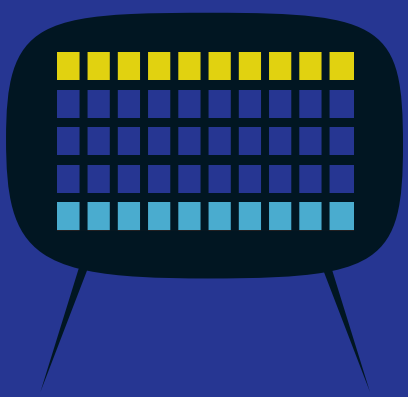
Teletext in Europe

From the Analog to the Digital Era



Edited by Hallvard Moe and Hilde Van den Bulck

NORDICOM

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Hallvard Moe and *Hilde Van den Bulck*

Teletext in Europe

An Introductory Guide to the Book

Hilde Van den Bulck & Hallvard Moe

This book is about teletext: a "broadcast service using several otherwise unused scanning lines (vertical blanking intervals) between frames of TV pictures to transmit information from a central data base to receiving television sets" (http://www.nielsentam.tv/glossary). To the contributors to this book and possibly to many readers, this technical definition will feel out of place as it obscures the rich history of a formidable if forgotten medium. Nevertheless, it is the basic technology of teletext that sets it apart from other media and that, in part, has been the basis for much of what did and did not happen to teletext in terms of policy, institutional setting, content, users and scholarly interest. Many contributions in this book will provide similar definitions, but mostly as a stepping-stone to explore all that has so far been left unsaid by this technical description. It is this gap in our knowledge of teletext in Europe that this book aims to fill.

The first part of the book consists of three chapters that try to provide broad and, at times surprising, perspectives on teletext as a medium. As the raison d'être of this book was our perception that teletext in Europe constitutes something of a forgotten medium, at least with media scholars, the first chapter explores this lack of interest. As a case in point, we take the original and, for a long time, leading teletext service Ceefax of the BBC and the wider development of teletext in the UK. The chapter follows a traditional mass media model of communication as structuring principle to discuss various potential reasons for the lack of interest from media scholars in European teletext. Exploring relationships between teletext and the media industry and policies, characteristics of teletext content and the specifics of teletext use and users, the chapter tries to find answers to the questions regarding this absence of interest in teletext and argues why we should not ignore it.

Next, combining sociological insights and artistic experiences, teletext artist Raquel Meyers makes a case for considering teletext as much more than just a medium and, even more importantly, as a medium not in decline but in the

middle of finding its bearing as a tool for and product of artistic endeavours. Her account of the present and future of teletext is at once highly personal and artistic and, at the same time, deeply rooted in sociological theories regarding narcissism, technology and fear, the relationship between fate and fatalism, between art and hobbyism. Meyers dares us to embrace teletext as she does and concludes that teletext's best is yet to come.

In contrast, working from a phenomenological perspective based on close readings of theorists like Merleau-Ponty, Gibson and Scannell, Lars Nyre, in Chapter 3, takes a five-step approach to understanding human perception as lived experience and comes to the conclusion that teletext – different from nature, transport technologies, social events or television watching – is not to be regarded as essential to modern human existence. At the same time, he argues that it is the phenomenological limits, the pureness of expression, that makes teletext interesting.

Having provided the reader with context and food for conceptual thought, part two of the book provides various country cases of the development of teletext in Europe.

In "Teletext in Flanders: A Medium Hiding in Plain Sight" Hilde Van den Bulck traces the long – if dwindling – success of Flemish teletext, which started as the work of a handful of enthusiastic "volunteers" within public service broadcasting but expanded rapidly in terms of content and services provided, institutions offering teletext and audience numbers. Against this background, the chapter explores the reasons behind the lack of policy attention to teletext in Flanders, if and how teletext developments ignited societal concerns, and the way in which teletext was seen to impact on the wider media ecosystem.

That third issue is also central to the chapter "Back to the Future: What Teletext's Past Tells Us about the Future Relationship between Public Service Media and Publishers in Switzerland" by Manuel Puppis, Samuel Studer and Edzard Schade. The Swiss teletext case is discussed mainly as an instance of conflict between publishers and public service broadcasting. Giving wider meaning to this example of a policy battle, the chapter compares the teletext case to other instances of conflict between both parties, namely the introduction of television advertising in the 1960s, the online activities of the public service broadcaster and the introduction of Hybrid Broadcast Broadband TV (HbbTV).

Turning our attention to the Nordic countries, first, Marko Ala-Fossi discusses the Finish case in "The Old Reliable: Teletext as a Survivor of Digitalization of TV in Finland." Taking an historical perspective combined with a political economy and a social shaping of technologies approach, the chapter explores the development of teletext in the country, and evaluates the reasons for its success as well as its future prospects. With regards to the latter, Ala-Fossi weighs the fact that teletext in Finland survived the first digital technology transition of television against the chances of it surviving transition to come.

In "Super Teletext: A Social Shaping of Teletext as Locating Newness in a Media Convergence Future" Pernilla Severson takes up the case of Swedish teletext as case of a relatively ignored but vital part of Swedish media developments, focusing on the public service television company Sveriges Television (Swedish Television) (SVT), and in particular on teletext's role in the development of digital terrestrial television in Sweden. She refers to it as Super Teletext, that is teletext in a digital TV context involving multimedia content and interactivity. As such, the chapter provides an interesting case study of how teletext has been instrumental in furthering new (digital) media developments, itself transforming in the process.

Taking mainly an historical approach, Ole J. Mjøs analyses the teletext service in the smallest of the Nordic countries in his chapter "The Icelandic Public Service Broadcaster RÚV's teletext service *Textavarpi* and Media Change." Tracing the historical development of teletext through three phases, Mjøs explores the emergence and development of RÚV's teletext within the Icelandic television sector as an inroad to develop new perspectives on other media platforms such as the Internet, and to further our understanding of change and continuity in media development.

Hallvard Moe, in his chapter "Freedom of Information and Divides in the Digital Age: Teletext and Internet Use in Norway", focuses on users and addresses the broad question of how media contribute to freedom of information, and how media scholars go about assessing such a contribution. On the basis of a history of teletext that institutionally has much in common with the previous Nordic country cases, Moe employs statistics of teletext and Internet use to discuss changes in the divisions among groups when it comes to different media. The chapter reminds us that not every new medium follows the same route in its diffusion, just as the birth of a new medium does not entail the death of an old one. A prerequisite for a discussion of freedom of information in a digital age, Moe argues, is a nuanced approach to the media, with attention given to how different technological, political and cultural contexts matter for how different media are being used, and by whom.

Moving on from the Nordic countries, "Teletext as a New Media Promoter in Croatia: Surviving War and Transition" turns our attention to the unique case of Croatian teletext. Mato Brautović and Tena Perišin try to rectify the neglect of teletext by Croatian media historians by tracing the turbulent yet successful history of teletext in Yugoslavia and later Croatia. Starting from the first teletext experiments in the early 1980s, the chapter explains the key role of teletext during the breakup of Yugoslavia and the war for Croatian independence and, as such, operating in a significantly different context from other places in Western and Northern Europe. The chapter further elaborates on how digital and multiplatform information services have not entirely supplanted teletext as users and economic parties maintain an interest in the service.

In "The Italian Way to Teletext: The History, Structure and Role of Televideo Rai" Luca Barra and Gabriele Balbi discuss teletext as a constant presence in the background of the Italian television system. While the focus is on the teletext services of the public service institution RAI, the chapter indicates the significance of commercial initiatives. Most of all, this contribution focuses on what the authors call "Italian idiosyncrasies" with respect to its technology, its relationship with politics, its commercial model and its editorial strategies.

Lyombe Eko subsequently explores the fascinating case of France. In "Teletext and Videotex in France: From Innovative Social Media to Objects of Cultural Memory" he shows how, different from the other countries discussed in this book, French teletext remained in the shadow of its interactive competitor: videotex service Minitel. The chapter shows how Minitel was heavily promoted by the French government. It is exactly in the very different approach to videotex and teletext that lessons about the role of government in technological developments and the "French exception" become clear.

As a postscript, finally, we take a step back and, from a bird's eye perspective, identify three main lessons learned from the book: insights about the longevity of media and their changing relations to other media and to users, about the ways in which contexts matter for media, and about how media are regulated and understood on a political level by different stakeholders.

PART 1: Perspectives

1 Why Media Researchers Don't Care About Teletext

Hilde Van den Bulck & Hallvard Moe

Abstract

This chapter tackles the paradoxical observation that teletext in Europe can look back on a long and successful history but has attracted very little academic interest. The chapter suggests and discusses reasons why media and communications researchers have paid so little attention to teletext and argue why we should not ignore it. To this end, it dissects the features of teletext, its history, and contextualizes these in a discussion of media research as a field. It first discusses institutional (sender) aspects of teletext, focusing on the perceived lack of attention to teletext from a political economic and policy analysis perspective. Next, the chapter looks at the characteristics of teletext content (message) and reasons why this failed to attract the attention of scholars from a journalism studies and a methodological perspective. Finally, it discusses issues relating to the uses of teletext (receivers), reflecting on the discrepancy between the large numbers of teletext users and the lack of scholarly attention from traditions such as effect research and audience studies. Throughout, the chapter points to instances in the development of teletext that constitute so-called pre-echoes of debates that are considered pressing today. These issues are illustrated throughout with the case of the first (est. 1974) and, for a long time, leading teletext service Ceefax of the BBC and the wider development of teletext in the UK.

Keywords: teletext, communication studies, research gaps, media history, Ceefax, BBC

Introduction

When we first started thinking about a book on teletext, a medium that has been very much part of people's everyday lives across Europe for over forty years, we were surprised by the lack of scholarly attention or even interest. We could find very few studies or even general reflections on the medium, and asking colleagues about their knowledge of work on teletext not only confirmed the lack of interest but created disbelief (and even laughter) at our interest in

the topic. To the extent that reasons were given for the lack of attention, they were mostly not of a scholarly nature. This begs the question: Why do media scholars not care about teletext?

Digging a little deeper, we found that, over its history, some work on teletext has been done. First, there are some books written by people actually working with teletext at the broadcasting institutions, but these tend to take the format of a chronicle, personalized history or personal reflections rather than an academic account (e.g. Andersen and Bernstein 1999; Verpoorten 1990). There are a number of sources, second, that came out mostly in the 1980s, i.e. in the first decade of teletext, and that can be situated in the field of informatics and technological literature, dealing with technological issues (e.g. Alber 1985; Blatt 1982; Veith 1983). Similarly, teletext tends to get a mention in sources dealing with videotex, teledata, Minitel, telematics – those neighbouring marvels that circled around trade and technology discourses in the same period (e.g. Bates 1988; Martin 1982; McIntyre 1983; Weaver 1983). Third, there are a few sources that advertise paying attention to analyse teletext as an inroad to another way to the Internet, drawing attention to several characteristics of teletext that helped pave the way for the web as a media platform (e.g. McKinnon 2011). Yet nobody has actually written an alternative history of how teletext was instrumental in the development and acceptance of the Internet. Beyond that, fourth, some sources deal with teletext in its own right – its development, economics, policy and other aspects – but they almost all focus on teletext in the US, and mostly on its failure (e.g. Graziplene 2000; Sterling 2006; Tydeman et al. 1983). The decades-long success of teletext in Europe is ignored. Finally, the limited interest in communication studies mainly comes from a political economic perspective (e.g. Mosco 1982; Schlesinger 1985; Tyler 1979), focusing on the relationships between industries and policies. However, these sources too are rare and mostly focus on the early years of teletext.

Taking the first (est.1974) and, for a long time, leading teletext service Ceefax of the BBC and the wider development of teletext in the UK as a case in point, this chapter suggests and discusses reasons why media and communications researchers have paid so little attention to teletext and argues why we should not ignore it. We identify and explore a number of reasons that may help explain the absence of teletext in scholarly research. Following a traditional mass media model of communication, we first discuss institutional (sender) aspects of teletext, focusing on the perceived lack of attention to teletext from a political economic and policy analysis perspective. Next, we look at the characteristics of teletext content (message) and look for reasons why this failed to attract the attention of communication scholars, including, from a journalism studies perspective, that teletext content is "boring," is a mix of information and – for a long time academically ignored – services, and is methodologically hard to collect, archive, consult and analyse. Finally, we move on to issues relating to

the uses of teletext (receivers). Here we reflect on the discrepancy between the large numbers of teletext users and the lack of scholarly attention, and on the reasons why traditions such as effect research and audience studies ignored teletext users. Throughout the chapter, we will point to instances in the development of teletext that constitute so-called pre-echoes of debates that are considered pressing today.

The aim of the chapter is not to justify spending time on researching a peripheral part of the media. Neither is the primary aim to convince the reader that media research has failed as it abandoned teletext. Rather, we want to dissect the features of teletext, its history, and contextualize it in a discussion of media research as a field. The aim is to get a better understanding not only of teletext but also of the research field.

Teletext's institutional context

The origins of teletext are to be found at the public service broadcasting (PSB) institution of the United Kingdom, the BBC: the "mother" and, to this day, to many the ideal type of PSB (e.g. Hendy 2013). As Schlesinger (1985: 473) narrates, in the early 1970s, Director of Engineering James Redmond wished to develop a transcription system that would allow the hearing impaired to better understand and enjoy television programmes without disturbing the visuals of the programme for the rest of the audience. He intended to use lines of the television transmission signal to carry extra data. Inspiration came from Philips' engineer John Adams, who in 1971 submitted to the British broadcasting authorities a technical proposal for a system that would become the standard for teletext in the UK (and large parts of the world) (McIntyre 1983). Adams' concept held the key elements of classic teletext: pages of 24 rows with 40 characters each, page selection, sub pages of information and vertical blanking interval data transmission. Gaining first institutional and then government permission to develop a system for the deaf, Redmond used Adams' design to develop his subtitling tool. Teletext grew around this initiative as something of a side effect, as the BBC decided to put the technical development to good use for all of its audience, not just the hearing impaired.

For Schlesinger, the move reflected the ideals of public service (Schlesinger 1985: 474). So, when BBC teletext service Ceefax was introduced in 1974, the BBC developed a range of content types for teletext, including news, entertainment and services such as the weather report and sports results. In 1975, commercial competitor ITV introduced its own teletext, dubbed Oracle, which followed the same principles in technology and content as Ceefax (Schlesinger 1985: 474). Technologically, teletext developed around the same time as videotex – a service with much of the same characteristics for users, but stemming from the

telecom and budding broadband technologies, and therefore harbouring the potential of two-way communication. Teletext, in return, was less expensive than videotex and easy to use, requiring not much additional knowledge or investment at both the production and reception side of things (Woolfe 1981).

Teletext as a bottom-up side effect

The early history of teletext suggests that it was almost like a random, technical side effect of other developments in the area of public service broadcasting. It was perceived as a tool rather than a medium in its own right, and as a small experimental issue in the periphery of the broadcasting institution rather than a major innovation. It further transpires that it originated 'bottom up' from technicians, rather than as a result of a top-down decision of management and policymakers inside or outside broadcasting. This appears similar to, for instance, the development and unexpected success of Short Messaging Service (SMS), which was introduced merely as residual functionality of a cell phone but turned into a big success, becoming a major means of communication for entire generations (Enli 2005; Kim et al. 2007).

However, the fact that teletext started as a bottom-up, technical side effect is no excuse for academics not to have paid attention to it, for two reasons. First, as academics we have to be attentive to developments that are not "hot," not mainstream or not on the agenda of "big business" or "big politics." Indeed, it is up to academics to find trends that seem to develop at the fringe or bottom up. Media scholars routinely do this. The literature on the history of the Internet, for instance, is ripe with discussions of how hackers and other enthusiasts mattered (e.g. Rasmussen 2007). Brunton's intriguing history of spam on the Internet (2013), to name one recent book, is an in-depth analysis of a communication phenomenon under the radar. Spam might be big business but it certainly is not the most obvious topic for media and communication studies. And while spam is something most Internet users can relate to, media scholars are not known to shy away from more obscure or peripheral phenomena. The point is not to say that we should not grant attention to telephone switchboard operators (Carmi 2015) or the promotion of the civil defence in Britain in the period from 1938-1939 (Maartens 2015), to pick two examples of recent titles from the leading media history journal. The point is to argue that technological obscurity or the lack of official grandeur in its early history does not explain why media researchers have not cared about teletext.

Second, reducing the lack of interest in teletext to its random and bottom-up development does not do justice to the history of the medium. As becomes clear from the UK case, and many other cases in this book, after a small-scale quasi-experimental start, teletext quickly caught the attention of policymakers and the industry (and audiences), turning it into a real entity worthy of aca-

demic attention and resources. In the case of the BBC, the institution quickly obtained permission from the government to develop teletext as a regular part of its responsibilities. As Schlesinger (1985: 473) elaborates, this was later confirmed by the influential Annan Committee on the Future of Broadcasting (Great Britain Home Office 1977). Similarly, there was early cooperation with the Independent Broadcast Authority, IBA, British Telecom and the British Radio Equipment Manufacturers' Association BREMA (McIntyre 1980). The government also proved instrumental in the exponential growth of teletext in the UK in the 1980s, as we discuss below (Schlesinger 1985). In other words, it is not as if teletext stayed under the radar for 20 years.

All in all, the notion of a side effect buried within a big institution is an insufficient argument to the lack of interest. If we as academics had paid more attention, we would have found all kinds of interesting technological and commercial developments that pre-echo current debates. For instance, in the case of the UK, Schlesinger (1985: 479-480) points to the early development of what he calls "closed broadcasting" as Oracle obtained permission from the government in the 1984 Cable and Broadcasting act to close certain pages to the general public to make them commercially available for subscribers. At the time, for Schlesinger, this was a move towards enclosure of the communication commons – something that gained new attention from critical political economy in the digital era (e.g. Murdock 2005).

What, then, are other possible reasons why we have ignored teletext as a topic of scholarly interest? We suggest two connected explanations concerned with the institutional level.

There was no controversy over teletext

One further potential explanation for the academic silence regarding teletext is the fact that there was no controversy over teletext. In the UK, and in many other places in Europe, teletext was first introduced as part of public service broadcasting. By the 1970s these were all well-established and esteemed institutions which, in many places, held a monopoly, with no market to compete in and no consumers to fight over. There are some exceptions, as the chapter by Puppis et al. on Switzerland in this book suggests, where there was competition and even a fight, but in many other countries, public service teletext had overall "free reign" for quite a long time.

What is more, at the time of its introduction and in the subsequent decade, teletext was typically a new technology lurking in the shadows, while videotex stood in the spotlight. Videotex was considered more revolutionary as it allowed for two-way (rather than teletext's one-way) communication and caught the attention of industry, as it required the development of technologies outside the broadcasting institutions, through cooperation with telecommunications.

As is now clear, videotex in the end (and with the exception of France, see Eko's chapter on France in this book) did not work out while teletext had a considerable success, at least in Europe. One potential reason for this is of a technological nature. As Elton and Carey (2010: 70) explain:

> this situation suggests that those championing [videotex] were probably right about the market being ready to accept services of the kind they envisaged (the services met a real need). But these champions may have underestimated the technological hurdles standing in the way of getting an easy-to-use version of their service into the market fairly soon.

Importantly, the lack of controversy seems to have followed teletext through most of its history. This is a feature that separates it from, say, spam, or other peripheral shadowy communication phenomena, and it might help us understand why teletext has not garnered attention from media researchers later on in its development.

There was no interest from the industrial-economic complex

Elton and Carey (2010: 220) further suggest that a lack of policy and academic attention for teletext could result from the fact that the start of teletext did not really involve the building of a new industry, a new economy, but instead appeared as little more than an add-on for broadcasting. What is more, at the time of the start of Ceefax and other teletext services in Europe, most public service broadcasting institutions were not allowed any commercial revenue (Van den Bulck 2001), including on teletext.

This is somewhat of an over simplication. For one, in the UK, Ceefax was soon followed by its commercial competitor Oracle. Veith (1983) points out that Oracle was commercially driven. For Schlesinger (1985: 476) Oracle primarily "was launched as an advertising vehicle." To be clear, this was backed by government support as the 1981 Broadcasting Act explicitly allowed advertising on Oracle. This too received little academic attention, possibly because by that time teletext was "old news" and the commercial teletext initiative was part of a wider discussion of the commercialization of television post public service monopolies. Philip Schlesinger (1985) was probably the only communication scholar who, from a political economic perspective, pointed at the potential economic/commercial impact of what was, up until then, predominantly a public service information channel. As such, academics missed out on an opportunity to analyse a part of the history of commercial content in a non-newspaper, non-broadcasting context. This history would be interesting in its own right but also as a pre-echo of more recent trends such as commercials on the Internet or cross-media advertising strategies which, according to Schlesinger (1985: 477), were already occurring between ITV channels and Oracle.

As a result, scholars have ignored some fascinating developments in terms of all kinds of 'to-be-paid-for' teletext services. An interesting example thereof is Teletext Ltd. When Oracle lost the teletext franchise in 1993, teletext for ITV and Channel 4 were taken over by Teletext Ltd., continuing a mix of news, information and services. Several of its services, especially those related to travel and holidays, proved very profitable. In 2009, Ofcom's second public service broadcasting review declared that the abundance of online information services made a teletext licence obsolete. As a result, the company terminated its news and information and in 2010 its teletext activities ended entirely. However, the company re-launched its holiday services online, now as a successful independent holiday broker[1] and car rental service[2], keeping the original brand name.

What is more, while not requiring the building of an entirely new industry, teletext did prove instrumental in the economic growth of the television industry. In the UK, according to Schlesinger (1985: 476), there was strong cooperation between the producers of television sets and the commercial teletext service Oracle. The double aim was for teletext to help boost sales of new generations of affordable television sets with teletext decoders, and for these television sets to help boost the public's interest in teletext. Here, too, the government played its role, as Schlesinger (1985) analyses how it subsidized television sets with teletext option over television sets without the teletext options.

This cooperation between teletext and television industries also appeared in other countries, as for instance the chapter by Van den Bulck on Flanders in this book illustrates. In Flanders, the introduction of teletext by the public broadcaster saw considerable cooperation and consultation with the industry, including Fabrimetal, the umbrella organization of household electronics manufacturers at the introduction, and later on in the 1990s with Dutch home electronics maker Philips in Eindhoven. As such, in the vocabulary of Elton and Carey (2010: 32), teletext was a case of "piggybacking on replacement cycles." Television was well-established in households and, as people regularly replaced their old sets, new sets provided options for teletext without extra cost or effort. "This provided a highly favourable context for the rapid diffusion of teletext" (Elton & Carey 2010: 33), but did not push for a whole new, and potentially profitable industry, to develop.

In sum, the institutional context provides some possible explanations as to why teletext did not attract more attention from scholars: the lack of controversy and the related lack of interest from the industry brings us closer to an understanding of the faith of this medium – and also underlines avenues of research well worth pursuing. If we move one step further in the communication model, we can identify further explanations.

Teletext content: news and services

Next, we must wonder why there was no interest from scholars studying media content. From its early days, teletext services like Ceefax and Oracle, but also across Europe, offered a wide range of content, covering news and providing all kinds of information services. Yet, while the study of content is a staple of communication studies and several of its strands focus on this to this day, these traditions have ignored teletext content. Why is that? We see at least three reasons.

Teletext journalism is boring

A first reason, we believe, is related to the nature and format of teletext news. Teletext news was very much conceived by the institutions as journalistic endeavours, as can be witnessed from the fact that the teletext services and personnel in many institutions were part of the broadcasters' television newsroom, as in the case of Ceefax and, as the book will show, many other European teletext services. When Ceefax was launched, it offered news, current affairs, sports results and other informational genres, reflecting the profile of its public service home institution, i.e., aiming to reach all segments of the audience not just with news but also with entertainment. Later on, ITV copied that approach. Similar content could be found on other European teletext services, as the various chapters in the book illustrate. What is more, institutions such as the BBC expected its teletext news to follow the public service ethos and the rules of journalistic professionalism that were in place for its other news services (cf. Schlesinger 1985). These rules of professional journalism, breaches of them, and the implications thereof for the role of journalistic media in a democratic society have been subject to much empirical and conceptual work in journalism studies and political communication. Yet, in these fields little or no work on teletext could be identified. Why?

Much of journalism studies is concerned with genre and style, and content analyses are about issues relating to rich texts (e.g. framing, stereotyping). Teletext created a new genre of concise text writing, writing that was an "evanescent, non sequential textuality constantly being made and remade anew, never settling, never taking, never receiving definite shape" (Kirby 2009). While this was new and exciting and, according to some (e.g. Kirby 2009), prepared people for contemporary forms of news and information dissemination through social media such as Twitter, from a journalism studies perspective this is boring, that is, dry and stripped of all colour, matter-of-fact, impersonal, slippery and hard to grasp (Vestbø 2002). Teletext is not the arena for the op-eds that change public opinion or the famous journalistic signature – things that journalism scholars thrive on. What is more, because of its format, teletext is not a good

source to study journalistic trends such as tabloidization, again making it of less interest to scholars working on news. While this is a convincing reason, it is also a reason that points to some deep-rooted biases: it reflects and confirms the hierarchies inherent or even made explicit in a lot of journalism studies whereby "hard news" is favoured over "soft news," political communication over popular communication and "long reads" over short factual news, thus often ignoring the reality of news production.

Teletext services are even more boring

A second reason for the lack of interest is related to the other main type of teletext content: services. Much of what teletext was and is about is not so much news as about services: weather reports, financial information, flight hours, fan forums, recipes and the like.

Even more than with teletext news, services have a very low status amongst communication scholars and are therefore at the very bottom of their interest food chain, even when these services appear in other media. For instance, it was not until Michael Billig (1995) drew attention to it to illustrate his point about banal nationalism that weather reports published in newspapers received any real academic attention. In general, though, like teletext news, services such as stock market listings, flight hours or classified ads lack sufficient rich text to attract the attention of communication scholars. This sentiment, by the way, is often echoed by journalists themselves who traditionally consider these kinds of contents as very much secondary to their own writing (e.g. Wahl-Jorgensen 2007 on letters to the editor).

This lack of attention is regrettable for several reasons. First, it ignores the fact that, despite the lack of rich text, these types of content are ripe with ideological meaning, as Billig so clearly illustrates. Second, the lack of interest in services in the past is providing media scholars with a set-back and additional challenges when trying to come to terms with new media developments. Indeed, today, media scholars pay as much or even more attention to all kinds of new services and related offerings (apps, games, social networking services) than they do to traditional media content, and they can be seen to be struggling with it. Chat room-like services, to point to one kind of service, were part of the output of teletext in several European countries, potentially exposing a much larger set of users of this kind of mediated communication than did the budding Internet-like services such as Bulletin Board Services on dial-up modems. An attempt at grasping their characteristics at the time could have prepared media researchers for the massive growth that was to come as Internet-based services made mediated chatting into a mainstream activity.

Teletext content storage and archiving is a nightmare

A third potential reason is of a *methodological* nature. If dealing with media archives is a big enough challenge for media historians dealing with "easy" media such as newspapers and television, it is far worse for teletext. Even though television content (i.e. programmes) is traditionally archived by the broadcasting institutions such as the BBC, and even though teletext is broadcast with the television signal, teletext pages were not recorded and stored for practical reasons. Every television programme is one recording but every teletext service would be as many recordings as the number of pages of which it is made up of. If a researcher would want to collect the teletext content personally, this would have to be done in real time and to be recorded continuously and with a number of recording devices equivalent to the number of pages. Considering that, from early on, teletext provided "instant" updates, allowing people to follow the news almost as it happened rather than make them wait until the next newspaper or news broadcast came along, this also means collecting many more "editions" than in the case of newspapers or television news. In principle, you could print the content, but then you would have to reprint it every time it changed. In short, as a researcher, you would not really have (had) the tools or financial means to do that. It is much easier to deal with printed press, or even regular television programmes. The problem of content archiving again seems like a pre-echo of current debates over web archiving (e.g. Brügger 2009) and is a convincing argument for the lack of empirical research on teletext content.

In sum, much as the institutions of teletext might have discouraged researchers' curiosity, the content of the medium made an ill fit with the interest of media research. This goes for the journalistic as well as the service-based parts of the content found in various forms in different national contexts. While such explanations are plausible, a methodological reason for the lack of publications on teletext's content should also be added. If we turn to the final step in the communication model, we find yet other potential reasons.

Teletext users: From minorities to the majority and back

If we turn to look at users and uses as an inroad to understand the lack of attention to teletext, another perspective on the medium's history emerges. Focusing again on the pioneering UK, survey data by and large confirm teletext's journey from being a peripheral playground for technical enthusiasts in the formative years of the mid- to late 1970s, to mainstream media platform in the early 1980s and onwards. It is worth stressing that the growth came early: by 1981, awareness of teletext among the general UK population was already

61 per cent, up from a mere 10 per cent three years before (EC 1987: 63). A survey amongst UK teletext users in the early 1980s (Weaver 1983) revealed that, during an average week, users spent just under two hours on teletext, going there about 77 times for some 9 minutes per day. Even before government policy facilitated a clear economic rationale for industry support of teletext, then, the medium was well known and well used.

User numbers peaked in the 1990s with Ceefax being consulted at least once a week by some 20 million users (Gayle 2012; Hermann 2012). These impressive numbers reflect teletext audience figures in other European countries, as various chapters in this book illustrate. By the 2010s, however, teletext was no longer a medium used regularly by the majority of the population as the web took over many of its functions. Together with the start of digital television signals in the UK and the announcement of the analogue TV switch off, Ofcom (2009) advised the end of teletext in the UK. On 18 April 2012, Ceefax went off air in London. Before that, in 2009, Teletext, the commercial teletext service launched in 1993 to replace the ITV-run Oracle, had already been terminated as the company felt the drop in audience figures – seen as a result of television audience fragmentation and growth of online news. Commercial services could no longer guarantee a viable business (Sweney 2009). At that point, users were again a minority, consisting of men, and the elderly unaccustomed to new digital media, along with those for whom the technology was originally developed: the hearing impaired (Kirby 2009).

Considering the huge success with audiences for such a long time, the question arises of why the user perspective did not attract scholars to teletext. Some explanations are put forward.

Teletext users did not count

On one level, teletext users were counted. National statistics on media use in several countries included teletext. In addition, the broadcasters – to varied extents – did undertake user research into teletext. However, for media scholars, such data by and large did not generate substantial interest. There could be several reasons for this – reasons that have to do with teletext.

First, any user of teletext is also a user of television. In principle, it is possible to view a teletext page without first watching regular television but, in practice, teletext use is an add-on to television, much in the same way as the service itself is an add-on. While there certainly are discrepancies between the two user groups, one might plausibly think that the television users would be the most obvious group to focus on.

A second aspect of the lack of attention to teletext users is the state of audience research in communication studies in the 1980s and 1990s – when teletext was at its most popular. At the time, communication scholars dealing

with audiences could mainly be seen as members of one of two groups. On the one hand, working within a strong media/passive audience paradigm, there were scholars that fit the effects tradition of communication studies. For media researchers interested in media effects, teletext, with its dry text-only journalism, would not be the most obvious medium to look at. Whether or not one assumed any effect at all from teletext is not really relevant – the challenge of finding causalities in media effects is big enough with emotional and rich audio-visual content; focusing on teletext would seem like a long and winding detour with uncertain destination. On the other hand, working within an active audience paradigm, there were scholars that set out to explore what audiences did with media rather than what media did with audiences. The paradigmatic battle between these two groups of scholars was mainly fought out over the medium of television, focusing mainly on fiction and, to a lesser extent, on news.

A third reason behind the lack of attention for teletext from audience researchers has to do with the type of communication that takes place. The "active" in the former active audience paradigm referred to actively dealing with content that was presented through one-to-many, mass communication via the television screen, not to activities of consultation typical of teletext use. Indeed, in the 1980s and 1990s, next to a small group of scholars interested in interpersonal communication, the bulk of communication studies focused on mass communication. Registration and consultation were considered outside the field of mainstream communication studies and were relegated to the margins of technology and telematics enthusiasts or the "alien" field of telecommunications. It did not resonate with those researchers interested in active audiences – nor with those who, especially in the early 2000s, went against the orthodoxy of a passive broadcasting audience (e.g. McNair et al. 2003). It was not until the Internet made consultation a dominant form of communication that the mode of communication became a hot topic of mainstream communication studies.

Together, these factors might help explain why media scholars have not paid much attention to the users and uses of teletext. The factors also shed light on missed opportunities. A cursory scroll through survey data of teletext users will reveal that a core group has been (and, at least in some countries including Norway, remains) well-educated middle-aged men with senior management positions. This group is often seen as potential opinion-leaders, and they are a focal point for audience research, at least of the commercial kind. We might speculate that the rapid, reliable, no-bullshit agenda of teletext is attractive for these users – checking the teletext front page (in addition to sports, perhaps, or stock exchanges) before the working day begins confirms that the world still stands. To move beyond speculation would entail empirical research, and might have given us new insights, even rejecting our speculations.

Conclusion

Following the three steps from sender via message to audience, this chapter has presented and discussed several reasons that could help us understand why media researchers do not care about teletext. Some of the reasons are both convincing and valid. There certainly were and still are massive methodological challenges with large-scale studies of teletext content, for instance. Other reasons are convincing but less valid. While it might not be laudable, the general paradigm or research tradition in practice matters for the kind of research undertaken at a given time in the history of a research field. What we have tried to demonstrate throughout is the missed opportunities caused by the lack of interest in teletext. We do not say this to sulk or to cry over spilt milk. Despite the massive growth our field of research has gone through in the last decades, media and communication research remains a comparatively minor operation. There are simply not enough people to handle a too-large pile of pressing and interesting work. When teletext was new, and in the years we have focused on here, media and communication as a research field was relatively new too. We should be careful not to project undue expectations on our predecessors.

Instead, we should seize the opportunity that teletext presents us with – to get a better understanding of the history of our media systems, to strengthen our comparative arsenal, and to add to our theorizing. Time is ripe, not just because we need such insights to grasp currently pressing questions, but also because teletext, and the key figures that shaped it, are still to a large extent around. So, rather than mourn the lack of attention in the past, there is no time like the present to embrace the topic of teletext and all of the fascinating insights an analysis thereof can provide, both with regards to teletext in its own right, and with regards to wider media and to communication studies. The remaining chapters in this book take up this challenge.

Notes

1. http://www.teletextholidays.co.uk/
2. http://www.teletextcars.co.uk/

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2 Is It Just Text?

Raquel Meyers

Abstract

This chapter looks at teletext from the perspective of an artist and of its artistic value. It is argued that teletext is not just news on demand provided by television networks or a character set, and that it is about much more than nostalgia, profit, constraints, domesticity or zombie technology stored in a garage, because teletext performs in ways we have not fully designed it for and not yet fully understood. Teletext is compared to brutalist architecture with which it shares many similarities: text is used unadorned and roughcast, like concrete. Brutalism has an unfortunate reputation of evoking a raw dystopia and teletext evokes an "object of nostalgia," It is a challenge and has the universal language of silence. The text further argues that using old technologies, like teletext, is a commitment that is at the same time a risk because it does not seek to forge a self-identity. It is a dialogue of possibilities rather than an ego-trip monologue with technology. And these possibilities are irrelevant to the individual's self-identity and pursuits. Finally, the chapter also explores how teletext is not a physical object; it is the dark band dividing pictures horizontally on the television screen, used by the PAL system. Vertical-blanking-interval lines like REM (rapid eye movement) sleep intervals. A door to unlock the Imagination.

Keywords: teletext, art, grid, text characters, brutalism, imagination, media art

Introduction

Teletext is a news and information service in the form of text and graphics, transmitted using the spare capacity of existing television channels to televisions with appropriate receivers. What the viewer sees on the screen of his teletext TV is a page of characters, 40 in a row, 20-24 rows, 800-960 characters per page. These characters can be presented in a limited number of colours, including coloured backgrounds, and the character set contains all the letters of the alphabet (both uppercase and lowercase), numbers, punctuation marks, special symbols, and graphics. Teletext is a silent medium, as there are no narrators, but users must read the information from the television screen, transforming the characters with their imagination.

On the 23 September 2014, teletext turned 40. As an artist, I feel this calls for celebration. For me, teletext is not just news on demand provided by television

networks or a character set. Teletext is not only about nostalgia, profit, constraints, domesticity or *zombie* technology stored in a garage, because teletext performs in ways we have not fully designed it for and we have not yet fully understood. Today, television networks are killing off their teletext services, as in the case of the 2012 termination of the original teletext service Ceefax (see the previous chapter in this book), because too often technology over 30 years old is proclaimed as a case of "dead media" (Sterling 1995). Yet, just because consumer society decides that they are electronic waste or "digital rubbish" (Gabrys 2011: 17), it does not mean that I do. Before business interests or the Internet took over, teletext was a free technology. The first teletext artists were unknown workers from television broadcast companies. Today, they have names and web sites. Similarly, according to Graziplene (2000: 22), in the late 1970s "the earliest users were home electronics enthusiasts who had built their own decoder units as add-ons to their television receivers using plans published in a popular electronics and wireless hobbyists' magazine."

Today, teletext is free again, not because of the Internet but because hobbyists are working with it again, with open source inserters to create their own teletext signal, like Peter Kwan's VBIT (USB Teletext Inserter https://code.google.com/p/vbit/). "Ceefax was brief, but art is long" (Cheshire 2012). In this chapter I shall explain why I think a negative view of the (future/end of) teletext is wrong because the best is yet to come. As Giddens (1991: 81) pointed out: "We have no choice but to choose." I choose not to consider teletext junk or *dead media*.

An artist's perspectives on teletext

My journey with teletext started in 2011 when I got in touch with the teletext engineer Peter Kwan, who had developed an open source USB teletext Inserter (VBIT), and we started to work together in a long-term project for teletext live visuals. The reason for this was that I did not just want to use a teletext graphics editor like CebraText, a free teletext editor made by Danish company Cebra (http://www.cebra.dk). I wanted to use the teletext signal. That means to push the bottom on the remote control and trigger the teletext on the television screen. I wanted to create an eerie universe with text-characters, a brutal storytelling instead of using teletext for news on demand. One of my biggest influences in deciding to work with teletext was *Hands Up!,* a ten-episode-long 1980s series about sign language, developed by Ian Irwing, produced by Intelfax, broadcast on Channel 4/4-Tel and made in teletext. It was one of the first examples of storytelling and teletext and a huge inspiration to me as an artist.

My first, childhood, memory of television (not teletext) is the Spanish TV Show called *La Bola de Cristal* (The Crystal Ball), a Spanish TV show broad-

cast on TVE between 1984 and 1988, the brainchild of Spanish writer Dolores Rico Oliver (better known for her artistic name, Lolo Rico) and was hosted by pop singer Alaska. Its main character was the Breakdown Witch (*la bruja avería*), a puppet who proclaimed "Long Live evil, long live capital!" *(¡Viva el mal, viva el capital!)*. The programme had fake advertising spots meant to ridicule real ads and propose alternatives to the consumer society (Rico 2003). One of the several spots declared "Use the machine, don't be the machine." This idea stuck in my mind and never left. Not only as an anti-capitalist, anti-consumerist and anti-authoritarian message but as a quest for freedom through knowledge, imagination and creativity. Discussing the "painter of modern life," Baudelaire (in Baudelaire & Mayne 1964: 8) wrote: "The child sees everything in a state of newness; he is always *drunk*. Nothing more resembles what we call inspiration than the delight with which a child absorbs forms and colors." When I use teletext I feel *drunk* with joy, in a childlike barbarous way. The simplicity of the colours and the character set make the process of making teletext graphics straightforward.

In my opinion, teletext has a lot of similarities with brutalist architecture (cf. Clement 2011). Text is used unadorned and rought-cast, like concrete. Brutalism has an unfortunate reputation of evoking a raw dystopia and teletext evokes an "object of nostalgia," according to Ernst and Parikka (2013). Teletext and brutalism have more in common than the raw aspect and unpretentious honesty. Both heralded a new age, a changing socio-economic society, and captured the spirit of their time and contradictions. They were meant to be useful and functional rather than refined and ornamented.

My generation grew up with the fax, early home computers (like Commodore, Amstrad, Acorn BBC, Sinclair), arcade machines, video game consoles, photocopiers, cassettes, Walkman, VHS, 35mm film camera and Polaroid. However we were not spoiled by technology; it was our playground. According to Olivares (2007: 21), "Play is part of our lives like language and desire." Technology felt the same way and, even more importantly, impressive. But, as the Spanish journalist Ramón Colom in *La bola de Cristal* said, "to play, toys are not necessary." Only imagination is necessary, and it does not belong to a specified period of time.

Teletext also reminds me of the "Zone" in Andrei Tarkovsky's movie *Stalker* (1979): a wasteland. Because teletext is a technology designed to die and to be forgotten. As Green (1993: 94) elaborates: "The Zone – a place of terror, or the repository of dreams; a lost domain, another place or time which one feels nostalgia; uninhabitable earth, or ideal realm; a memory of childhood. Or death?" The Zone is also home, a place known and loved by the stalker: "Here is my happiness, freedom, dignity" (Green 1993: 94). In this case, Teletext and the Zone are allegorical, a condemnation in favour of a new understanding. A place for revealing instead of burying.

In the following sections of this chapter, I will elaborate on these different approaches to teletext.

Media archaeology and dead media

Looking at research into teletext use by audiences, it appears that, today, teletext is used mainly by older people (Van Selm & Peeters 2007) and by men (Graziplene 2000). As a result, it is probably not so strange that teletext gets mentioned in relationship to the concepts of *dead media* and *media archaeology*. In this regard, some would consider teletext ready to be given a chapter in the *Dead Media Handbook* that Sterling's Dead Media Manifesto (www.deadmedia.org) refers to. However, as Ernst and Parikka (2013: 56) replied to the Sterling's Manifesto:

> Rather than being a nostalgic collection of "dead media" of the past, assembled in a curiosity cabinet, media archaeology is an analytical tool, a method of analyzing and presenting aspects of media that would otherwise escape the discourse of cultural history. As long as media are not mistaken for their mass-media content, they turn out to be nondiscursive entities, belonging to a different temporal regime that, to be analyzed, requires an alternative means of description.

Although formulated as a criticism, *media archaeology* and *dead media* are two sides of the same coin. It seems that you can only choose one of them when you talk about old technologies like teletext. There is no room for the possibility of still using or developing it. Why would you want to do that?

Gabrys (2011: 74) called it "The 'Social Death' of Electronics (…) As electronics break down at end of life, they enter several stages of devaluation, salvaging, recycling, reprocessing, and decay." However, I argue that teletext is not broken. Teletext is not dead. You cannot kill the vertical blank interval.

Teletext's past is clear, what about its future?

If we agree that teletext is not dead, then what is its future? Is it little more than a *Zombie* technology? Is it an Archive? Or is it, as I shall argue, Art? Art is "useless, yet crucial." What is more, for art to move beyond "the fusion of art in the realm of culture, the advent of which, paradoxically enough, is considered as a result of the development and triumph of our liberal-capitalist society!" (Chateau 2014: 32), making art useless is the only way to avoid this triumph. Why is it then also crucial? Because it is a quest, it is a challenge and there is no goal. You do it because you like it. Art has many theories but there is no

absolute truth, as Kittler and Johnston (1997: 100) pointed out: "In our current century which implements all theories, there are no longer any. That is the uncanniness of its reality." Teletext is useless, yet crucial.

What about teletext as a technology, *Zombie* or otherwise? Here the concept of *techne* is crucial. Etymologically, it is the Greek word τέχνη, often translated as craftsmanship, craft or, interestingly, art. As Tabachnick (2004) noted, in contemporary discourse:

> Contemporary technology … most often refers to the product itself, instruments and machines (i.e. the computer is technology). However, the earliest uses of the word still describe a knowledge or systematic study of the arts (e.g. metalworking) rather than the products of that knowledge. So, at least by these definitions, techne and technology are quite similar if not the same.

I propose to look at teletext as *techne*, i.e. as knowledge of techniques and knowledge of a skilful or artful use.

But with the Greek always comes the tragedy. And the tragedy should not be translated into the fear of technology and the aim to control it, like a tragic dystopia in text-mode where zombies hide in garages waiting to be reanimated. I am, however, not a technological groupie. I prefer to have a conversation instead of a parasitic (Niebisch 2012) monologue with technology. I prefer to use it instead of collecting it for pure storage or archive contemplation. According to Turkle (2007: 10), "When objects are lost, subjects are found. Freud's language is poetic: 'the shadow of the object fell upon the ego.'" Teletext is not lost, it is only hiding – on spare transmission lines in broadcast television signals; a ghost in the television. In this regard, Kittler (1997: 96) noted that, "[a]s we know, however, ghosts do not die," in which case the question emerges: What about the ego? In the next section I will examine the relationship between ego as narcissism and the use of technology as commitment.

Narcissism versus commitment, control versus fear

Narcissism and technology are very close, as Giddens (1991: 170) pointed out:

> Narcissism presumes a constant search for self-identity, but this is a search which remains frustrated, because the restless pursuit of "who I am" is an expression of narcissistic absorption rather than a realizable quest. Narcissism stands in opposition to the commitment required to sustain intimate relationships; commitment places restrictions on the opportunities the individual has to sample the many experiences demanded in the search for self-fulfillment.

As humans we want to be special, unique, and we will do whatever it takes to achieve it. Commitment requires the sacrifice of new experiences that the

narcissist thinks will lead to self-fulfilment. And we do not want the obligation that restricts our freedom of action and control. We only demand and reject the possibility of "giving to others" that this implies. To me as an artist, using old technologies, like teletext, is a commitment: you give up your ego. That commitment is a risk because it does not seek to forge a self-identity. It is a dialogue of possibilities rather than an ego-trip monologue with technology. And these possibilities are irrelevant to the individual's self-identity and pursuits.

At this point, it is very important to mention the use and abuse of technology in the narcissistic quest, as Niebisch (2012: 9) recalls about Dadaists and Futurists:

> They were not satisfied with the intended functioning of media systems and attempted to expand the possibilities of the newspaper, radio, film, or whatever media they encountered. Such a manipulation is parasitic, because it depends on the supply of new media gadgets through science and technology and it does not intend to engage in a dialogue or equal exchange with these fields. The avant-garde artists were not interested in a discursive dialogue with media engineers.

The parasitic abuse of technology cultivates a detachment necessary to the maintenance of narcissistic ego. Conversely, the narcissistic approach to technology chooses to form an ego that fears commitment because it requires giving up control. Old technologies require skills and patience. The control of them is not instantaneous, like using the latest technologies, that are ready to use and function in a click. You need to spend a certain amount of time to be able to understand and use them, so the control of your persona and practice takes second place and even disappears. The shortcut is the emulation, which requires just a basic knowledge to be good to go. It's fast and you gain an illusion of control. In this regard, we can refer to Svendsen's (2008: 43-44) interpretation of Sartre's concept of fear:

> The analysis of fear is a clear example of this, since fear is claimed to be an intentional strategy where the subject attempts to remove – in a "magical" way – an object. It ought to be fairly obvious that this magic is not very often successful, as an object seldom disappears simply because one fears it. When this magical tragedy fails to work, the subject resorts to flight.

Maybe we use this magic to control technology until we cannot do it anymore, either through lack of interest, or because something shinier and newer comes around. Let us be honest: we are lazy. We want things to come easy with no effort at all. As such, it is not fear, it is boredom. Why spend my time on anything? Better to say that it is dead because it is old. And from there you have only two options. Put it in the trash and forget about it, or put it in a box in your garage and wait some years to sell it on Ebay for a considerable profit.

"Cultural imaginary is at the heart of the composition and decomposition of modernity and modernism" wrote Shanks, Platt and Rathje (2004: 64), in relation to the *garbage imaginary* of electronics and waste.

This is not about collection, garbage imagery or archive; this is the Diogenes syndrome, created by the capitalist society we grew up in. This is the real tragedy. As Giddens (1991: 81) wrote:

> A lifestyle can be defined as a more or less integrated set of practices which an individual embraces, not only because such practices fulfill utilitarian needs, but because they give material form to a particular narrative of self-identity.

At this point I feel that teletext (and any old technology) has a crossroads ahead: one road heads for control, fear, narcissism, speed and nostalgia; and the other one for intimacy, commitment, play and imagination. At the intersection, only one choice can be made. One way dissociates and the other confuses, because it seems like a waste of time. I choose confusion, but not as a mistake or error; as a complex and less understandable path. I choose the challenge and mysterious one rather than the inertia and apathy of day-to-day life, even if it ends nowhere.

Is teletext a hobby? Are hobbies art?

In the late seventies, Heidegger (1977: 5) wrote:

> Technology itself is a contrivance, or, in Latin, an *instrumentum*. Most of the times technology does not reach the peak of full development before something new and faster comes around. We have no time, and even worse, we have no patience. Even though teletext emerged in the late 1970s, it is still in development.

This is the idea of teletext as a medium in search of an audience that would be rewarded from its use. It turned out to be a great hobbies' medium, for anglers, artists, florists, or dozens of other hobbyist groups, as Graziplene (2000) noted. Well, in my view, today "The hobbyists are back!" And teletext's possibilities are not yet fully discovered.

So is teletext a hobby? Are hobbies Art? To answer these questions I asked two of my favourite teletext artists, Dan Farrimond (UK) and Max Capacity (USA) how, when and why they started to work with teletext. We share the same starting point to working with Teletext: 2006 and the *Microtel* project organized by Emma Davidson and Paul B. Davis from Lektrolab. *Microtel* was one of the projects curated by ambientTV.net as part of VBI [voluptuously blinking eye] – a submission for the exhibition "Satellite of Love." This project was presented at the 35th International Film Festival Rotterdam in association with Witte de

With Center for Contemporary Art and the TENT Centre for Visual Arts (http://projects.lektrolab.com/microtel/). Dan, Max and I met for the first time at the International Teletext Art Festival ITAF in 2012. *Microtel* was not the only project outside broadcasting. Other examples included, *För Text-TV, i tiden* (2010) by Fredrik Olsson and Otto von Busch, who mixed cross-stitch and Teletext to convert pictures from the wedding of the Swedish crown princess Victoria that people could send via mail or SMS; and *Teletext Babez* (2000) by Dragan Espenschied and Bodenständig, a video first broadcast on 6 October 2001 on P.A.R.K. 4DTV Amsterdam, featuring teletext pages from German cable TV (collected by me) and a hot euro-dance tune by Bodenständig 2000, all put together by Maarten Ploeg (http://drx.a-blast.org/~drx/projects/teletext/index.en.html).

Regarding the first question about how and when the two artists started to work with teletext, US-based Max Capacity wrote to me (21 July 2014):

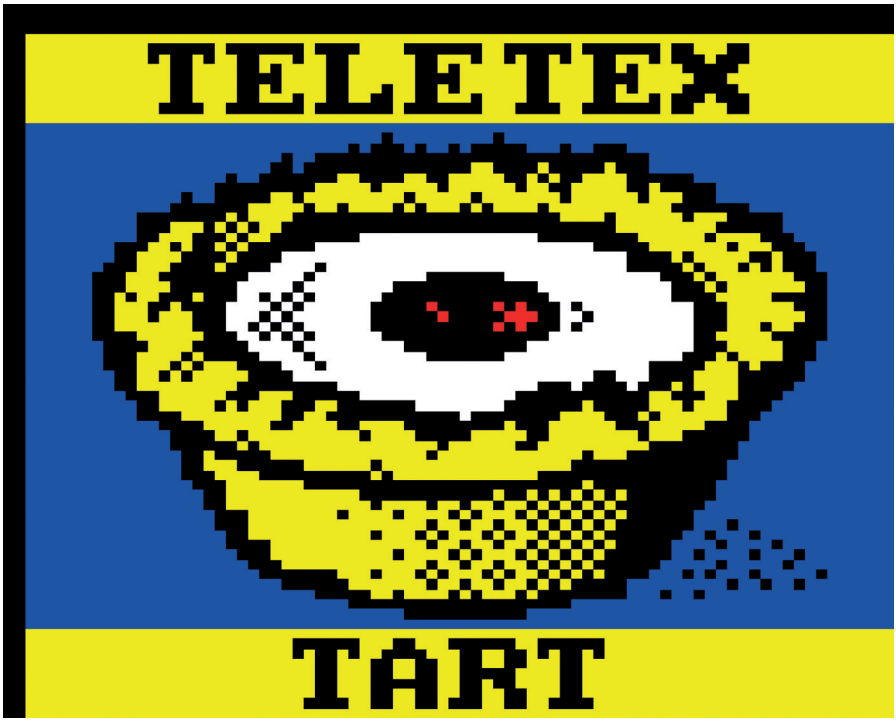
> Here in the U.S. we did not have a very robust or popular teletext system, so I did not actually grow up with teletext. But the aesthetic was similar to American public access TV stations and some networks' schedule and info screens. It was later, when I was working with pixel art from ZX Spectrum and Commodore 64 graphics protocols and experimenting with pirate analog TV broadcasting, that I was recommended teletext (by Rich Oglesby from Prosthetic Knowledge).

***Tiger 3* by Max Capacity. Courtesy of Max Capacity**

> I did some research and was really captivated by the low-resolution graphics produced for teletext. Rich pointed me to CebraText at Microtel.

UK based teletext artist Dan Farrimond replied (23 July 2014):

> I sketched out some experimental designs in the teletext format while researching my university dissertation in 2006, which just so happened to be based around ... teletext art. I did not pick it up again until I discovered an open call for entries to the 2012 International Teletext Art Festival, but I have been working with teletext ever since.



***Teletext Tart* by Dan Farrimond. Courtesy of Dan Farrimond**

Max, Dan and I have different ideas about what we like about using teletext. Max wrote (21 July 2014):

> I really enjoy the limitations of the software. The constrained options for resolution, color, and placement really force me to be more creative than I might otherwise be. If something isn't going to work for me in teletext, I have to make it work somehow (with the limited options and tools) or I have to move on to something else that will work. Also the technical constraints of teletext means that the finished product always fits with the teletext aesthetic.

And Dan replied (23 July 2014):

> I enjoy the challenge of the teletext restrictions, and the fact it is very hit-and-miss – for every half decent piece of art, there are at least three previous experiments that did not work. But when it does work, it is a wonderful accident. Above all that, though, I love the aesthetic and its simplicity. To me, it will always represent the future, specifically that predicted by countless 80s sci-tech films and TV shows. Though they might not have been 100% correct, teletext does continue to thrive as a counterpart to the Internet. So they were right that the medium's lifespan would stretch well into the 21st century.

These answers relate to what Connor (2013) wrote on *rhizome.org* about the 2013 edition of the ITAF festival:

> With the seemingly limitless creative software available today, it can be difficult to understand how complex technological tools shape one's creative output. With teletext, the constraints imposed by the tool are entirely out in the open, making the relationship between the artist and the technology that much more transparent.

For me, teletext has always been related with the TV signal and not emulations. Made in teletext for teletext! It was not until 2011 that I started to work with it seriously; once I had the teletext inserter VBIT, I was able to create my own teletext signal, so I can combine hardware (teletext inserter) and software (teletext graphic editor). I do not share the idea about the constraints. Rather, teletext presents an opportunity for the imagery. But I do agree with the argument of it being a challenge, the patience you require for doing it and how much fun it is.

Working with text-mode

Kittler (1997: 150) wrote that, "[w]hen meanings come down to sentences, sentences to words, and words to letters, there is no software at all. Rather, there would be no software if computer systems were not surrounded by an environment of everyday languages."

I use text-based graphics like teletext and PETSCII, (PET Standard Code of Information Interchange), also known as CBM ASCII, the character set used in Commodore Business Machines' (CBM) 8-bit home computers, as my language and for the joy of text-mode – i.e. the computer display mode in which content is internally represented on a computer screen in terms of characters rather than individual pixels. Both technologies share the grid as a framework and text characters as instructions, its complete method of craft that I define as *KYBDslöjd*, which means drawing and crafting by typing. For me, text-graphics are meant to be typed, a conversation with the machine that is translated into graphics and animations with a character set; i.e. a dialogue stored in text.

In an article from The New York Times about the Spike Jonze's new film *Her*, Yu wrote about romance and technology and how this relationship changes our vision of the world and ourselves:

> I fell ardently in love because of how it shaped my conception of the universe. That's what the Commodore 64 did. Even with its blocky, ASCII interface. Without any graphical representations, it was purer. You looked at text on a screen. You were never under any illusion that this machine was trying to be your friend. It did not want to talk to you – and if you wanted to talk to it, you had to learn its language. (Yu 2014: SR1)

Yu finished the article with "We're holding magic boxes, boxes that want to serve us and coddle us, instead of challenge us. And how can you love something that doesn't challenge you?" (Yu 2014: SR1).

Do you dare to use Teletext? I do.

As part of my teletext "I dare" quest, in 2012 I took part in first ever International Teletext Art Festival (ITAF) that was inspired by the 30th anniversary of Teletext in Finland and organized by FixCcooperative/ FISH Helsinki, an independent artists co-operative founded in 2007 (http://www.fixc.fi), in collaboration with the Finnish Broadcasting Company YLE. "The art works can be viewed with teletext editors or made into animated images but the true forum for teletext art is of course teletext itself," wrote the organizers on their website. And the artworks were shown on the YLE Teletext pages 525-545 from 8 March until 8 April 2012.

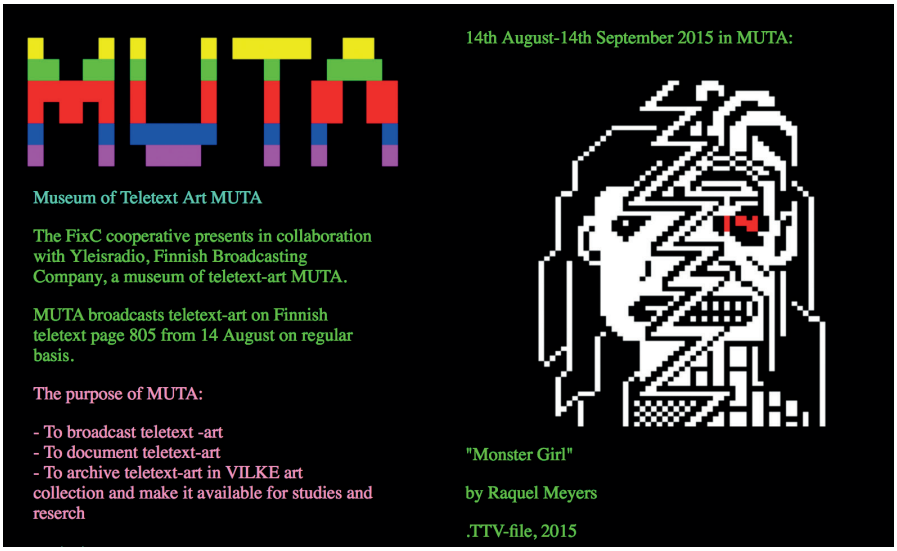
> The potential of Teletext as a tool for artistic expression has not yet been fully discovered though the aesthetics of Teletext have slowly creeped [*sic*] in to the most fashionable street ware, graffiti and fine art. Is the next big word in intellectual small talk of the hip, rich and famous going to be teletextualism? Time will show, but since it happens The International Teletext Art Festival gives the possibility to the ARD Text users to decide for themselves. (ITAF in ARD and Pflüger68 2012)

ITAF 2012's participating artists included Ashley Anderson, Bym, Frederic Cambus, Max Capacity, Cordula Ditz, Maria Duncker, Dan Farrimond, Kathrin Günter, Francis Hunger, Juha van Ingen, Dave Needham, Rich Oglesby, Seppo Renvall, Janne Suni, Jarkko Räsänen and Kari Yli-Annala and myself.

ITAF proclaimed "Teletext as art," and since 2012 they have been on that quest. The festival ran not only on YLE. In 2012, it was also on the German teletext service ARD Text and the 2103 edition was a collaboration with ARD Text, ORF TELETEXT and SWISS TELETEXT and was selected to participate in the ARS Electronica Festival in 2013. In March 2014 the FixC cooperative in

collaboration with Yle Finland founded the Museum of Teletext Art, MUTA, with a permanent teletext-page 805 in Yle teletext, and all the works donated to the museum by artists are archived in digital format in the Collection of Finnish Electronic art VILKE.

From 14 August until the 14 September, 2015, MUTA was broadcast on the Finnish teletext yle page 805, my TTV-file "Monster Girl."



***'Monster Girl'* by Raquel Meyers. Courtesy of Raquel Meyers**

ITAF 2014 was broadcast at ARD Text, ORF TELETEXT, Swiss Text and ARTE Teletext from 14 August until 14 September. As the Breakdown Witch mentioned at the start of this chapter would have said: "Long live the Teletext!"

In 2014, the ITAF (2014) jury decided to give me the first-ever Teletext Art Achievement Award. They stated the following reasons for me deserving the honour:

> Raquel Meyers was rewarded for her highly elaborated and unique style of her own; her outstanding technical expertise and ability of storytelling through the teletext format. The jury acknowledged especially how teletext art plays an integral role of her overall artistic work including embroidery and old computer technologies. (http://www.teletextart.com/information/teletext-art-prize/)

After I made the Teletext series *Do you go where I go* for the ITAF 2012, I started to work with teletext for live visual performances and installations. I used a teletext inserter (VBIT) and a television (with a teletext decoder) to display my own teletext graphics to be browsed with the remote control, just like normal,

broadcast teletext. Below I list the projects I have completed so far, including several collaborations with Swedish musician Goto80 in 2013:

Mind the volcano! (2013) is a text-based, TV-performance using teletext signal for the first time for live performance visuals. The music by Goto80 was composed live in text-based software and shown as part of the visual story. It was performed for the first time at Transmediale festival 2013 BWPWAP, and it probably was the first live teletext performance ever.

At the LWLVL Festival 2014 in New York, I did also a live performance set using teletext technologies and PETSCII Graphics with a Commodore 64. Probably the first teletext VJ set using PAL signal in the United States. For that I had to carry a Television with the teletext decoder and the VBIT hardware to be able to make it. (https://youtu.be/Loq56ibUx3c)

Datagården (2013) was a teletext installation with obituaries based on real information from the Internet. It was made by Possan, Goto80 and myself; the interface was developed by Peter Kwan. It was made at Art Hack Day (Larger than life / Loggen över ditt liv) and exhibited at Bonniers Konsthall (Stockholm). It was most likely the first installation in the world to use a custom teletext signal and featured video input, video feedback and Twitter-feeds along with custom-made graphics/text/software and C64-music.

Thread of Fate (Teletext Norns) (2014) is a solo project with teletext, where the user enters a page number to choose his or her destiny ("Thread of Fate, enter a number from 104 to 300 to choose your destiny with teletext!"). It is based on teletext technology and PETSCII graphics, where the Norns, the female beings who rule the destiny of gods and men in Norse mythology, become the vertical blanking interval (VBIT) that hide in the PAL signal of the Television and the animations are typed manually as a form of keyboard craft. The animation works symbol-by-symbol rather than frame-by-frame.

In ancient times the development of events beyond a person's control was determined by a supernatural power. Mythological characters like the Norns ruled our destiny but, today, we change the fate of gods for a fate in computers. We substitute beliefs for rationality. Computers can analyse true consequences of human nature and tell us what to do, but this is a machine fantasy, a dream of the machine. We twine the thread of fate in a computer screen, into a grid that provides a framework to determine the final output. It's an oblivion metaphor of our times and fate, a storytelling about technology and mythology, a weaving dystopia in text-mode on the two-dimensional regularity of the grid.

As Giddens (1991: 109) said about fate, fatalism and fateful moments:

> To live in the universe of high modernity is to live in an environment of chance and risk, the inevitable concomitants of a system geared to the domination of nature and the reflexive making of history. Fate and destiny have no formal part to play in such a system, which operates (as a matter of principle) via what I shall call open human control of the natural and social worlds.

***Thread of Fate* by Raquel Meyers (2014). Courtesy of Raquel Meyers**

The definition of technology remains "obscure and groundless," as Heidegger (1977) pointed out. And it is not about speed re-production like most of the works posted on the Internet. "We can only make ourselves understood (well or poorly) if we maintain a certain speed of delivery," (Barthes & Heath 1977: 191). Especially since teletext is not just decorative, like a wallpaper. As Baudelaire put it:

> The more beauty that the artist can put into it, the more valuable will be his work; but in trivial life, in the daily metamorphosis of external things, there is a rapidity of movement which calls for an equal speed of execution from the artist. (In Baudelaire & Mayne 1964: 4)

Teletext is a challenge and has the universal language of silence; a complete absence of sound.

Related to that, I wish to mention my collaboration with Goto80 and his *Teletext Music Software* project (http://youtu.be/CE5mhct5L0Y). It was an Internet joke about a magical software application, but that is the beauty of fantasy: to do something that is impossible and to master it. The only real thing about that software was the teletext itself but not the sound (made by him with a tracker in an Amiga computer, and added to the video in post-production). I

send the Teletext pages live to the television, for him to be able to manually trigger them in real time as he was pushing the buttons of the remote control to simulate the tracker. The success of the video on YouTube and the number of people who believed that the software really exists might be related to Giddens' (1991: 3) idea of Postmodernism as a risk culture. But Beck (1992: 72) goes even further: "We are dealing not with 'second-hand experience', in risk consciousness, but with 'second-hand non-experience'."

Teletext vs www

> We live and work in a world in which the telephone, the television, and the computer are being linked together. With that linkage will come whole new ways of learning, relaxing, playing, and working. Indeed, we may be beginning to reach that impossible ideal of Johann Gutenberg in the fifteenth century: all information in all places at all times. (Eder 1985: 90).

Teletext was the precursor of the Internet and the promise for the new link world of real-time information. But it was a dream that had already started in the 1960s with HOMEFAX, developed by RCA. It finally arrived in the late 1970s when "teletext was the name given to systems that distribute text information on spare transmission lines in broadcast television signals for decoding and presentation on specially modified television receivers" (Graziplene 2000: 21-22).

Teletext was created to become the elusive key to dominating the home of the future. We simply had to push a button on a remote keypad to switch to the main menu screen of the teletext. A one-way service with one page at a time to be displayed on a television screen. The www offers information which is to be navigated by the visitor. With teletext the interaction is realized merely by the users' initiative to consult the page using the remote control: "The simplest form of interactivity operates along the spatial dimension only, making possible two-sided or multilateral communication." as Van Selm and Peeters (2011: 662) argue.

Information is power and we want to control it. As Lunenfeld (2011: 39) observes: "There are an exponentially growing number of people who cannot but see the world as information itself. This is the key to understanding the aesthetic effects of the culture machine." We want to control the machine and put it on our knees as forced labour. I am your master, you are my slave. Do what I want. Already in 1985, Cornish wrote: "In the future, we may find that computers are increasingly becoming artificial friends – providing us with helpful reminders about what we need to do, remembering addresses for us, playing music for us that we have indicated we like, etc." (Cornish 1985: 5). The Internet has a multilateral control over us (what we do and what we want or are looking for); we choose less and less because we are overloaded with

information. We want to get a selection made according to our meta-data, even if it is made by robots or commercial strategies. It does not matter anymore. We create and are spam in the www. Information becomes opportunism.

What is more, "[t]here is a world of difference between the most complex randomness and the most elementary combinatory scheme, and it is impossible to combine (to produce) a narrative without reference to an implicit system of units and rules," Barthes (1977: 80-81) wrote. The narrative of the Internet is long gone and it is not getting any better. Robots write books using Wikipedia content. Pagan Kennedy discovered this and wrote about the writer droids in an article for The *New York Times* called "Do Androids Dream of Electric Authors?" – about Lambert M. Surhone and Amazon (Kennedy, 2011). It is not strange that this is happening; we are spoiled and we want even more. A writer cannot generate such an amount of content in such a short period of time. Teletext was the first type of digital journalism and, still, there are no robots behind it, only humans, concrete writers.

Hui Kyong Chun (2011: 184) claims that "[n]ew media, like the computer technology on which they rely, race simultaneously toward the future and the past, toward what we might call the bleeding edge of obsolescence." Instead, I rather say that Information is becoming obsolete on the www. And it is ironic to say that teletext is archaized. However, as usual, the market is the one that decides if the dream is profitable or not, and if it should end, like the fate of the early home computers from the 1980s (for example the Commodore 64). Once the dream is gone, we can only emulate it, and hope for the best.

Teletext for art's sake

For Kluitenberg (2011: 66): "Imaginary media, when understood as machines that mediate impossible desires, should be regarded as impossible machines."

This raises the question: How can teletext be a form of Imaginary media if it is functionless? This brings us to teletext for arts' sake. In my opinion, the use of technology is not only about aesthetics. Most people do not care if you use the real technology or if you just emulate it; the only important thing is that the result looks real. There is no quest in that, only shortcuts. Artefacts as parasites of technology, fitting in perfect harmony and success with the economy system we are dragged into.

> The parasitic abuse of technology is thus not simply a destructive rejection of hegemonic discourses, but a creative intervention that exploits, bends, and shows the limits of established practices. The avant-garde exploitations did not demolish existing forms of communication but irritated media discourses and forced these systems to generate new creative transformations. (Niebisch 2012: 9-10)

This parasitism is the only way to constrain technology and *reanimate* it as if it was a corpse. Still according to Niebisch (2012: 17), "[t]he genre of the manifesto, the most important means of the avant-garde movements to communicate their ideas, invoked the parasite." But this is old history; what about today? Lunenfeld (2011: 39-40) confirms, with regards to the culture machine tagged as the ultimate in postmodernism, that:

> Our moment is *unimodern* in the sense that it makes modernism in all its variants universal via networks and broadcasts, uniform in their effect, if not affect, and unitary in terms of their existing as strings of code. In the *unimodern* era – as bits, online and in databases – a photo is a painting is an opera is a pop single.

Maybe the intrinsic value of teletext is divorced from any didactic, moral or utilitarian function, like the 19th century expression l'*art pour l'art*. As Walter Benjamin (in Benjamin et al. 2008: 42) said: "the artistic gratification of a sense perception altered by technology. This is evidently the consummation of *'art pour l'art'*." It may sound like an old glory, talking about the past, who never goes. As Hui Kyong Chun (2011: 188) wrote: "The major characteristic of digital media is memory." As well as "By saving the past, they were supposed to make knowing the future easier."

Teletext has been imagined as a futuristic device that could transform the idea of art. As Chateau (2014: 32-33) wrote: "Valéry prognosticated the metamorphosis of art along with the invention of a new kind of device, the main function of which was to enable remote data transmission – a sort of television ..." At least, I would like to think that Valéry meant Teletext.

Teletext is not only a domesticated technology because of its daily life characteristic, as mentioned by Markus Stauff (2014: 139) with regards to the domestic character of television:

> One of the most decisive aspects of television's "ecology,", though, is its domestic character, which raises more general questions about the consequences of the domestication of technologies and the interrelation between media technologies and other technologies involved in daily life.

This is one of the reasons that people cannot take it seriously; it is homelike and not post-modern or *unimodern*.

> Revolution has been co-opted by the marketers, on the one side, and fundamentalist death cults, on the other. Technological determinism is not the answer. Technologies certainly open up spaces, but they also close them down. (Lunenfeld 2011: 131).

In my opinion, challenges are becoming like animals in danger of extinction: a memory of the past. We are engaged in a taxidermic tragedy, a lifelike ef-

fect. But this is not a competition; there is nothing to prove and only choices to make. And I choose to go slow, because in this hi-speed society we are losing so many things on the way (not only technology). We have no patience or time: "To live in the 'world' produced by high modernity has the feeling of riding a Juggernaut" Giddens (1991: 28).

Teletext is not a physical object; it is the dark band dividing pictures horizontally on the television screen, used by the PAL system. Vertical-blanking-interval lines like REM (rapid eye movement) sleep intervals. A door to unlock the Imagination.

This is not a manifesto, a sales pitch or a fiction. It is real storytelling about technology. John Giorno (1994) said: "You Got to Burn to Shine." Teletext already did it, what is left is up to us.

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3 What Is Teletext?

A Phenomenological Description

Lars Nyre

Abstract

It seems clear that the teletext experience has rather low intensity compared to that of other media. Teletext consists of a visual interface that communicates in alphabetical script, numbers and icons. In this chapter, I offer a phenomenology of teletext inspired by close readings of Merleau-Ponty, Gibson and Scannell. They all write about lived experience, or perception, and their theories help me answer an existential question: What is teletext? What happens when I turn on the apparatus and start experiencing it? In order to encircle the teletext experience, the chapter describes a series of experiential situations with communicative features: (1) the full body experience of nature, (2) disembedded technological life in the city, and the increasingly-specialized cultural activities of (3) attending a football match at a big stadium, (4) watching the match on live television, and (5) reading about it on teletext. The first four situations are just as important to understand as the fifth, i.e. that of reading teletext and, furthermore, they are necessary preconditions for its "readability." The analysis shows that a medium is a reduction of the action possibilities of perception, and teletext is considerably more reduced than radio, television and online services.

Keywords: teletext, perception, technology, phenomenology

Introduction

This book is oriented to teletext's technology development, social organization and national policy differences. In the process of detailing all this governance, it risks losing sight of the reception process. A book dedicated to its full description must deal realistically with how it is experienced. Compared with other media, teletext has only text and pixels and, as such, it is a limited sensory influence on people's lives. In this chapter, I offer a phenomenology of teletext inspired by close readings of theorists like Merleau-Ponty (1992), Gibson (1966) and Scannell (2014). They all write about *lived experience*, or perception, and their theories help me to answer an existential question: What is teletext? What happens when I turn on the apparatus and start experiencing it?

First a preliminary answer based on insights from other chapters in this anthology. Teletext is an electronic technology that allows humans to com-

municate in a readerly way: to take up the remote control and select a page, read it through and punch in a new number to read another page, for as long as you like until turning the TV set off. The individual user appropriates a standing resource of live, written information. This resource is constructed to have "readability" for its users, and it is contained in large data networks with servers, wires, transmitters and receivers. Indeed, teletext is part of a global network of communication technologies that all have sensory interfaces that allow people to communicate in this way or the other.

The chapter first explains itself theoretically and methodically. The analysis is going to through five distinctly different situations that nevertheless have communicative features in them: (1) the full body experience of nature, (2) disembedded technological life in the city, and three increasingly-specialized cultural activities of (3) attending a football match at a big stadium, (4) watching the match on live television, and (5) reading about it on teletext. The four first situations are just as important to understand as that of reading teletext and, furthermore, they are necessary preconditions for its "readability."

Phenomenological description

Ontology is a way of reflecting on the conditions of existence for humans and their habitats, and it describes the distinguishing features of things and actions in various domains of reality.[1]This chapter is written according to a phenomenological approach. Phenomenology studies the general features of the subjective experience of the world. Phenomenology has a focus on the individual's perspective, their everyday life, their practical projects, interpretations and engagements, and describes all of this in general terms.

Scannell (1998) asked "What happens when I (or anyone) turn on the TV set?" and he underlined that you engage a large technological infrastructure where expert work has already been devoted – with care and concern – to shaping the technology. Like Scannell, I aim to describe the lived experience of media technologies under given historical conditions. While Scannell's vocabulary is borrowed mainly from Heidegger and deals with social concerns, mine is borrowed from Maurice Merleau-Ponty (1992) and J.J. Gibson (1966) and deals with the perceptual dimension of media. My position is meant to fit into Scannell's media ontology, so there is no negating of phenomenological principles. The originality rather lies in the exploration of material aspects of communication within phenomenological limits. Throughout the text there will be connections with central phenomenological authors like Don Ihde, Albert Borgmann and Wolfgang Iser and it is abundantly clear that my arguments rely on close readings of these authors.

My writing method is to formulate *descriptions* of the everyday perception of media. With careful choice of concepts and vocabulary, I explore the human situation in a series of five experiential variations. I construct an implied person, or a manikin, like the crime writer constructs a villain and a detective. And in the same way that the crime novel contains an implied reader who is interested in crime stories, my intention is for this description to be recognizable for any and all readers, regardless of their cultural background. I construct the "implied perception" of a person who shifts between various projects in his daily life, among them watching television and reading teletext. While the latter is clearly the focus of my chapter, the other situations are needed to put teletext in its proper place. The descriptions that follow will not give preference to teletext but place it into the technological life of such a generalized person. It is a form of scenario-building, where stories and situations are presented with the imperative "Imagine this ..."

In relation to history, this approach can be considered a "synchronous description" of the electronic communicative affordances in Western societies at the turn of the 20th century; applicable to most if not all of the countries dealt with in this book. Around 1990, teletext was an established medium in Europe. It was at the top of its curve because, like many other technologies, teletext had a phase when it was new and cutting edge, from the late 1970s and all through the 1980s. Along with the emergence of the Internet and smartphones, teletext entered a phase – from the late 1990s and up to now – when it is being made redundant. In 2015 teletext is definitely by and large a fading medium, with emotional defenders and a majority of researchers never even thinking about it. So please notice that the description presumes a "timetravel" back to a time when teletext was commonly used and the Internet did not exist in people's lives.

The method of phenomenological description may seem odd to some readers. It is not built on empirical data in the social scientific sense but, rather, it consists of a series of variations or imaginings that are eminently interchangeable with any other of a similar type. To support the explanatory force of the arguments, they are visualized in a series of five custom-made drawings by a skilled designer. These drawings show objects and processes and their relations. Since we are dealing with materiality we can simply *show* how the humans relate to the physical objects in question. Academics who deal with perception and technology often make use of such descriptive figures, for example Gibson (1966).

The illustrations show a human character relating to typical perceptual experiences for average Western humans: (1) in nature with a fire, (2) in the city with the transport system, (3) at a football match in a big stadium, (4) watching television with others, (5) reading teletext alone. The figures do not show abstract correlations or modelled relations, they just show what you can

see right there. They show "snapshots," synchronous slices of projects that are active and on-going for a while, before you move on to other matters in your life. In this sense they could just as well have been photographs. The five situations form a trajectory from rich to poor fidelity of mediation, from exploration with all senses to reading text alone and, hence, a trajectory from sensual to cognitive information gathering. This exposes an underlying historical narrative in this chapter.

Full body in nature

Imagine being out in nature without any modern technologies; it could be in the mountains surrounding Bergen, Norway, where there are hills, brooks, forests and bogs. Although you can do many complex tasks in nature, you cannot reach beyond your immediate environment. For most of human history this has been the only situation possible, and it can be called full body perception.

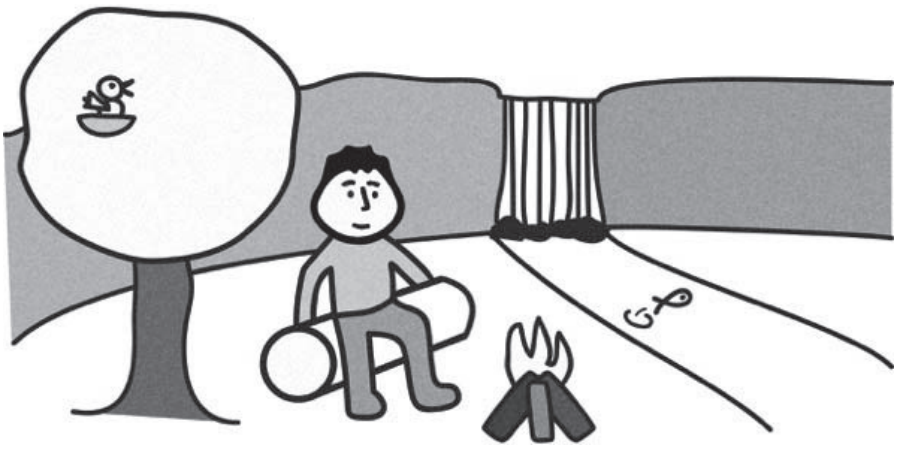

Figure 1. In nature. Drawing by Stig Hovlandsdal Øvreås[2]

It is important to note that full body experience is exploratory. Humans do not have passive sensations as much as explorative projects. Perception is an active search for information about the environment, where the individual (body) uses the combination of perceptual systems most suitable for investigation of the object in question. In assessing the "eatability" of raw meat the senses of smell, touch and vision are engaged, but not, typically, taste or hearing. Elaborating on Figure 1, I will describe the five basic perceptual systems according to Gibson (1966), and add a sixth.

1. The visual system orients to information that can be specified by the variables of optical structure, and chief among them are sizes, shapes,

colours, patterns and ratios. The intentional act can be called "watching" and it relies on light from the sun in the daytime and the light from the fireplace at night.

2. The auditory system orients to information about the nature and location of vibratory events, and they consist of sizes, distances, energy levels/forces, etc. The intentional act can be called "listening" and the manikin in the drawing can, for example, hear a chirping bird, the white noise of the waterfall and the crackling of the fire.

3. The haptic system involves the arms, hands and fingers, as well as the skin surface of the body, and orients to information about the earth, mechanical encounters, object shapes, material states and solidity or viscosity. The act can be called "touching" or "handling" as when building the fire.

4. The taste-smell system orients to the nature of volatile sources and nutritive and biochemical values. This can be to prepare a meal on the blazing fire, and know when it is ideal for eating. The intentional act can be called "smelling" or "sniffing."

5. The basic orienting system relates to information about the direction of gravity, and of being pushed, the sense of body motion, or position-movement sensation, sense of locomotion, etc. Locomotion by foot, swimming, riding and other means are included here.

6. I will add the expressive system. Speaking is a demanding task and involves the whole body. Both listening and speaking are crucial to oral communication; in speaking you must use your tongue, larynx, mouth nasal cavity, and in hearing you must use your skills of interpretation and sensitivity to nuance.

Regardless of how many systems we identify, the whole body is still the primary phenomenon. Here Merleau-Ponty and Gibson are in accord, despite not being part of the same academic cultures. The perceptual systems are interrelated rather than mutually exclusive; they are merely our analytical tools to talk about perception. In a given exploratory project one system combines effortlessly with the others and overlaps with them when registering objective facts. We do not primarily assemble the meaning of the objects and events in our surroundings cognitively; we experience them directly as action possibilities.

Another way of saying the same thing is that perception constantly evaluates the "... –bility" of things. The climbability of rocks, the drinkability of watery fluids, the readability of teletext and, in general terms, the usability of anything. This focus on *assessing the possibilities for practical engagement* is important in phenomenology. There is a subtle link to Merleau-Ponty's notion of the "perceptual horizons" of experience. A horizon is the apparent line that

separates the earth from the sky, and what is below the horizon is somehow within our reach as humans (the sea, mountains, forests) while that which is above the horizon continues endlessly into the sky and is unattainable. While the outer horizon of experience delimits that which is imposed on us by the laws of nature, the inner horizon delimits what can be modified and constructed by the humans. It could be called the "horizon of action" and it tells us what we can do something with and what we cannot.

Disembedded in the city

Imagine that the Bergen woman travels to London by airplane, and lands at Gatwick Airport. She continuously explores her environment, according to the full body perception described above. She can get there in approximately five hours, including waiting time at the airports. She departs from a small city full of mountains, tunnels and bridges and, after travelling on the Gatwick Express, arrives in a multi-million metropolis with motorways, ring roads, commuter trains, buses, underground, taxis, etc. Around her other airplanes take off and fly off to other cities in Europe, the Americas and the rest of the world. She takes part in a global system of air transportation.

Figure 2. In the city. Drawing by Stig Hovlandsdal Øvreås[2]

Compared with life in nature, life in modern technological civilizations is bigger, stronger, more controlled, but simultaneously limits our physical behaviour, liberating us from one situation and enforcing another. The process involved has been called "disembedding mechanisms" by Giddens (1991: 21): "By disembedding I mean the 'lifting out' of social relations from local contexts of interaction and their restructuring across indefinite spans of time-space." Gid-

dens' approach can be supplemented with that of the technology philosopher Albert Borgmann (1984). He distinguishes things from devices, and the latter concept can be considered to describe the same as Giddens' "disembedding mechanisms." Please think back to Figure 1, and the fire in the wood. To build and maintain a fire is to make a thing, Borgmann (1984: 41) explains. A thing is inseparable from its bodily and social world, and a wood-burning stove furnishes more than mere warmth; it is a focus, a hearth, a place that gathers the work and leisure of a family and gives a house a centre (Borgmann 1984: 41-42), while to turn on the central heating system is to use a device.

The city is dominated more by what Borgmann calls devices than by the resource-demanding things. Keep in mind the ubiquitous presence of underground lines, traffic light systems, sidewalks of streets and floor plans of buildings. The function of such technologies is to disburden the humans, Borgmann argues. A device produces an instantaneous, ubiquitous, safe and easy commodity, and it is typically carefree, discardable and perishable. Devices have what Borgmann (1984: 43) calls a "variety of means, stability of ends," which implies that the machinery of the device can change dramatically without the function changing at all. The means are concealed and unfamiliar, while the ends are prominent and available (Borgmann 1984: 44).

It is important to note that while life in the city involves disembedding mechanisms, it does not in itself involve a reduction of the full-body experience. Imagine our person travelling on the Gatwick Express. While she is detached from the natural surroundings by a high-speed train, she is continuously *centred* in relation to the physical world. The train window may feel a little like a television screen where everything just whisks past, but if you open it and stick your head out you will recognize that you are indeed still in the full-body world. Urban life does not in itself produce perceptual discontinuities and breaking points, while electronic media most definitively do (more about this later).

The relationship between perception and technology becomes more complex the more technologies we add to the mix. There should nevertheless be a common ground in the vocabulary of the analytical approach. Following Gibson (1979), I will consider all technologies to be material objects with characteristic *affordances*. Gibson defines affordance as the perceptual possibilities of a particular object or technology. According to Gibson "the affordances of the environment is what it offers the animal, what it provides or furnishes, either for good or ill. It implies the complementarity of the animal and the environment" (Gibson 1979: 127). For example, a ledge affords sitting, air affords breathing and water affords drinking and bathing. Thus, affordances refer to the practical meanings that objects have for observers, and these meanings remain invariant in most cases (Goldstein 1981: 192).

Continuing the definition, Gibson points out that affordances are *action possibilities* latent in the environment. They are objectively measurable, and

independent of a person's ability to recognize them, but always existing in relation to the body and therefore also contingent on its capabilities. For example, a person's reaction to a flight of stairs is basically "here is a way to go up" and not "here is a series of flat, layered surfaces" (Goldstein 1981: 192). Notice that it is the material limitations of objects that create these action possibilities. If all objects could flexibly alter their appearance at any time, alternating between being hard and soft, small and large, loud and quiet, stinky and pleasing, there would be no action possibilities. Again, we return to the claim that perception is the human way of exploring the "...-bility" of objects: the transport-ability of a train or the safety of a football stadium.

Focal practices at football matches

Imagine that the Bergen person goes to the Emirates Stadium to watch an Arsenal home game for the first time. Along the way she encounters sounds, smells, street surfaces, other people, etc. Inside the stadium she can smell the green playing field, feel the noise and warmth of all the other people, and see innumerable colours, shapes and textures of everything around her. She can, for example, study the flickering advertisements, the security guards, or the TV cameras. She can run the gamut of her own personality, for example trying make it onto the live TV coverage by running onto the pitch during half-time to do a boob flashing. She scouts the "boob-flashability" of her location at Emirates stadium.

Figure 3. At a football match. Drawing by Stig Hovlandsdal Øvreås[2]

During the match there will be a mood dominated by the mass of people being assembled in one place. There is social bonding, yelling, beer drinking, rough language, fisticuffs, and perhaps even a real fight. The football stadium

carries a rough-and-ready mood, where events sometimes spin out of control and riot police have to clear the space.

The stadium is a technology that brings a large number of people together in order to attend to approximately the same thing; it could be a concert, but in our case it is a football match. Many different people, independently of each other, can refer to this event as being about approximately the same thing; e.g. they all accept the security rules, and implicitly agree to behaving in a polite way. In this sense the stadium event is a primary social situation; one which can considered a public event regardless of the presence of cameras, microphones or computer keyboards. It is a type of event that pre-dates modern media, but which is also deeply involved in the technological mediation of our own time.

Under the next headline I will deal with mediation of the football match, but first we must specify further what kind of experience the football match is. Borgmann (1984) develops a theory of "focal practices" that fits nicely. Focal practices are activities like playing music, tending a garden, cooking or hunting (Borgmann 1984: 197). They have a unity of achievement and enjoyment, of competence and consummation that makes them valuable beyond the individual's subjective experience. A football match is a focal practice in Borgmann's sense; the quality of "being at the scene" constitutes the event as reality – not only for the ones present at the stadium but also for the absent television viewers.

Borgmann's approach fits nicely with Scannell's, probably due to the fact that they are both inspired by Heidegger's ontology (see Nyre 2007). Scannell (1998: 7) argues that being human means "being with others in a shared world of concern." He sets up a contrast between objective space and humans engaged in space. "I am in the seminar room," Scannell writes. "You can notice that there are several other things in the seminar room as well; a blackboard, an overhead projector, a cassette player." Objective space includes the measured, observed, objective properties (Scannell 1998: 8) which for example carpenters and engineers deal with. Next, Scannell gives an example of the shared world of concern. "I am taking part in the seminar. The only thing that can sensibly be said to be in the seminar with me are you, the other participants, and not the blackboard, the overhead projector or the cassette player" (Scannell 1998: 8). By setting up this contrast between being present and taking part, Scannell encircles the fundamentally communicative way of being that we humans have established among ourselves, even when we use technologies.

Watching television together

Imagine now that the Bergen football enthusiast turns on her television set to watch an Arsenal match. She has returned home, and now watches the match

with her boyfriend in the comfort of her home. There is a big difference between the two experiences. She cannot act in the same way as when she was present at the Emirates Stadium. She turns on the television set with a touch panel, and can hear the sounds and watch the images that appear from the device. The set can be considered a technical frame in which something from the full body world is displayed.

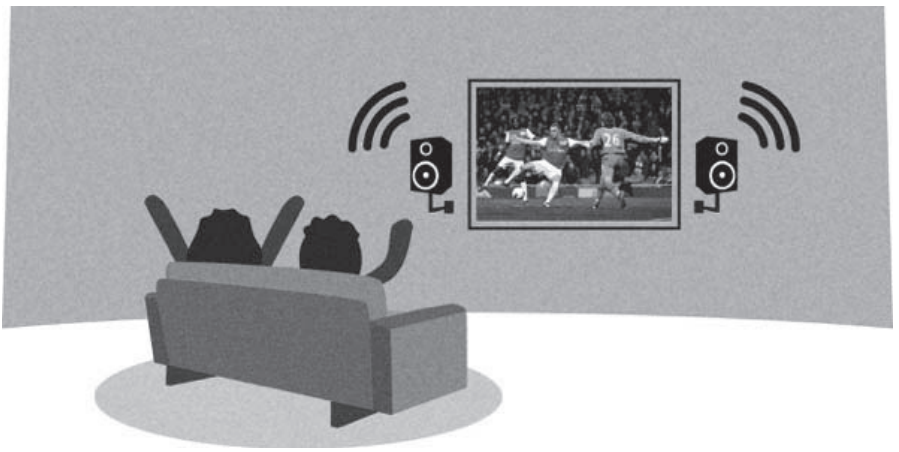

Figure 4. Watching television. Drawing by Stig Hovlandsdal Øvreås[2]

Although her full body perception of course continues while she watches the TV screen, it is strangely impotent in relation to the events presented through the television set. The situation in front of the television can be called a "reduced perception" of the Emirates Stadium. Television presents the same, standardized, and quite limited, action possibilities for everyone. For each medium we could specify the reduction that takes place; for example the reduction to sound alone in telephony, radio and music records. This process opens up creative possibilities at what can be considered the "producing end," and these are the main working features of a medium.

In the human-technology relation described here, there is a strong sense of seeing what is happening in the other place, a sense that there is an indexical link back to the full body world of the stadium. And a phenomenological approach will have to concede that, yes, there is indeed a link, but it has no horizons. The link is being shaped in a technological way so that it should rather be called an "analogue" or a "presentation" of the events on the other side.

Real-time transmission is the strongest analogue of reality. The fact that television is live at the point of transmission has been used to great effect, and carries a tremendous documentary authority due to the fact that it is felt to happen "right now." Furthermore, television displays the sounds and images of the live events, which increases its authority as real. Television is further limited

by camera frames, microphone characteristics, colour limitations, frequency spectrum limitations, cultural conventions, media-specific genres, etc. In sum, we nevertheless get an "analogue." The information we get from the football match by the aid of television is smaller, bigger, faster and slower than the information we would get by being present at the stadium, but it is not at odds with reality. Seen from a phenomenological perspective, what happens is that the TV set *neutralizes the action possibilities* of the objects being presented. Although the viewer sees the possibility for perceptual exploration of the stadium, she knows it is nevertheless completely impossible. This is a "reduction" in strictly material terms: we cannot explore the events at the football stadium with all our perceptual systems when we watch them on television.

Phenomenology is conceptually well equipped to describe this confounding feature of mass media. Merleau-Ponty (1992: 68) writes "the screen has no horizons." He argues that when we recognize objects depicted on a screen, it is based on our familiarity with the given objects and their ratios, and not with a direct perceptual experience of them through the screen. Media perception on this score is fundamentally different from full-body perception.

> When, in a film, the camera is trained on an object and moves nearer to it to give a close-up view, we can *remember* that we are being shown the ash tray or an actor's hand, but we do not actually identify it. This is because the screen has no horizons. In normal vision, on the other hand, I direct my gaze upon a sector of the landscape, which comes to life and is disclosed, while the other objects recede into the periphery and become dormant, while, however, not ceasing to be there. (Merleau-Ponty 1992: 68).

What Merleau-Ponty says about film is also valid for television, and it is also valid for auditory phenomena. The reality of screens and loudspeakers does not include what Merleau-Ponty (1992: 265) calls the "field of presence" extending in the here/there-dimension and past/present/future-dimension. They just do not afford a gradual exploration, like the objects that are within your perceptual horizon.

In ordinary experience this fundamental lack of horizons goes largely unnoticed because of the strong emotional, social and indeed political role of television. Television is a device in Borgmann's sense; the concealed machinery produces an easily accessible commodity. The existential twist consists in the fact that this commodity is fully capable of constituting a focal practice in people's lives, and in this way television become fully meaningful despite its perceptual shortcomings. While it is not a full-body focal practice, it is indeed a public one. It is a "for anyone as someone" structure (Scannell 2000) with a carefully prepared "listenability" and "watchability," and this point fits with Gibson's theory of affordances discussed above. The TV experience is constructed to be a public, social, engaging event. Media strategists and engineers

have constructed the watchability of television programmes in order for them to become a "shared world of concern" or a "focal practice." Scannell (2014: 99) compares the dull inertia of a CCTV surveillance tape with a television programme to show how much care goes into a television programme. "Liveness," he writes, "is the worked at, achieved and accomplished effect of the human application and use of technologies whose ontological characteristic is immediate connectivity" (Scannell 2014: 99). The "care structures" of television aim to please the audience, and create a warm and positive experience.

Reading teletext alone

Imagine that the woman was unable to follow the match live on television, but now she has come home and she checks the result on a teletext service. Most likely, the sound will be turned on from before, so she will also hear the sound of whatever programme is aired on the mother channel at that moment. She turns off the sound, sits down in the sofa and starts reading – sports results, the weather in Bergen, a "breaking news" story.

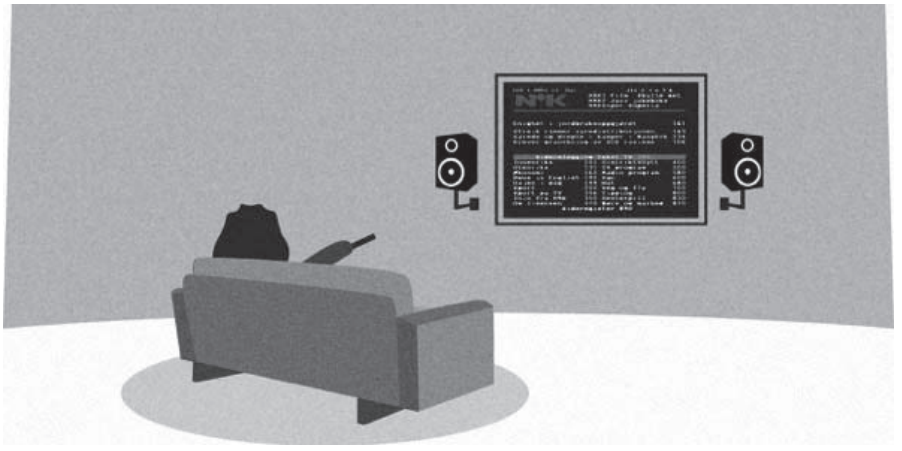

Figure 5. Reading teletext. Drawing by Stig Hovlandsdal Øvreås[2]

There are at least three unique perceptual processes that help to distinguish the act of reading teletext from that of watching television, going to a football match, etc. These are the fruits of applying a phenomenological perspective on teletexts.

1) Live paper: Teletext has a pixelated visual interface. Its expressiveness basically consists of letters, numbers, words and sentences. They are expressed in relation to boxes, polygons, and with a selected typeface. There is no video;

there are no light-induced representations of visual phenomena and no representations of sounds. Teletext does not have the perceptual, technicolour, stereo-sound richness of material that characterizes radio and television broadcasting. Since there is no sound in teletext, it is not produced with its own soundtrack – neither sonfication nor the spoken word. What is left is live transmission and the flexibility of written language, and it is in these communicative qualities that we can finally identify the ontological status of teletext.

Teletext's readability is *live*, and this makes it very different from paper. The words are "streamed" continuously through the transmission and cable systems to the subscriber's television set. The transfer process was for many years analogue but has now, in most cases, become digital. However, teletext is still live at the point of transmission. This is crucial for the human behaviour involved in teletext. The perceptual relations of reading teletext are highly sophisticated. All hand and finger movements are combined with vision, which can change focus, see colours and shapes, read words and sentences, recognize metaphors, etc.

2) Remote control reading: In teletext the remote control comes into its own as a communicative tool. While it is also important for television, for switching channels or zapping around, it lies on the table for most of the time – especially during programmes that have achieved the status of a focal practice. The less the remote control is used, the more successful the programme. For teletext it is the other way around: the more the control pad is used, the more active the reader is. Teletext positions the user as an active seeker of information. Furthermore, the remote control is a technological tool that can be analysed in a phenomenological way. It is tactile, visual and visceral, a little like an axe for chopping wood. There is manual work consisting of punching numbers and letters on the touch panels of media like the telephone, typewriter and calculator, and control panels with buttons and levers for anything from airplane cockpits to high street cash machines. Finger and hand movements are central, and teletext involves cognitive operations, a highly advanced behaviour using several fingers for coding at the same time. This skill is only found only in humans. In Gibson's (1966: 53) vocabulary, it is the eyes-fingers-body system. Touch panels have an indexical link through the technological ensemble since text and images appear on other computers because of acts done here, at the same time. Beyond simply appearing, the text can be stored digitally or on print-outs. However, there is no manual or haptic horizon. You cannot use teletext to move anything physical on the other side, and this is the same as saying that the remote control has no manual horizon. Instead, it has tremendous symbolic powers. The user's actions with the remote control generate presentations of text, sent out in real time, written by the broadcast institution, and presented in a typeface with bright colours and an "electronic" appearance.

3) Pure Code: Teletext is not a continuation of television as much as of the pen and paper; of writing and reading. While it is fine to say that we *watch* television shows, we clearly *read* teletext. So what we have to be concerned with explaining is the readability and writability of teletext. Iser (1980) reminds us that the reader is absent while the writer writes the text, and the writer is absent while the reader reads it. This distance is also characteristic of teletext. The writers, as anonymous clerks in the broadcast company's staff, have almost no identity at all. Teletext has no faces or voices. The primordial identification through these indices is completely nulled out. Teletext can never unite people in the way a live television match can. For the football fan who pines for his side to win there is no replacing the opportunity to be present at the stadium and cheer them on, or at least watching the game on TV along with friends.

It follows that teletext is written words, semantics, syntax and grammar. Teletext relies on the high literacy levels in Western public spheres as well as the dexterity of our hands and fingers. Literacy grows through action via codes or languages; embedded in materials that can store code. Teletext is one of those material forms, along with letters, newspapers, books, telefax, etc. The coded communication of writing is as dense as communication between humans can be.

Teletext is not visually indexical in the way that television can be. There is no seeing "through" the teletext apparatus to the other side. There is no other side except the people who write the code somewhere in the production line of the media company. Teletext is an extremely pure reduction with enormous potential. It can express anything that can be expressed in any natural language in the world. Ihde (1990) describes what he calls hermeneutical technology relations. In these cases there is an indexical or isomorphic link between the user and the reality presented, but the link is coded through language, genres, norms and conventions. If you do not know the culture you will not understand the communication. This is true for teletext, but not for television.

Conclusion: The limits of teletext

The media are reductions of the action possibilities of objects, and teletext is considerably more reduced than television. It is less sensual than moving images and sounds. There is technicolour beauty, but all representation takes the form of symbolic signs. From a phenomenological perspective, teletext does not come across as essential to modern human existence, like nature is, or the transport technologies of the city, our social events and television watching. Compared to these practices, teletext is less impactful, less relevant and less missed when it is inaccessible. The unique perceptual characteristics of teletext,

as described in this chapter, are "live paper" presentation, reading with the remote control, and communicating in pure code.

However, from a phenomenological perspective it is this limited "action horizon"; this visual precision without care for expressiveness is exactly what makes teletext interesting. Because of its material form, teletext cannot easily be included among sociable experiences like watching television together. It seems we have to conclude that teletext is not a focal practice, as Borgmann describes it, nor is it a relation marked by concern, as Scannell describes it. While TV is emotional, collective and inclusive, teletext is logical, individualist and exclusive. Clearly, teletext produces information commodities just like television, but they do not have the same social concern for people, and do not become a focal practice. At the end of the day the most interesting aspect of teletext is its character of not being all these important things. It is what it is as a result of these negativities. Few other media are as pure in expressive forms – with the exception maybe of the telegraph. Teletext affords live readability and writability, and that is what it does.

The analysis of teletext is an instance of media ontology, and my general phenomenological approach to mediation has shown that media present us with materials that *lack action possibilities*, and therefore they communicate in a fundamentally different way from the things that are simply present (or absent). The material that can be manipulated by producers, programmers, speakers, and other creative contributors exists because of specific perceptual skills on the other side of the technological mediation. Electronic media are characterized by a myriad of ways to reduce and codify the body's perceptual reach, and teletext is a particularly interesting example of the process.

Notes

1. Notice that in computer science "ontology" typically means a comprehensive system where all items can be expressed in the ontology. "An ontology compartmentalizes the variables needed for some set of computations and establishes the relationships between them" (Wikipedia 2015: "ontology").
2. All drawings: © *Stig Hovlandsdal Øvreås*. Reproduced by permission of Stig Hovlandsdal Øvreås. Permission to reuse must be obtained from Stig Hovlandsdal Øvreås.

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PART 2: Cases

4 Teletext in Flanders

A Medium Hiding in Plain Sight

Hilde Van den Bulck

Abstract

This chapter analyses teletext in Flanders, the Northern, Dutch speaking part of Belgium, focusing on teletext in public service as well as commercial broadcasting, and working from a combination of theoretical insights from the international literature, internal documents and publications on teletext, and in-depth interview with privileged witnesses. The aim is to help fill the gap between, on the one hand, the long-standing – if dwindling – success of teletext and, on the other hand, the lack of policy and academic attention. First, a factual history of teletext in Flanders is provided that allows for a better general understanding of its evolving position in the media landscape. Next, the chapter explores potential reasons for the gap between its general success and the academic and policy neglect. Furthermore, it discusses how developments in this "forgotten" medium pre-echo contemporary debates in media policy, focusing on three elements in particular: the relationship to other media, especially newspapers in the early days and, more recently, internal online newsrooms; the relationship between teletext content and social issues such as decency and privacy; and the notion of '(inter-)active audiences' which teletext users proved to be. An analysis of teletext is thus shown to help understand the relationships between various media in today's complex media ecology

Keywords: teletext, Flanders, policy neglect, content and social concerns, (inter) active audiences

Introduction

As in many other cases in this book, the long-standing – if dwindling – success of teletext in Flanders, the Northern, Dutch-speaking part of Belgium, harbouring just over half of the 11 million population (www.belgium.be), contrasts sharply with the lack of attention it has received in policy and academic circles alike. Originated within the confines of the public service institution during its monopoly period, and originally pushed by a handful of enthusiasts, the medium quickly expanded both in types of content provided

and success with audiences and, after commercial competition set in, was extended to other broadcasters. Yet, in Flemish media regulation, teletext is mentioned rarely and only in passing. A similar absence of interest can be noted in the literature. This chapter wants to help fill this gap by analysing the public service and commercial development of teletext in Flanders, starting from the conviction that there is a need to understand the medium in its own right and as a means to analyse and better grasp other media developments. What makes the Flemish case of interest is that it is not just a good example of how a medium can be hugely popular with audiences while being neglected by policymakers and academics, but that the case shows quite convincingly how developments in this "forgotten" medium pre-echo contemporary debates in media policy and the relationship between various media in today's complex media ecology.

After this introduction, the chapter first develops a theoretical framework with conceptual issues that are instrumental to analyse not just why there has been so little attention from regulators and policy makers but also how teletext is related to other issues that feature in discussions on media developments today. Next, a brief factual history of teletext in Flanders is sketched to allow for a better general understanding of the evolving position of teletext in the Flemish media landscape. The focus is on teletext in public service broadcasting, as this is where the service was originally developed, but pays attention to the commercial alternatives as well. Subsequently, teletext is discussed with regards to a set of research questions that relate teletext development to wider media issues. Finally a conclusion discusses the lessons learned.

The research is based, first, on a study of the relevant international literature. Little work has been done and focuses mostly on the US failure to introduce teletext (cf. Graziplene 2000; Sterlin 2006) but some relevance can be found in more theoretical-conceptual thinking regarding the introduction of new media and various issues relating to this. The research is based, second, on internal documents and publications on teletext, mainly from the Flemish public service broadcaster. Third, the study has been much enhanced through in-depth interviews with privileged witnesses: Stijn Lehaen (then Head Digital Media VRT, interviewed May 2012), Jo Martens (VRT study department, April 2012), Emmanuel Rottey (then Chief Editor News Gathering, Online and Social Media at VRT, 9 October, 2014), Linda Van Crombruggen (Worked for VRT teletekst 1981-2007, interviewed 22 October 2014). Interviews were transcribed and analysed by means of an instrument developed on the basis of the conceptual literature, looking for answers to the research questions. Information from written primary and secondary and from oral sources was triangulated.

Theoretical framework and research questions

Non decision making and policy silences

To date, no history of Flemish teletext has been written. There are two books by editors of the Flemish public service broadcasters, written five (BRT Teletekstredactie 1985) and ten (Verpoorten 1990) years after the introduction of teletext, and one special issue of Flemish academic journal *Communicatie* [Communication] (1984) that deals with teletext, combining contributions from academics and professionals. After 1990, though, academic and general interest seems to have died down and was limited to paragraphs in studies of broadcasting or innovation. Therefore, the first question this contribution wishes to answer is: How did teletext in Flanders start and develop over time?

This lack of academic attention was mirrored by a lack of legislative and policy attention. Indeed, a study of the regulatory and policy documents relating to media in Flanders show a considerable lack of interest in or concern for teletext. Until the late 1990s, teletext was not mentioned in any media legislation. The media decree of 1998, which brought together all media regulation with regards to broadcasting, did mention teletext but only introduced it in the section on (the prohibition of) advertising on public service teletext (cf. infra). Today, it is limited to references where issues with regards to other media "also apply to teletext" (Vlaamse Regering 2014). Similarly, in the successive management contracts between public service broadcasting institution VRT and the Flemish government, mention of teletext is rare and limited to a few lines (e.g. Vlaamse Regering 2011). As such, teletext appears to be an instance of what Des Freedman (2010) refers to as 'non-decision making' and policy neglect. Freedman (2010: 347) appeals to media policy scholars to look at these instances "to locate power in less visible arenas of decision making and indeed to focus instead on examples of non-decision making and policy neglect." Such an approach, still according to Freedman (2010: 347), looks for the ideological processes behind policy decisions and "examines the means by which alternative options are marginalized" or indeed, ignored. Understanding why teletext was not prominent in media policy debates and regulation (or the research thereof) can thus help to see policy decisions (or absence thereof) as the result of unequal access to power. This leads to the research question: What reasons explain the lack of policy decisions with regards to teletext in Flanders?

Some potential explanations to understand (the lack of) policy attention for certain media innovations and issues can be found in the literature. One inroad is an analysis of the paradigms and metaphors within which certain media (policies) develop and that function as ideological policy guides. Metaphors help to mentally capture certain processes (cf. Lakoff & Johnson 1980), including those involved in dealing with media. Media innovations draw the attention of industry, policy makers and users when they manage to push for an awareness

restructuring that leads to rephrasing the dominant metaphor/paradigm through which media and their use are understood (cf. Schön 1993). Following this line of thought, it would appear that, at least from the point of view of the media policy makers, teletext, as part of the broadcasting media, was seen by policy makers through the prism (and as part) of existing and well-developed paradigms/metaphors, therefore not requiring a new (policy) paradigm and policy initiatives. This chapter will look for indications hereof in the Flemish case.

A second potential, and related, reason for the lack of policy interest in teletext can be found in the perceived lack of innovative industrial-economic potential. This hypothesis assumes that, at its outset and different from its sister technology of videotex (online information), teletext did not really involve the building of a new industry and a new economy as it was mainly seen as an 'add on' for broadcasting rather than a 'new' development and because, in its early years, it developed within the confines of the public service institution, allowing little room for commercial exploitation. According to Carey and Elton (2010: 220), "[t]he governments of France and Japan, long time devotees of industrial policy, supported videotext development with grants for research and development" while for teletext, policy makers perceived no such industrial and economic advantages. This chapter analyses to what extent this applies to teletext in Flanders.

Back to the future: Returning questions

The lack of policy and academic interest in teletext did not just result in a lack of understanding of the medium of teletext as such but protracted the understanding of issues and concerns relating to the introduction of subsequent media. In other words, this contribution explores the claim that issues arising with regards to teletext foreshadow academic and policy discussions surrounding subsequent introductions of new media and platforms, ranging from the Internet and social media to computer games. Three elements in particular will be explored: the relationship to other media (RQ3), the relationship between teletext content and social issues (RQ4), and the notion of '(inter-) active audiences' (RQ5).

First, it is interesting to explore the set up and development of teletext in relationship to other existing and emerging media. In media policy research, the relationships between various media have long been seen as a battle between competing media outlets and companies (cf. Doyle 2002). More recently, however, a media market is conceptualized as an ecosystem. Media ecosystem refers to the careful balance between the different players in a certain (inter) national, regional or local mediascape (Fransman 2010; Lopez 2012). The term is highly ideological as it claims the authority and normality of natural cycles for man-made industrial-economic activities (Gitlin 1982: 216). Yet, it provides an

interesting view on the relationships between various (old and new) players in the media market and has been a powerful tool in the hands of media players to defend their "stake" in the media landscape against unfavourable changes. From this perspective, technological innovations such as the introduction of teletext alter the balance in the audio-visual media industry's ecosystem with potential effects for certain players in the value chain, including businesses and consumers. This results in the research question: How was teletext seen to impact on the balance between existing and other emerging media in the Flemish media ecosystem?

Second, teletext was not just about policy and different media but also about content. The technological characteristics of teletext required a specific type of language use, different from that used in both newspaper and broadcasting. Therefore, it is interesting to study the characteristics of teletext language in its own right. The relevance hereof goes beyond teletext, though. According to Cary and Elton (2010: 10), there are two stories about how the web developed. While most attention has been paid to the development of the Internet from its inception as a US military project (Arpanet/Advanced Research Projects Agency Network), they point to a less-explored story that is related to the history and development of content.

> From the late 1970s through the mid-1990s, videotext and teletext were the experimental field laboratories for content development. (...) Between them, however, they developed advertising, news services, games, shopping, and even auction. (...) All these services led the way to models of content on the Web today. (Carey & Elton 2010: 10)

This chapter explores to what extent this holds in the Flemish case. It will not just look at the types of content available on Flemish teletext as such but also at the extent to which this resulted in controversy. Indeed, in the history of media content, each new medium has elicited concerns about its impact: from the fear of copycat behaviour (from "Das Leiden des Jungen Werthers" over television and games) to concerns about privacy (from the telephone to the Internet). This results in the research question: What types of content were available on Flemish teletext and to what extent did it ignite societal concerns?

Finally, it is interesting to study the relationship between teletext and its audiences. In a traditional division of types of relationships between media/information and audiences, four types can be distinguished, depending on where resides the power to provide and to consume: mass communication, consultation, registration and one-to-one communication (cf. McQuail 2010). According to McKinnon (2012: 20), making reference to Elton and Carey (1983): "Newspapers, magazines, television and radio established the frames through which media industries understood their teletext research, but video games established the frame through which children understood teletext products."

This suggests that while teletext was established within a medium of mass (one-to-many) communication, it did not necessarily restrict itself to this type of communication and audiences did not necessarily consider and use it as such. This results in the final research question: What was the nature of the relationship between Flemish teletext and its audiences?

Teletext in Flanders: An historical overview

Teletext pioneers

Teletext was first introduced to Flemish audiences in 1978 by a local (Ostend) cable company TEVEO that gave its 30,000 subscribers access to the BBC service Ceefax through its open net (Dewulf 1990: 10). However, with no decoder to enable content selection, audiences could only watch pages as they rolled over the screen. In 1979, the public service broadcaster BRT (now VRT) started tests, following the British Ceefax norm rather than the French Antiope standard (Dewulf 1990: 11). Eventually 'Teletekst', the public service version of teletext, officially started on 8 May 1980 on an experimental basis as a free add-on service of the broadcast institution (De Grooff 1984: 3). As Teletekst veteran Linda Van Crombruggen (2014) explains in an interview, the word Teletekst had earlier been trademarked by the Dutch public service broadcaster NOS that kindly allowed its Flemish counterpart to use it. Originally, few or no funds were allocated to the project: a single input device and a computer memory of a maximum of one hundred pages were provided. These were operated, as Van Crombruggen (2014) elaborates, by volunteers: one journalist and one information secretary of the television news department who did this on top of their regular job. As a result, the original offer was limited to 40 pages, of which only a few could be refreshed and for which there was not enough time for regular updates.

However, Teletekst (decoders) turned out to be a success with audiences. They had the opportunity to compare Flemish teletext with its much more elaborate Dutch NOS counterpart – which started with its own 13-staff newsroom and high capacity equipment (Boussé 1985a: 7). This competition pushed the Flemish initiative ahead and, as a result, in May 1981 teletext obtained its own newsroom, consisting of three journalists, three typists and a graphic designer employed to work exclusively for the new medium. This allowed teletext to meet the growing demand for new subjects and faster news coverage (Dewulf 1990: 13-14). For instance, by means of a direct data connection between teletext and the central elections computer, each new result of the 1983 local elections could be consulted within mere seconds (Dewulf 1990: 15). By 1983, all one hundred pages were in use, with an improved layout and divided into seven chapters, each with its own table of contents.

One key aspect of teletext was subtitling, aimed at the hard of hearing. It was first applied in the autumn of 1980 for the live broadcast of Egyptian president Sadat's funeral (Ameel 1990: 41). In 1982, subtitling was limited to live sports broadcasts (that were not very labour intensive) and a limited number of the main television news bulletins (Boussé 1985b: 55). The development of specific subtitling equipment in 1983 and the specific assignment of two of the teletext staff to subtitling, guaranteed a steady growth in the number and types of subtitled programmes (Ameel 1990: 42). According to Van Crombruggen (2014), teletext was further promoted off-screen, during events across the country such as the annual book fair in Antwerp.

Coming of age

In 1985, Teletekst's success pushed further expansion. Based on information obtained from an academic audience study conducted in 1984 (De Meyer et al. 1984), adjustments were made. In February of that year, new equipment allowed the expansion to eight hundred pages, better distribution allowed for faster manoeuvring through the pages, and each of the, now eight, chapters (news, sports, weather/traffic, radio/TV, financial, leisure time, consumer, daily/weekly papers) was given its own number and table of contents (Dewulf 1985: 42-43; see also Dewulf 1990: 18). Rolling pages were introduced but again removed when audiences indicated their annoyance with them, as Van Crombruggen (2014) explains. Subtitling was split into two separate services, one for each public service television channel. Following the BBC example and encouraged by audiences, the continuous news flash was introduced (Dewulf 1985: 45). The success of the original coverage of the 1982 elections was surpassed by the much more extensive and faster coverage of the 1985 parliamentary and the 1988 local elections (Dewulf 1990: 19-20). Yet, the fact that Flemish public service television did not start broadcasting, and therefore Teletekst could not be consulted, before 2 pm each day was considered a hindrance for the development of services such as traffic news. This was all the more regrettable since such services, next to information provision, were considered key to the growth (of the success) of the medium (Dewulf 1985: 45).

As a result, throughout the late 1980s, Teletekst further developed in providing news and service information. To this end, it established a network both outside (Brussels stock exchange for futures and currency market data, Belgian national airport Zaventem for flight information, the national royal weather service KMI for weather updates, amongst others) and within the institution to help establish specific pages. To the latter's end, a technical data network was set up throughout the institution connecting all Teletekst informants, who each had their own input equipment and a code providing access to their specific pages (Dewulf 1990: 24).

Competition

With the legal break-up of the public service television monopoly in 1987 and the arrival on 2 February 1989 of the first Flemish commercial television channel, VTM (Saeys 2007), a new teletext service was introduced in Flanders: VTM text. VTM had its origins in part in the politically-felt need to provide an alternative news service (Van den Bulck 2007). As such, news and information provision was considered a key function of this new channel, also through teletext. According to Van Crombruggen (2014), the first VTM text employees were recruited from the public service broadcasting news and Teletekst rooms. However, VTM text differed notably from its public service counterpart. It had a different look, with bright colours, a distinct commercial flavour with advertising banners, and a more commercial approach to audiences – with regular raffles and the like. It further provided interaction through 0900 paid telephone lines, which were a source of income. The news content was provided by the press group Concentra, then publisher of regional newspaper *Het Belang van Limburg* and shareholder in VTM (Van den Bulck 2014). The introduction onto the Flemish television market of more commercial channels – VT4 and 2BE (1995), Vitaya (2000), VijfTV (2005) etc. – was often accompanied by complementary teletext services following the more commercial set up of VTM text.

The arrival of the commercial competitor VTM was not really anticipated or did not provoke immediate strong reaction from the public service broadcaster in general (Van den Bulck 2007) or its teletext service in particular, as Van Crombruggen (2014) confirms in the interview. Some innovations could be observed in 1989, though. Teletekst was allocated additional personnel and new input terminals were installed, digitizing the news input via an Electronic News System (Dewulf 1990: 28). Public service television started broadcasting earlier on in the day, so Teletekst could now be consulted from 10 am onwards. This was not just the result of competition but rather of audience's and teletext editors' demands and of external developments such as the introduction of CATS (Computer Assisted Trading System) on the equity market, which resulted in trade starting earlier (Dewulf 1990: 26). Competition did have an effect on content, though, as Van Crombruggen (2014) elaborates on in the interview. Up until that point, Teletekst provided a late-night overview of the headlines of tomorrow's newspapers and an early overview of the public service television news. The latter was considered a service to the audiences and a cross-promotion for the television news. However, with the arrival of commercial television news, the latter service was discontinued as the public service television news did not want to give away its headlines to the competition. Since teletext at the time was not mentioned in any media legislation, advertising – not allowed on public service television – was not legally prohibited for Teletekst and, so, in the 1990s some attempts were made to introduce advertising banners. Yet, this was

never a wholehearted affair, according to Van Crombruggen (2014), as teletext workers felt it went against the public service ethos and politics interfered (cf infra). The only commercial revenue generated by Teletekst was through its so-called "snow-line" where people could phone in during the winter months to obtain detailed information on snow in ski-resorts.

The 1990s saw a flourishing of public service Teletekst with a diversification of content and services. The public broadcaster added an array of services from carpooling information and hitchhiking services Taxistop and Eurostop, to commodity tests from consumer service Test-aankoop and information on the quality of sea water (Dewulf 1990: 27-28), to detailed information for pigeon fanciers and other lesser known sports (Van Crombruggen 2014). Special attention was given to youngsters through the development of TT-junior, which included games, birthday wishes, theatre advice and the like (Van Crombruggen 2014; Dewulf 1990: 28). The expansion was mirrored by its success with audiences. A 1997 survey with a representative sample of Flemish television households (VRT studiedienst 1998) showed that no less than 93 per cent used one of the existing Flemish teletext services weekly. However, the success slowed down the loading of pages to up to thirty seconds (De Redactie 2010). As a result, in 1998, VRT teletext was split into Teletekst 1 (for general interest channel TV1) with extensive news, weather and sports, programme guide and lottery results, amongst others, and Cantext (for the second, "serious" channel Ketnet/Canvas) providing cultural and financial information, interactive games and travel information. However, according to Van Crombruggen (2014), it quickly became apparent that this was not user friendly nor was there enough teletext personnel to accomplish this, and the split was terminated on November 1, 1999.

Restructuring

In the early 2000s, the teletext services of the VMMa and SBS broadcasting groups further explored their commercial opportunities, including the introduction of erotic pages and interactive options. In 2010, having received a warning in 2008, VTM, 2BE and JIM (of the VMMa group) and VT4 and VijfTV (of the SBS group) were fined by the Flemish media regulator for putting erotic content on teletext unencrypted during the day, which was considered as potentially harmful to young people (VRM 2010).

Conversely, following audience research, from 2002 onwards, public service Teletekst changed slightly, focusing more heavily on news provision and on up-to-date news. At the same time, the need was felt for a presence on the Internet (De Redactie 2010). Teletekst's emphasis on news and speed resulted in a growing tension between the Teletekst and radio newsrooms, as the former was faster and made a different selection of the news. Increasingly, as Emma-

nuel Rottey, at the time of the interview Chief Editor online and social media explained (2014), VRT management realized it provided three somewhat different news selections through its three (TV, radio, teletext) media and that this needed streamlining. This was part of a push towards convergence. Indeed, the main, fundamental innovation in Teletekst resulted from a complete restructuring of the public service news services (cf. Van den Bulck & Tambuyzer 2013). The convergence of public service radio, television and online news provision into one newsroom, and of the three sports departments into Sporza in 2007, was predated by the merger on 1 January 2003 of the Teletekst newsroom on the one hand and the online newsroom vrtnieuws.net (now deredactie.be) and sporza.be on the other hand (De Redactie 2010). Van Crombruggen (2014) explained that this meant a further split of the old Teletekst newsroom, as subtitling remained under the wings of television but those providing news, sports and services each moved to a separate home.

Demise?

The next innovation for teletext in Flanders was the move from analogue to digital, increasing its potential. Since November 2009, the teletext pages of VRT's general interest channel één can be consulted not just via television and the Internet but in a mobile fashion via an app for smartphones. At that point in time, Teletekst had a newsroom that maintained more than 700 pages, covering 10 sections from 6 am until midnight daily. As a result, in 2010, celebrating 30 years of Teletekst, the prognoses were positive as VRT claimed that "the online medium *avant la lettre* is ready for the future" (De Redactie 2010) and that its key characteristics of being quick, simple and reliable helped guarantee its success in the digital era (De Redactie 2010). In 2012, then head of digital media Stijn Lehaen (2012) and VRT study department collaborator Jo Martens (2012) confirmed this in the interviews, referring to the fact that, at that time, the mobile Teletekst app was VRT's most downloaded app. However, by 2014, the future seemed less secure. While subtitling remains important, with 25 people working in this department, the government-induced need for cost cutting and a managerial consensus regarding the priority of the news website have affected the perceived relevance of Teletekst. VRT's head of social and digital media, Rottey, speaking in the autumn of 2014, expects the information function to take a back seat at the advantage of the website, while the services of Teletekst will continue until a critical bottom threshold of users will be reached (Rottey 2014). As it is, numbers of Teletekst users decreased, from 700,000 in 2009 to 180,000 in 2014, as people increasingly migrate to the website and, indeed, consult teletext online (Lehaen 2012).

Claiming that teletext had become an old-fashioned medium of which the functions could be better performed by online and social media, VMMa stopped

VTM text (and the teletext services of its other channels 2BE, JIM and Vitaya) at the end of October 2014. Its main functions were taken over by the channel's website vtm.be and the VTM app. Only subtitling remained available on page 888 (Llo 2014). The pages for pigeon fanciers were taken over by SBS teletext VIJF Text until further notice.

A case of policy neglect

A key factor in the lack of attention for teletext in Flanders is that it developed in the context of public service broadcasting which had held a broadcast monopoly since 1930 and, at the time of the start of Teletekst, was not allowed any commercial revenue (Van den Bulck 2001). A possible alternative platform for a teletext initiative was the cable operators, as the Ostend example at the very outset suggests. Flanders (and the whole of Belgium) is an example of an early and widespread adopter of cable broadcasting (Saeys 2007). However, the cable industry at the time was decentralized in several, relatively small scale, "intercommunals"; i.e. collaborations between two or more municipalities (Stevens 2009). At the time, they did not have the size or financial means to start new media initiatives, although later on, they would adopt teletext to provide their cable subscribers with practical information.

As a result, first, Flemish teletext was originally, and for a long time, considered as part of existing metaphors, a re-interpretation of, but no real shift in, the paradigms of print and broadcasting. It was initiated as an "add on" service to public service television and thus considered part and parcel of this medium, to the extent that in the organizational chart, Teletekst was never recognized as a medium in its own right but remained under the responsibility of the head of television news throughout its history – "like a stowaway" (Boussé 1985a, author's translation). Some of the Teletekst workers saw this additional news source as the fusion of the print and broadcasting paradigm: as the "printing press from a distance," "Guttenberg on the TV screen," "the final step in the realization of McLuhan's Guttenberg Galaxy" (Verpoorten 1985: 30-31, author's translation) that put a renewed focus on the literacy skills of audiences. Later on, others saw the future of teletext more from a computer perspective in its potential as permanently updateable and consultable database. Looking ahead in 1985, Teletekst editor Bernard Dewulf (1985: 45, author's translation) tried to imagine all that Teletekst could encompass, referring to "the provision of service pages including up-to-date traffic news, flight information from Zaventem [national airport], 'on line' stock exchange information, agricultural database and the like." As Van Crombruggen (2014) explained in the interview, the evolutions in sports reporting on teletext, amongst others, demonstrated that teletext was indeed ideally suited for anything with tables, numbers (football

results, weather forecast, traffic updates), while the election coverage showed the ease with which external computer data could be taken over automatically (Dewulf 1990:20). By that time, though, the notion of teletext as an extension of mass communication was well established in the minds of policy makers and industry.

This is not to say that the industry took no notice. There was considerable cooperation and consultation with the industry. The start of teletext was pushed by Fabrimetal, the umbrella organization of household electronics manufacturers (Dewulf 1990: 11). The development of affordable television sets with teletext decoders greatly added to the spread and popularity of early teletext (Piens 1990: 89). In the 1990s, Dutch home-electronics maker Philips in Eindhoven (NL) developed a television set that could store teletext pages so that viewers did not have to wait for the entire carousel to go past. Van Crombruggen (2014) adds in the interview that the industry also developed suitable remotes and fast texts systems. As such, in the vocabulary of Carey and Elton (2010: 32), teletext was a case of "piggybacking on replacement cycles." Television was well-established in households and, as people regularly replaced their old sets, new sets provided options for teletext without extra cost or effort. "This provided a highly favourable context for the rapid diffusion of teletext" (Carey & Elton 2010: 33), but did not push for the development of a whole new, and potentially profitable industry.

Relationship to other media

External relationships

The start of teletext in public service broadcasting in 1980 was preceded by extensive consultation and negotiations with the printed press, represented by the Belgische Vereniging van Dagbladuitgevers (Belgian Association of Newspaper Publishers) (Dewulf 1990: 11). The press recognized that, in principle, teletext was a broadcasting issue but at the same time considered the medium as a potential competitor. A compromise was reached that every evening between 9 and 10 pm the newspaper headlines would be put onto Teletekst, where each newspaper had its own page. Audience research in 1984 (De Meyer et al. 1984) further confirmed to both broadcaster and press that teletext was no competition for newspapers as people indicated their newspaper reading was not affected by teletext use. Both were seen as different media with their own specific characteristics, including the brevity of teletext information. In subsequent years, according to Van Crombruggen (2014), teletext often served as incubator and motor for new technological possibilities and digitization. For instance, she explains how the financial newspaper *Financieel Economische Tijd* (FET, now *De Tijd*) studied the teletext technology and rented Teletekst lines

to send financial data to its subscribers. In 1995, the FET would be the first to have an online "newspaper" rather than resembling a digital brochure (Beyers 2004: 12). As such, teletext is considered by some as the forerunner of online newspapers (Beyers 2004). The relationship with the press remained stable until the introduction of the VRT news website, which was contested by the press as unfair competition for their own online initiatives (Van den Bulck 2008).

The arrival of the first commercial teletext service of television station VTM resulted in the transfer of some of the public service teletext workers. However, at that time, the two services did not consider each other as competitors as their aims differed, with VTM text having a much more commercial goal while the public service Teletekst stressed information and service. Van Crombruggen (2014) explains how relationships changed in the 1990s when public service management, looking for alternative revenues, decided to experiment with commercial banners on pages other than those for news and children and youngsters. This was possible in principle as the media decree, regulating advertising on public service broadcasting, did not mention teletext. However, the move was much contested by the commercial competitors claiming it would distort the market. This complaint was picked up by neoliberal politicians and this led to an amendment of the media decree to prohibit advertising on public service teletext (Van Crombruggen 2014). This constitutes a pre-echo of the debates about advertising on the public service news website (Van den Bulck 2008).

Relations with the various external organizations that teletext worked with, including the Belgian national airport Zaventem, Royal weather institution KMI, Royal Belgian Association of Pigeon Fanciers KBDB, were usually quite good because mutually beneficial. Nevertheless, some conflicts occurred; sometimes because Teletekst was not entirely satisfied with the services rendered (as with the KMI) (Dewulf 1990) or, as Van Crombruggen (2014) explains, because an organization made what were felt by Teletekst to be exaggerated demands, for instance the umbrella organization of pigeon fanciers KBDB. Furthermore, some institutions and organizations outside the media considered teletext as a competitor. For instance, the introduction in 1985 of a permanent time indication on Teletekst was considered as competition for the pay-per-call "speaking clock" service of the national telephone and telegraph operator RTT (Dewulf 1985: 44).

Internal relationships

While unhappy not to be recognized as a medium in its own right, as was the case in the Netherlands, Teletekst's position as part of the public service television newsroom (cf. supra) overall was not one of constant internal competition but rather of relative symbiosis and mutual advantage (Dewulf 1990). Nevertheless, as Van Crombruggen (2014) elaborates in the interview,

the relationship remained somewhat uneven, as television was always prioritized, financially but also in other ways. In the early years, television did not start until well into the afternoon and since Teletekst could not be consulted without at least the test pattern being on air, the public broadcaster lobbied for air time for the test pattern but this was refused on financial grounds. In the 1990s, attempts from the Teletekst newsroom to heighten the profile of teletext, by launching a competition amongst Teletekst audiences to design a logo, were also quickly brought to a halt as teletext was not allowed to be more than a supporting medium (Van Crombruggen 2014). This pre-echoes policy discussions in Europe in the 2010s about whether websites of television programmes can provide more than is necessary to support the programme (Van den Bulck & Donders 2014).

Over the years, Teletekst developed a network with people from different departments within the broadcasting institution to obtain information (Dewulf 1990). Overall, this was quite a successful endeavour but relationships with radio became strained over time. As Van Crombruggen (2014) explained, radio resented the Teletekst newsroom's competitiveness in beating radio at being first in bringing news, while Teletekst resented radio for dumping information that they no longer wished to be burdened with, such as information on water levels for waterway skippers, the price of cattle and the like.

Finally, while the "official" history mentions a successful and smooth merger of teletext and online newsrooms in the public service institution in 2003 (De Redactie 2010), inside views tell a somewhat different story. According to Van Crombruggen (2014), the merger of the teletext and online newsrooms did not go smoothly. Teletext people were expected to use their know-how (regarding the written word) for the website but wanted to give priority to getting the news on teletext first, and had the more user-friendly input system to do so, while online people (and management) wanted to prioritize the website to beat the online newspapers' competition, as Rottey (2014) confirmed in the interview. Tensions were heightened by the fact that, technically, the two systems did not communicate (Van den Bulck & Tambuyzer 2013).

Types of content and social concerns

From the outset, it was clear that teletext needed its own language, different from both radio and television. In the experimental days of Teletekst, the motto was "poor but neat" (Dewulf 1990: 12): poor because there were no full-time employees, neat because teletext information, like all news services in the public service institution, was to follow professional journalistic rules and had to be "correct, objective and in proper standard language" (Dewulf (1990: 12). These strict public service rules were not limited to news provision but to all

information services provided on Teletekst (Boussé 1985a: 27). What is more, early Teletekst workers explored the possibilities and limits of teletext language in different genres (Boussé 1985a: 9-10). A key example was the Teletekst fictional series *De Vertellers* (The Narrators). Looking for something other than news to put on Teletekst and following the cultural educational logic of the day, several options were explored:

> Most literary works were not suited for electronic reproduction. The syntax was too elaborate and vertical reading required considerable effort that overly exhausted the eyes. The [radio] 'Chronicles of the day' of the 1950s and 1960s too could not be taken into consideration as they were meant to be read out aloud in front of a microphone. So literary works or radio chronicles could only be used if they were re-written to fit the norms of the new medium. (…) And so came the idea [of some kind of] 'mix', in thirteen episodes, each of 7 to 8 electronic pages. (Boussé 1985a: 9, author's translation).

Furthermore, and in collaboration with the Dutch NOS Teletekst, from September 1984 onwards, a daily poetry contribution was provided on the ttl (Teletekst literary) page, of which almost 20 per cent had never been published before (Boussé 1985a: 27; Van Crombruggen 2014). So, Teletekst very much developed within a public service ethos with a stress on quality, culture and education (cf. Van den Bulck 2001). However, over time, Teletekst also faced problems originating from its public service character. For instance, like radio and television, it was expected to reserve pages for various philosophical institutions and organizations, originally political and denominational, later on representative of all kinds of social groups. As Van Crombruggen (2014) explained, Teletekst workers did not favour this because these pages often contained statements that went against the strict public service rules of quality and objectivity, but they were pushed by the institution's Board of Governors, itself composed on the basis of political, denominational and philosophical representation (Saeys 2007).

This is not to say that Teletekst was entirely dominated by the cultural-educational logic of traditional public service broadcasting. As early as 1985, Verpoorten (1985: 33, author's translation) stated with regards to the introduction of games on Teletekst: "the serious viewer may not much appreciate this and Shakespeare may not find the answer in teletext games to 'what's in a name?', but words and games are very important in the world of teletext entertainment." While the commercial teletext services were much more free to explore various types of content, they too were confronted with limits in this regard, as illustrated by the 2010 fines awarded to SBS en VMMa for erotic pages that were seen as potentially harmful for minors due to their unencrypted position on the teletext pages (cf. supra). This resembles social debates about media content on other (new) media such as the Internet.

(Inter-)active audiences

When Teletekst started in 1980 there were an estimated 600 users (Dewulf 1990: 13) and in 1981 only about 10,000 TV households had a television set with teletext decoder (costing 15,000 franks (€375) more than other sets (Van Crombruggen 2014)) but, by 1990, cheaper decoders had resulted in more than 400,000 families having teletext, the equivalent of 20 per cent of all television devices and of 1 million potential users (Dewulf 1990: 9). By the late 1990s, 97 per cent of all Flemish television households consulted one of the Flemish teletext services (VRT Studiedienst 1998). However, since 2007, Teletekst user numbers have decreased, for instance from 700,000 in 2009 to 180,000 in 2014 (VRT Studiedienst 2014).

Looking back after ten years of teletext in Flanders, Dewulf (1990: 9-10) explored some potential reasons for its success and referred to the active role of the audience the medium allows for: The viewer can autonomously decide what (s)he wants to read, when, and for how long. As main attraction, Dewulf saw the combination of quick and up-to-date information for wide audiences (news, sports, weather, traffic, radio and television programming) with very specific, focused services for a diverse group of target audiences (financial information, subtitling for the death and hearing impaired). In short, he referred to the 'consultation' function of teletext, which later proved an important factor in the success of the Internet. It showed, as mentioned above, that audiences experienced teletext through the prism of paradigms established outside of broadcasting and print (Elton & Carey 1983).

Boussé (1985a: 6-7) and Dewulf (1990: 10, 14), confirmed by Van Crombruggen (2014) in the interview, further underline the strong interactive relationship between teletext and its audiences. The latter, originally, would telephone and write letters and, later on, would send emails to discuss what was good or bad about teletext and how it could be improved – which new rubrics would be useful, among other things. Teletext workers were very responsive to this, enhancing the feeling of a dialogue rather than a top-down, one-way communication. According to Carey and Elton (2010), these experiences were not just a pre-echo of things to come with the Internet and social media but enhanced the potential acceptance, and thus the success thereof. Indeed, in their discussion of the development of Interactive Television (ITV), Carey and Elton (2010) explain that while in the US a negative attitude towards ITV dominated, in Europe and particularly the UK there were far fewer trials and attitudes were less negative. "In the United Kingdom, people had experience with a limited form of enhanced television through Teletext, which taught them simple skills about how to interact with television and may have created an appetite for more advanced services" (Carey & Elton 2010: 270).

Discussion and conclusion

Analysis of the development of teletext in Flanders confirms the role, success and importance of teletext as a medium. It shows how, quickly after its introduction, the medium became very successful and showed a steady growth and enduring size both in the services rendered (informational and consultational) and audiences reached. It was revealed that the lack of academic attention paid to the medium in its own right and in relationship to other media and relevant stakeholders has done a great disservice to our understanding thereof. For one, teletext furthered the success of the existing medium of television and paved the way both technically, content-wise and in relationship to audiences for the introduction and success of digital news services. Some indications have been given towards understanding the lack of policy and industrial attention for the medium. A key factor, it transpires, for the lack of industrial attention was the fact that it developed within a non-commercial, public service context and that its early incorporation within television prohibited thinking outside the box of existing paradigms. The small size of the cable companies at the time further explained the lack of alternatives with more commercial potential and from a new perspective. If any thinking in alternative paradigms occurred, it was limited to reflections of teletext people working within the (limits of) the public service institution. Most of all, the analysis of Flemish teletext indicates that many of the issues that teletext was confronted with proved to be a pre-echo of discussion with regards to new media; discussion that can be found to be at the forefront of debates about various new media platforms and applications today. Current lobbying from newspaper groups to limit public broadcasters' online news provision (cf. Van den Bulck & Donders 2012) is a further development of negotiations regarding the relationship between Flemish newspapers and public service Teletekst. Debates about pornographic content on commercial teletext services are a good example of how teletext discussions pre-echo current debates regarding the potential "dangers" involved in new media. Most interestingly, the history of teletext shows interesting pre-echoes of ideas about moving beyond the one-to-many communication, inherent in mass media such as television, towards more interactive approaches to audiences in the era of 2.0 media. Not only has the history of Flemish public service Teletekst been shown to have been influenced by constant feedback from audiences, the service and consultation function of teletext introduced audiences to media functions that would become the main way to explore the Internet. These warrant the idea that an understanding of the history of teletext is nothing less than going "back to the future."

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5 Back to the Future

What Teletext's Past Tells Us About the Future Relationship Between Public Service Media and Publishers in Switzerland

Manuel Puppis, Samuel Studer & Edzard Schade

Abstract

Despite the proliferation of high-speed Internet access, teletext still enjoys popularity in many European countries. Apparently, in spite of its archaic technology and the availability of more modern alternatives, teletext is doing just fine. With the introduction of Hybrid Broadcast Broadband TV (HbbTV), a medium that was new three decades ago is trying to reinvigorate itself by combining elements of traditional teletext and online services. However, academic research has shown only limited interest in this "forgotten" medium so far. Yet the history of teletext promises to hold important insights into media policy-making and into the delicate relationship between newspaper proprietors and public service broadcasters. Focusing on Switzerland, the case of teletext will be historically compared with other instances of conflict between publishers and the public broadcaster, namely the introduction of television advertising in the 1960s, the online activities of the public broadcaster and the introduction of HbbTV. Results indicate that cooperation seems to be a successful strategy in resolving conflicts between newspaper publishers and the public service broadcaster. In a situation in which huge Internet companies like search engines and social networks are the main competitors in the advertising market, and also lure away the attention of users to non-journalistic content, cooperation may offer a viable option to overcome the so-called media crisis. This might be especially relevant for small media systems.

Keywords: media policy, conflict, history of communication, teletext, online, public service broadcasting

Introduction

Thirty years after its start in Switzerland, teletext still enjoys huge popularity. Despite the proliferation of high-speed Internet access and so-called smartphones, up to 20 per cent of adults and 24 per cent of households use teletext services on a daily basis (Mediapulse 2013: 36). Most TV stations still offer their own teletext services. Moreover, teletext is still used as an outlet for advertising (Stiftung

Werbestatistik Schweiz 2014). Apparently, in spite of its archaic technology and the availability of more modern alternatives, teletext is doing just fine. The story of teletext itself is far from being over. With the introduction of Hybrid Broadcast Broadband TV (HbbTV), a medium that was new three decades ago is trying to reinvigorate itself by combining elements of traditional teletext and online services.

However, academic research so far has shown only limited interest in this "forgotten" medium. Yet the introduction of teletext promises to hold important insights into media policy-making and into the delicate relationship between newspaper proprietors and the public service broadcaster SRG SSR. Their relationship proved to be tense due to newspaper publishers' fears that the SRG would move into their territory. By uncovering the history of teletext, this paper aims at a better understanding of public service media and its regulation. The case of teletext will be contrasted with other instances of conflict, namely the introduction of television advertising in the 1960s, the current move from public service broadcasting to public service media and the introduction of HbbTV, a combination of television and Internet services. The paper raises the questions of how newspaper publishers and public service broadcasting tried to influence media policy-making in cases of conflicting interests and what role media policy played in settling these conflicts. Results reveal that the political solution for the conflicts differed noticeably: while the SRG and publishers cooperated with respect to advertising and teletext, no compromise was reached regarding the SRG's online activities. As a consequence, government was forced to take a decision.

A short history of Swiss teletext

While in the UK teletext started in the 1970s, Switzerland was among the first continental European countries to start a teletext service (Schneider 2005). In 1981 the public broadcaster SRG SSR and the association of newspaper and magazine publishers (SZV; now VSM) jointly started trial operations on the German-language public television channel (Scherrer 2012: 144-145; sg 1981). In December 1983, the Teletext Trägerschaft SRG/SZV, a partnership of SRG and publishers, received a licence from the government to operate a teletext service (sg 1984). Only a few days later, in line with its licence, this Trägerschaft formed a limited company to operate teletext on a regular basis, the Schweizerische Teletext AG.

At the beginning of 1984 the regular operation of teletext on the German-language channel DRS (now SRF 1) started; services on the French-language channel TSR (now RTS Un) and the Italian-language channel TSI (now RSI La 1) started in 1985 and 1986 respectively (SWISS TXT 2014). In the following years, teletext became increasingly popular and almost every newly-established

television station decided to offer its own teletext service and discrete teletext services started in various local cable networks (Schade & Studer 2008). In 2005 teletext reached almost 30 per cent of the population in the German-speaking part (see Figure 1).

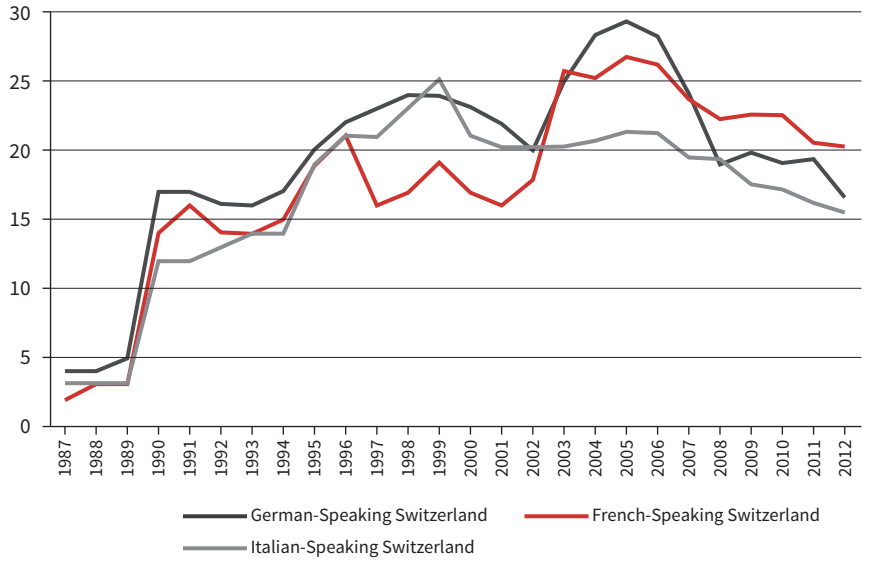

Figure 1. Daily teletext reach for persons over 15 years old (per cent), 1987-2012

Source: Annual reports of TV audience measurement (SRG Forschungsdienst/Mediapulse).

However, the average usage time was always low. This is not very surprising given the nature of content (news in brief, weather, programme information) (see Figure 2).

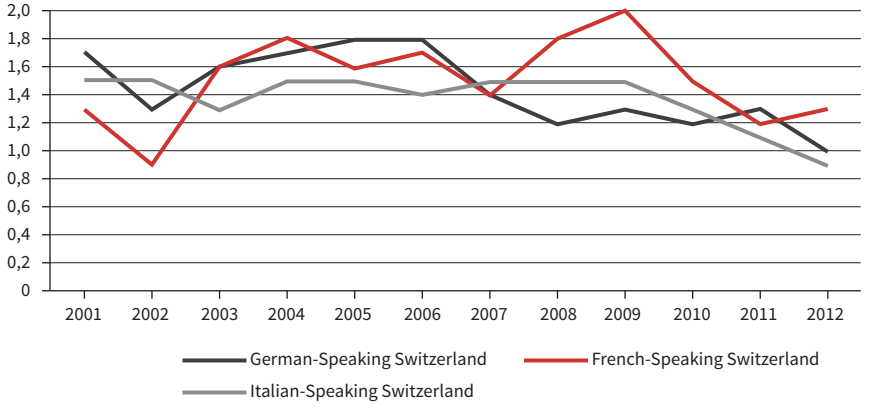

Figure 2. Daily teletext use for persons over 15 years old (minutes), 2001-2012

Source: Annual reports of TV audience measurement (SRG Forschungsdienst/Mediapulse).

Net advertising revenues of teletext are not too impressive but offer a welcome additional source of income for television stations. At the height of its popularity in the early 2000s, teletext generated CHF 14m per year (back then, approx. EUR 9.3m). Compared to the advertising revenues generated by newspapers and television, teletext is rather insignificant (see Figure 3).

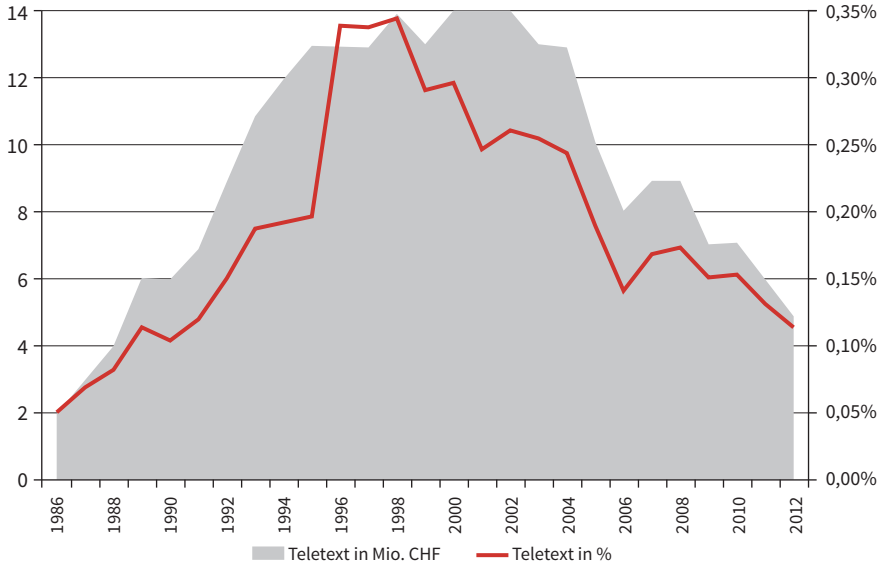

Figure 3. Net advertising revenues for teletext (m CHF) and teletext's share of total net advertising revenues (per cent), 1986-2012

Source: Annual reports of Stiftung Werbestatistik Schweiz

Comment: Example on how to interpret the figure, for example, in 2004 the total net advertising revenues was CHF 5322m (not shown in figure), the net advertising revenues for teletext was CFH 13m or, as shown in the figure, 0,24 per cent of the total net advertising revenues.

While usage numbers are slowly decreasing, teletext is still popular. The SRG continues to offer teletext services on all of its television stations. In the German-speaking part most commercial channels still offer teletext. Additionally, most commercial German channels that air advertising windows directed at Swiss viewers provide a special Swiss edition (news, advertising) of their German teletext service.

In 2013 and 2014 the SRG started a trial operation of HbbTV in all three language regions. While only part of teletext content is currently available via HbbTV, a complete transfer is bound to happen at some point.

The case of teletext shows not only that every expansion of the public service broadcaster's activities evokes criticism by commercial media but also that cooperation offers a policy solution for such conflicts. In the next section we will discuss theoretical approaches to analyse media policy-making.

Conflicts of interest in media policy

Media policy "is a deeply political phenomenon" (Freedman 2008: 1). Media policy-making can thus be conceived of as a struggle for influence in which media organizations themselves are important actors (e.g., Freedman 2008; McChesney 2008; Puppis 2015).

To uncover the influence and interests of media organizations in media policy it is necessary to analyse the policy-making process itself. One of the most influential frameworks for understanding policy processes is the stage-based approach to decision-making inspired by the policy cycle (Anderson 1975; Jones 1970; Lasswell 1956; Windhoff-Héritier 1987). It divides the complex policy process into a series of discrete stages, often labelled problem definition, agenda-setting, policy formulation, implementation and evaluation. The approach has been subjected to severe criticism and undeniably has its limitations, as it does not go beyond a sequential analysis of the policy process and is mostly descriptive in nature (Sabatier 2008: 7; Tresch et al. 2013: 900). Yet the stage-based approach offers a valuable heuristic for identifying actors involved in the different stages of policy-making. Used in this way, the approach can be useful for an analysis of interests of media organizations in media policy-making.

Compared to other democracies, the Swiss decision-making process features several peculiarities (Sciarini 2007; Tresch et al. 2013: 902-903). It is mainly the differences during the *stage of policy formulation* that are noteworthy. With respect to the legislative process, policy formulation can be divided into several phases. In the preparatory (or pre-parliamentary) phase, non-state actors are invited to express their views on legislative proposals in expert committees and in extensive consultation procedures. A public consultation in which all interested actors can submit a written response takes place for virtually every draft bill proposed by the Federal Council (government). Based on the feedback gathered during the pre-parliamentary phase, the government and the federal administration prepare the final bill, which is then introduced to parliament. The subsequent parliamentary phase is similar to other bicameral systems. At hearings of parliamentary selects committees, interests groups are given another chance to be heard. However, after parliament has taken its final vote on the bill, the decision-making process does not yet come to an end. In the referendum phase, citizens who oppose the bill have the chance to call for a referendum. Only when no referendum is called or when its outcome is positive, the bill is definitely adopted. During referendum campaigns political actors have additional possibilities to influence the policy-making process.

In case of other legal decisions, like the adoption of an ordinance or a new broadcast licence that do not require approval by parliament, policy formulation lies with government. However, even in these cases of *non-parliamentary policy formulation,* hearings and public consultations usually take place.

Evidently, political actors and interest groups have various opportunities to intervene in policy-making. Analysing such influences is especially intriguing in case of diverging interests in the media sector, as was the case with teletext.

Yet teletext was not the first conflict between newspaper publishers and public service broadcasting in Switzerland. As early as 1931, when the SRG was established, newspapers felt threatened. In order to protect them, the SRG was not allowed to produce radio news itself but had to air news produced by the news agency SDA, owned by several newspaper publishers (Schade 2000). Moreover, in the 1950s and 1960s, newspaper publishers first tried to prevent the start of television in general and, when this failed, the introduction of television advertising (Schneider 2006: 84-87). All these conflicts have been solved by cooperation. In the case of television advertising and teletext, a joint company of the SRG and publishers helped in allaying publishers' fears of competition. Forming such partnerships between public service broadcasting and newspaper publishers seems to be a peculiarly Swiss way of dealing with conflicts of interest. Thus, these past battlegrounds might offer important insights for today's conflicts. Digitization and convergence have triggered a conflict over the development of public service broadcasting into platform-neutral public service media. Newspapers aim at protecting their online ventures and fear competition for audiences and, potentially, also advertising online (Lowe & Berg 2013: 78, 89; Nord 2012). Moreover, HbbTV as a combination of teletext and online services creates new conflicts between the SRG and publishers but also with cable operators.

The paper thus raises the questions of *how newspaper publishers and the public service broadcaster SRG tried to influence media policy-making* in the conflicts regarding television advertising, teletext, online services and HbbTV as well as of *what role media policy played in settling these conflicts*.

Methods

In this study, the conflicts between newspaper publishers and the Swiss public service broadcaster SRG, with respect to the introduction of television advertising in the 1950s and 1960s, the introduction of teletext in the early 1980s and the regulation of the SRG's online services and of HbbTV, were compared across time in order to systematically analyse similarities and differences in media policy-making. While newspaper publishers are not a unified actor and sometimes differ in their political positions, with respect to public service broadcasting they usually close ranks. In all analysed cases they agreed upon a common opinion which the SZV presented as their unified position while bargaining with the SRG and political bodies.

This diachronic comparison was based on a qualitative analysis of documents (Mason 2002: 103-119; Mayring 2010). For this purpose, various documents that

were created as part of the policy-making process during these fours conflicts were collected and analysed. In particular, official documents available in the Swiss Federal Archives or via the Federal Chancellery, the federal administration and parliamentary services – the Federal Gazette (*Bundesblatt*), the Official Bulletin (minutes) of the Swiss Federal Assembly (parliament), the minutes (available until 1963) and the annual report of the Federal Council (government), documents created and submitted during consultations for new laws, ordinances and licences, press releases and annual reports of the SRG and its subsidiary Publisuisse, the association of newspaper publishers and the federal administration, the members' journal of publishers (*Bulletin Schweizerischer Verband der Zeitungs- und Zeitschriftenverleger*) as well as documents filed in the SRG's company archive (available until 2005) were searched for the keywords teletext, advertising, online/Internet and HbbTV (as well as related keywords like names of companies, in German and French).

All the relevant documents were then, in a first step, critically assessed (Reh 1995; Scott, 1990) and, in a second step, analysed using a method of deductive content categorization (Mayring 2010) in order to be able to analyse the arguments brought in by newspaper publishers, the SRG and distributors in different stages of the policy-making process. For each author and stage of the policy process, documents were categorized with respect to demands that were articulated and solutions that were proposed.

Results

The introduction of television advertising in the 1950s and 1960s

When the SRG televised its first advertising spot in February 1965, it marked the end of a fifteen-year-long controversy between the public broadcaster, the association of newspaper publishers and Swiss politics. Worried about losing advertising revenues that they depend on for survival, the publishers first tried to completely prevent the introduction of television (Liebherr 1994: 35-40) and, later, to at least achieve a ban on TV advertising. Both attempts failed. Television was introduced by way of a trial operation in November 1953 that was conducted by the SRG and financially supported by the Swiss federation with a credit of CHF 2.4m. Among other things, the objective of this trial was to shed light on the financial requirements of operating television in Switzerland (Federal Council 1955: 396). When the National Council debated the credit in 1951, it was clear to most MPs that, once introduced, television was there to stay and that it would not be possible to turn back the clock. Although the effects of television proved to be controversial, the National Council overwhelmingly voted for the credit, deciding against the publishers' interests (National Council 1951: 27-28). However, advertising was prohibited during the trial operation.

In December 1954, nine months before the trial was scheduled to end, the SRG decided that it was only willing to operate television on a regular basis under the condition that funding was secured and thus demanded the approval of television advertising (SRG 1960: 24-25). However, as government extended the trial until the end of 1957 and reiterated that it was not willing to allow advertising at this stage (National Council 1955: 170), the question of advertising temporarily disappeared from the agenda. One of the reasons for extending the trial was the inadequate legal foundation for broadcasting in Switzerland (Federal Council 1955: 446). The government's proposal to establish such a foundation by a new article in the constitution was rejected in a referendum in March 1957. As giving up television completely was not considered a viable option, the Federal Council interpreted this referendum as a refusal to subsidize television with tax money (Federal Council 1957b: 211-214). Given that the television licence fee would not suffice to cover the expenses for television, due to the small number of viewers at the time, advertising suddenly became a real option. With the introduction of television advertising just around the corner, the publishers decided to make the SRG an offer. In a letter addressed to the responsible governmental department, they offered the SRG CHF 1.5m each year for the next ten years if the SRG would refrain from financing television via advertising once and for all. At the same time, the SRG received a second offer from a consortium composed of advertisers (Reklame-Konsortium). The advertisers wanted to win the contract for producing television advertising for which they offered CHF 3m per year (SRG 1957). The SRG decided to refuse both offers, informed the Federal Council (SRG 1960: 42), and entered into tough negotiations with both sides. By playing the publishers off against the Reklame-Konsortium, the SRG managed to win better conditions. In the end, the publishers not only gave up their demand for an everlasting ban on television advertising but also raised their offer to CHF 2m per year in exchange for advertising-free television for ten years or until 180,000 people paid television licence fees (Federal Council 1957a: 61; 1957b: 223; SRG 1958). It was assumed that with 180,000 television licence-fee payers' revenues would be sufficient to fund television.

This provisional ban on television advertising was supported in parliament. Members of parliament claimed that television advertising would not only threaten newspapers in their very existence but also harm small- and medium-sized businesses, arguing that pressures for ownership concentration would increase because only big companies could afford advertising. Others were against television advertising for aesthetic reasons or feared that political propaganda would find its way into television through the back door of commercial advertising (Council of States 1957: 376-377; National Council 1957: 662-669). However, some MPs voted against the deal between the SRG and the publishers for political, economic and moral reasons. For instance, it was argued that

politics should not stoop to enforce the publishers' economic interests (National Council 1957: 664, 670, 672). Yet neither increasing the television license fee nor funding television by the national budget were considered appropriate and in the end parliament supported the government's proposal (Council of States 1957: 388; National Council 1957: 692).

In October 1961 the SRG informed the publishers that it would reach the number of 180,000 television licence-fee payers by the end of the year. Accordingly, the publishers would be free to cease their payments at that time while the SRG still had to refrain from broadcasting advertising until 1967. However, the SRG now claimed that this number of licence-fee payers would not suffice to fund television, arguing that costs had risen much more than initially assumed. Unsurprisingly, the question of advertising came up again: The SRG offered the publishers the creation of a joint company that would acquire advertising and also allow publishers to supervise the further development (SRG 1961). After lengthy discussions the two parties reached a deal and in July 1963 the SRG asked government to authorize television advertising (Federal Council 1963: 1, 4).

In April 1964 the Federal Council gave its consent without involving parliament (National Council 1965: 270). In July 1964, after years of discussion, the SRG and the publishers finally started to cooperate by founding the Limited Company for Television Advertising (AG für das Werbefernsehen, AGW). Both parties held 40 per cent of the shares. The remaining 20 per cent were originally intended to be in the possession of the state but were distributed to various associations (Publisuisse 2004: 1; SRG 1964: 9).

It was not until the 1990s that the publishers left the joint company, ending long-term cooperation. In 1992 the SRG raised its share to 70 per cent and three years later to 94 per cent. After an increase of the share capital in 2002, it possessed 98.8 per cent of shares (Publisuisse 2004: 3; SF 2005).

The arrival of teletext in the 1980s

Since the end of the 1960s, the SRG had been occupying itself with new media and distribution technologies like satellites, cable networks, videotex and teletext. Each new technology also raised the question of how it would change the SRG's relation to newspaper publishers. With respect to teletext, the SRG followed the developments in the UK closely: in 1972 the BBC and ITV had already proposed a so-called "telescreen newspaper" and in 1975 a trial operation started under the name teletext. The SRG was satisfied to learn that in the UK teletext was considered to be a broadcasting service and not a telecommunication service. After all, this legal decision granted broadcasters the responsibility for teletext.

In Switzerland, policy-makers started to deal with electronic information systems in the late 1970s. The SRG's claim that teletext should be its area of responsibility because teletext is delivered in the same way as the normal television programme alienated the publishers' association (SZV 1979: 30). The latter insisted that teletext was an electronic way of information dissemination and should thus be considered as their turf (SZV 1981a: 26). In the end, following the international trend, policy-makers assigned the responsibility for teletext (information transmitted within the TV signal) to broadcasters and the responsibility for videotex (information transmitted via the phone line) to the Swiss PTT. While winning the battle, the public broadcaster was aware that deciding the question of whether teletext is "letter television" or an "electronic newspaper" in favour of the SRG would leave some scars (SRG 1981: 2, 16). Now that teletext was legally defined as broadcasting, the SRG started to develop ideas for its teletext service and recognized a huge potential for development: Teletext could become a "news ticker for the man on the street" and a fast information channel for headline news. Moreover, since teletext allows individuals to retrieve information without disturbing other viewers, it could be used for target-group-specific information like stock market prices. The SRG even considered using teletext for locally-specific information. Overall, teletext was believed to help the SRG in competing with foreign TV channels by binding readers to SRG channels, and to improve its public service (e.g., by offering subtitles) (SRG 1981: 4-7). Teletext was an important first step towards more innovation, which was considered essential given the looming changes of the media landscape (SRG 1982: 11). Despite the many perceived potentials of teletext, the SRG decided to start with a trial operation first. The public broadcaster was aware that each and every extension of its services would be critically observed and commented upon by other media organizations and thus wanted to prevent prejudice (SRG 1981: 5). In early 1981 the SRG discussed two possibilities for the trial: a solo attempt and a cooperation with publishers. While a solo attempt would have been easier to put into execution, a cooperation was seen as advantageous because of cost-sharing. The SRG was also aware that a solo attempt could provoke strong resistance from the press, which, in turn, could bring the Federal Council to change the SRG's license and restricting its possibilities (SRG 1981: 16). Yet there was also external pressure to favour a cooperation. After the newspaper publishers had not only applied for a teletext licence in January 1981 but also claimed the right to become the exclusive information provider for teletext services (sg 1981), the director-general of the SRG was encouraged by the Federal Council to engage in a dialogue with the press industry in order to fathom possibilities for cooperation (SRG 1981: 17). In the end, in April 1981 the SRG opted for a cooperation for several reasons. First, the public broadcaster did not want to waste energy and public goodwill on a power play with publishers. In this context, the SRG also pointed to the

successful "truce" with publishers when television advertising was introduced. Second, involving the publishers in teletext was seen as a way to counter accusations that the SRG was extending its monopoly. Third, a cooperation was also perceived as stimulating in editorial matters. And finally, the prospect of lower costs offered an incentive for cooperation as well (SRG 1981: 22). For their part, the publishers considered the fact that their own application for a teletext licence made the SRG cooperation a success (SZV 1981b: 71). In the following months the SRG and the association Videopress that represented the publishers started to prepare the trial operation, which started on the German-language public television channel DRS on 1 October 1981 (SRG 1985: 24).

Parliament was not involved in the introduction of teletext until 1983. An MP asked critical questions regarding the commercialization of electronic media (including advertising in teletext) in an interpellation. And when the reading of the new radio and television act (RTVA) began, several members of parliament complained that government was creating prejudices in media policy with its decisions to start trial operations and to grant licences for teletext and private broadcasting. While not answering questions regarding teletext, the Federal Council argued that international media developments made it necessary to pragmatically allow fixed-term trial operations and that it was not possible for government to wait until legislation was ready (National Council 1983: 1350, 1867-1869). As a result, the Federal Council granted the Teletext Trägerschaft SRG/SZV (a partnership of SRG and publishers) a licence for a regular teletext service in December 1983. The two partners commissioned a limited company, the Schweizerische Teletext AG (SwissTXT), of which they each held 50 per cent of the shares with the operation of teletext. Teletext had to be funded by the revenues of the SRG, advertising and paid distribution of information by third parties (Teletext License 1983, Art. 2, 7, 11). The operating loss expected during the initial phase was advanced by the SRG. Accordingly, the SRG carried most of the financial burden (SRG 1984: 21-22). After the start of the German-language service on 1 January 1984, the French-language service started a year later and the Italian speaking service on 1 July 1986.

The SRG was funding this expansion despite the fact that teletext continued to operate at a loss. It was not until 1993 that teletext achieved a positive operating result and after the turn of the millennium the service started to lose money again (SRG 2002b: 2-3). Apparently, despite its success with audiences, the economic significance of teletext was limited. Thus, unsurprisingly, publishers lost interest over the years. When the renewed teletext licence (that entered into force on 1 January 1994) was granted to SwissTXT directly in order to facilitate matters, the SRG increased its share to 75 per cent, following long negotiations. It was argued that changes in the broadcasting market led to stronger competition between the two partners and thus made it necessary to readjust the responsibilities between the SRG and Videopress. Consequently,

the SRG was now fully responsible for the operation of teletext (SRG 1995a: 44). The publishers sold their remaining 25 per cent of stocks at the end of the year 2000. The Federal Council allowed the biggest Swiss cable operator Cablecom to buy the shares of Videopress (SRG 2000; UVEK 2001).

Public service broadcasting going online in the new millennium

With the advent of the Internet, discussions about the online services of public service broadcasting started all over Europe. The same is true for Switzerland: To this day newspaper publishers and the SRG have widely diverging views on the appropriate role of the SRG on the Internet and the desirability of advertising on its websites. Yet the analysis shows that the dispute between the two parties is mainly limited to the last 10 years (2005-2014) whereas the SRG's online activities were barely touched upon in political discussions in the first decade of broader Internet penetration (1995-2004). The SRG had already discussed the Internet internally in the spring of 1995, recognizing that the websites of its subsidiaries in the different language regions of Switzerland needed to be coordinated (SRG 1995b). In order to facilitate exchange between national management and the subsidiaries, it was decided to form an internal Internet working group (SRG 1997a). In retrospect, the first report written by this group was astonishingly farsighted: on-demand consumption and new online competitors were believed to change the broadcasting business massively. In order not to be left behind but to make use of the Internet's potential (reaching audiences where they are; new sources of income), the group recommended developing a comprehensive innovation strategy for the Internet age (SRG 1997b). In 1998, the working group's first draft of the innovation strategy was approved and a full time multimedia management team was formed to develop the new media activities and work on the strategy (SRG 1998). The idea of this strategy was that the SRG should go beyond simply using the Internet to complement broadcasts and play a more active role online. However, in spring 1999 the executive board shelved the finished strategy without discussion and the team was disbanded (SRG 1999b). Shortly before this decision a member of the executive management wrote a more cautious paper that included political considerations. The author challenged the importance of the Internet and framed it as largely complimentary to existing radio and TV channels. Moreover, he emphasized the danger of entering into competition with newspaper publishers and stressed that a more active Internet strategy would provoke resistance from the publishers. Finally, the author argued that competition by new TV channels was a much more pressing problem and that resources should be invested in television instead of the Internet (SRG 1999a). Ever since, the SRG followed an "added-value strategy," with the Internet only complementing

traditional radio and TV channels (SRG 2002a). Thus, it may very well be the case that both financial considerations and an effort to be considerate of the press offered strong incentives to opt for a more cautious Internet strategy.

It is open to interpretation whether this strategy was also the reason that the SRG's online services proved to be uncontroversial during the discussion of the new Radio and Television Act (RTVA). When the Federal Council proposed a reform of the law in the year 2000, it argued that the SRG needed to be able to respond flexibly to the changing media landscape and go beyond traditional broadcasting (Federal Council 2000a; 2000b). Given that there was no fundamental opposition to government's proposals in the consultation (UVEK 2001), the proposed regulation of the SRG's online services remained largely unchanged in the bill introduced in parliament. Government argued that the SRG needed room for development due to the rapid change of the media landscape. Thus it would not make sense to define editorial or advertising limits for online services in the law but that government would set limits in the ordinance and the licence, also taking into consideration implications for private media (Federal Council 2002: 1602-1610, 1682, 1690).

When the National Council discussed the bill in 2004, online services were not mentioned. A year later, during debates in the Council of States, this changed: Suddenly, some members of parliament asked for strict limits for the SRG's online services and a prohibition of online advertising on its websites in order to prevent market distortion. Others argued that there was no reason to restrict the SRG just to protect the private interest of the publishers and that the law gave government the authority to restrict advertising (Council of States 2005: 45, 50-51, 65-66). In the days before the debate, newspaper publishers publicly called for stronger regulation of the SRG (VSP 2005). A member of parliament even complained about their lobbying attempts.

Yet the provisions of the law remained unchanged and parliament adopted the new RTVA in spring 2006 (RTVA 2006).

As there was no referendum, government went on to revise the Radio and Television Ordinance (RTVO) and the SRG License. In the draft version of the RTVO the Federal Council proposed prohibiting online advertising and sponsoring in order to prevent undesired economic competition with private media companies (UVEK 2006: 14). During the public consultation, publishers welcomed the restriction whereas the SRG opposed it. The public service broadcaster argued that this limitation would deprive the advertising industry of an important vehicle and that online advertising was needed due to shrinking revenues from TV advertising. Shortly thereafter, government published a draft version of the new SRG license that would allow streaming of existing channels but limit online services to content related to TV or radio programmes. It argued that public funding leads to market distortion and thus the SRG should only offer online what is needed to fulfil its remit. Distinct new services would

not be allowed in order to protect private media (UVEK 2007: 5). During the consultation, most private media companies welcomed the restrictions. However, the publishers' association additionally asked for a financial cap that would limit the share of licence-fee revenues deployable for online services. In contrast, the SRG suggested a more open formulation, as such strict rules would not be in the interest of licence-fee payers.

In case of both the RTVO (RTVO 2007) and the SRG licence (SRG Licence 2007), government adopted its initial proposal. Ever since online advertising was prohibited in the RTVO, the SRG has been lamenting that it is excluded from the fastest growing advertising market (SRG 2007a; 2007b; 2008; 2009; 2010).

With the new act, ordinance and licence, a completely new regulatory framework was in place in 2007. However, only two years later, attempts began to loosen the restrictions. When adapting the RTVO to the new AVMS directive in autumn 2009, government also proposed allowing online advertising in connection to the SRG's sports and entertainment offerings. The publishers, most private radio and TV stations as well as conservative parties heavily opposed the proposal during the consultation. They argued that the SRG's expansion into online advertising was only commercially motivated, posed a frontal assault on the websites of newspapers and led to market distortion. Unsurprisingly, the SRG and the advertising industry were in favour of the proposed changes. The SRG and its subsidiary Publisuisse even suggested restricting advertising only in relation to news content, arguing that competition with private media mainly concerned news. In spring 2010, the Federal Council refrained from allowing the SRG online advertising at this point but decided to discuss the issue again in summer when deciding on a potential increase of the licence fee (UVEK 2010a). In summer 2010, the Federal Council emphasized that it was generally in favour of online advertising. Arguing that it was not politically feasible to significantly increase the licence fee, commercial funding was considered viable. Yet, instead of taking a decision, government wanted the SRG and the publishers to negotiate and find a solution themselves (UVEK 2010b). Several meetings took place in the second half of 2010, with no result (VSM 2011: 62, 67), leading to the publication of a scathing legal opinion by the publishers in spring 2011 that declared the online services of the SRG unconstitutional. In the winter of 2011/2012, working groups with representatives of the press and the SRG made some progress: The SRG offered publishers a so-called cooptition, meaning that the SRG is willing to provide publishers with video material in exchange for a share of their advertising revenues (SRG 2012; 2013; VSM 2012: 73, 75; 2013: 26).

Ultimately, negotiations failed and the Federal Council had to take a decision itself. While it maintained the prohibition of online advertising, government initiated a revision of the SRG's licence in order to grant the public service broadcaster more editorial flexibility (UVEK 2012a). The proposed new licence

would allow the SRG to publish content without connection to a radio or TV programme. Yet government also proposed limits: In order to ensure that the core of the SRG's online services is audio and video content and that the SRG does not turn into an online newspaper, 66 per cent of text articles would still require a connection to a programme, and articles without such a connection would be limited to 1000 characters (UVEK 2012b). For the newspaper publishers, these restrictions were not rigorous enough. They asked for a more narrow definition of what connection to a programme means, argued that 80 per cent of content should have a connection to a programme and that 600 characters are enough for text articles without such a connection. Moreover, publishers wanted a new provision that would include the idea discussed during negotiations that publishers could reuse the SRG's audio and video content on their own websites. All they got in the final version of the licence adopted in May 2013 was an increase to 75 per cent of articles that needed a connection to a radio or TV programme (SRG License 2013).

Despite the government's decision, the political discussion continued. When a revision of other aspects of the RTVA was debated in parliament in 2014, some conservative members of parliament unsuccessfully tried to prohibit the SRG from using licence-fee revenues for its websites and to regulate online advertising in order to prevent competition with private media companies (National Council 2014: 246-247, 257, 259, 261, 278-282). Moreover, the SRG and publishers are still considering a close cooperation with the SRG offering its audio and video content in exchange for a share of advertising revenues (SRG 2014). It remains to be seen whether a cooperation model already tested with television advertising and teletext will ultimately set an end to the conflict.

The start of the hybrid future

With Hybrid Broadcast Broadband TV (HbbTV) a new conflict arises. Combining elements of the Internet and teletext, HbbTV not only adds another dimension to the existing conflict between publishers and the SRG but affects the private interests of distributors as well.

After a year of trial operations on SRG channels, the Federal Council presented a revision of the RTVO and the SRG Licence in summer 2014 in order to definitely launch HbbTV. As with teletext, it proposed, on the one hand, to define HbbTV as a so-called coupled service that has to be distributed with the TV signal (at least for stations benefitting from must-carry status) and, on the other hand, to allow text and still-picture advertising as well as sponsoring in the SRG's HbbTV services (BAKOM 2014a). With respect to the conflict between SRG and publishers, positions remained the same as before. Whereas the SRG asked for more advertising possibilities (videos; targeted ads), for its HbbTV

services, the publishers worried that HbbTV would be used to circumvent the prohibition of online advertising. While they had no objections to content and ads on the broadcast side (i.e. the successor of teletext), they demanded that the broadband side remain ad-free and not contain content unrelated to programmes that would lead to increased competition with newspapers. Yet HbbTV also provoked heavy resistance from distributors like cable operators and telcos. Thus, a new conflict between broadcasters on the one side and distributors on the other emerged. Both the SRG and private TV stations fought for signal integrity and argued that the compulsory distribution of HbbTV with the TV signal as proposed by government is necessary. Otherwise, distributors could abuse their power to protect their own catch-up TV services. Additionally, commercial broadcasters demanded extending the distribution obligation for HbbTV services to all Swiss stations. While the partly state-owned telecommunications incumbent Swisscom argued more moderately, all distributors strongly opposed the government's proposal. First, it was argued that regulation is not necessary as distributors will offer HbbTV if there is enough demand by customers. Swisscom also mentioned that the company is in talks with the SRG to implement HbbTV on IPTV. Second, distributors bemoaned a restriction of their economic liberties, arguing that an obligation to carry HbbTV would lead to high costs as set top boxes used by many distributors for premium cable and their own on-demand services are not compatible. Moreover, HbbTV would be privileged compared to distributors' catch-up-TV services. Third, distributors disputed that HbbTV is a coupled service, arguing that there is no functional unity between the TV channel and HbbTV. Consequently, there would be no legal basis for government to stipulate a distribution obligation for HbbTV in the RTVO. Fourth, distributors were afraid that HbbTV will be (ab-)used to deliver online content via the broadcast signal (carousel) and not via broadband, requiring a lot of bandwidth.

Due to this vocal resistance, government shelved the proposed changes for the time being (BAKOM 2014b). It is an open question when regular HbbTV services will be introduced, and on what legal basis.

Discussion and conclusion

In this article we set out to compare conflicts between newspaper publishers and the public service broadcaster in Switzerland in order to better understand how the media industry tries to influence media policy-making, and to learn from past conflicts regarding television advertising and teletext for finding policy solutions for the public service broadcaster's online activities.

The analysis shows several similarities between television advertising, teletext, online services and HbbTV. First, both the SRG and publishers had ample

opportunity to bring their interests into the media policy-making process. As has been shown, public consultations and direct negotiations between the two parties and government played an important role in all four cases. Second, government played an active role by encouraging cooperation or taking decisions. In contrast, parliament was rarely involved in these discussions. Third, publishers complained about competition for their papers from television advertising, teletext and online services. They argued that the introduction and/or operation of the service in question by the SRG would threaten the existence of the written press. They perceived the introduction of television advertising and new information services run by the SRG as a threat to their survival and not just an issue of making slightly more or less money. And, fourth, the analysis also shows that the commercial potential of new markets was not the main reason for the SRG's expansion. Teletext and online services (including HbbTV) were, or are, seen as offering new editorial possibilities and as a necessity in order to reach the audience. Teletext advertising revenues were never significant; online advertising is still prohibited (although on the wish list of the SRG). And the introduction of TV advertising was obviously economically motivated, but not necessarily commercially. It was, and still is, argued that licence-fee revenues are not sufficient to operate television in a small multilingual country. Not financial valorization but being able to offer services on new platforms proved to be the main driver for the SRG's expansion. In this sense, the Internet and teletext do not differ that much, even though from a present day perspective the Internet is without doubt affecting our media and our societies in a more fundamental way than teletext ever did.

Yet the comparison of the four conflicts also reveals important differences. Two solutions that proved useful in settling conflicts in the past – beginning with a trial operation and forming a joint company – were not considered with respect to online media. TV advertising and teletext show that trial operations can be useful to prevent prejudice and that a joint company or a cooperation can facilitate the solution of economic conflicts. Moreover, the role of the state changed considerably over the last decades. Whereas teletext was born during the Cold War and thus into a climate of strict state control over communication channels, the political system's impetus to regulate the Internet was limited. There was no question that the SRG needs to use new digital platforms in order to remain relevant to the lives of citizens. At the same time, due to the transnational character of the Internet, possibilities for media policy to shape the media system are also perceived to be more limited. The situation today is also different with respect to publishers. Unlike with TV advertising and teletext, they did not immediately recognize the Internet and the SRG's online activities as a threat for their business. Only after the structural crisis of newspapers became apparent did resistance grow. With audiences and advertising shifting to parts of the Internet that have little to do with journalism, like search

engines or social networks, it is still unclear whether new business models and paywalls will generate enough revenue for commercial news organizations (Curran 2010; McChesney & Pickard 2011). Publishers thus fiercely oppose the development of public service broadcasters into platform-neutral *public service media* (Puppis 2013). The dispute surrounding the SRG's online services makes clear that publishers and the SRG only took up negotiations for a cooperation under government pressure. First negotiations failed, forcing government to take a decision itself. It remains to be seen whether the two parties will start to work together in the near future.

In sum, the analysed conflicts show clearly that the public broadcaster SRG and private media organizations used the opportunities granted by the Swiss political system for influencing policy-making. Through participation in public consultations and hearings, negotiations with government and lobbying in parliament, both parties brought their interests to the table. This incorporation of rival interests into policy-making is aimed at reaching consensus. With respect to both television advertising and teletext, conflicts were indeed mitigated by cooperation. Media policy – and especially the Federal Council – played an important role in settling these early conflicts by suggesting that media organizations work together and by supporting negotiated compromises. It is still unclear whether a cooperation will result regarding the online sector. While decision-makers in media policy tried to induce cooperation here as well, government had to make the final call because industry players could not come to an agreement. Media policy hence played a pivotal role in setting the analysed conflicts, either by encouraging and supporting cooperation or – when cooperation was not possible – by adopting regulation. Furthermore, the analysed data also hints at other modes of influence on policy-making, namely the importance of media coverage on media policy in the interest of newspaper owners. While not part of this study, it would be worthwhile to also look into this "second face of power" in the future.

The analysis raises the question of whether cooperation is always an effective strategy to solve conflicts between private and public media organizations. The Swiss examples stress that cooperation and the institutionalization of a joint company was never a romantic love-match but, rather, a marriage of convenience. In the face of a *fait accompli* decided by government, or at least taken-for-granted assumptions about future market developments, cooperation was deemed a useful bargain by both parties. In the case of television advertising, the actors involved were aware that its introduction could not be prevented in the long run. While the SRG bartered an instant solution for a maximum of autonomy, the newspaper publishers accepted the introduction of competition in the advertising market a few years earlier in exchange for at least some control. In the case of teletext, the state had decided to assign the responsibility for teletext to broadcasters. Whereas the SRG's benefit from

cooperation was a shared-costs model and the prevention of a reputational damage, the newspaper publishers gained access to a new medium.

By looking into ways of solving conflicts with private media companies, this study holds important insights for the future of public service broadcasting in Switzerland and beyond. As past examples have shown, cooperation seems to be a successful strategy in resolving conflicts between newspaper publishers and the public service broadcaster, both editorially and commercially. In a situation in which huge Internet companies like search engines and social networks are the main competitors in the advertising market, and also lure away the attention of users to non-journalistic content, cooperation may offer a viable option to overcome the so-called media crisis. This might be especially relevant for small media systems (Lowe & Nissen, 2011; Puppis & d'Haenen, 2009), many of which have a tradition of "democratic corporatism" (Katzenstein 1985: 32); i.e. the coordination of divergent interests by negotiations between associations. The limited possibilities of producing and refinancing domestic content offer a strong incentive for working together. Moreover, chances for striking an agreement are high due to the existence of small political and business elites. However, so far, conflict between public broadcasters and private media companies prevails in most big and small European countries. Publishers and commercial broadcasters filed a whole new wave of state aid complaints with the European Commission in the 2000s in order to try to prevent a further expansion of public service broadcasting (Bardoel & Vochteloo 2012; Donders 2012; Donders & Moe 2014). While often bureaucratic in nature, the so-called ex-ante tests agreed upon in many countries (Donders & Moe 2011) might at least help in refocusing the rationale for new services by giving more weight to editorial rather than commercial considerations. In addition, cooperation also entails the risk of restricting media plurality and diversity even further. With respect to media power and democratic considerations, cooperation has important downsides. Yet television advertising and teletext also show that cooperation is not for eternity. Rather, it seems to offer safe passage through the unknown territory of new media.

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6 The Old Reliable

Teletext as a Survivor of Digitalization of TV in Finland

Marko Ala-Fossi

Abstract

Every week as about 1.7 million Finns turn on the teletext on their broadcast TV receiver or the teletext application on their computer or smartphone, they are facing a living monument of failure in technologically deterministic new media development and a reminder of the unfulfilled promises of digital TV. This text-based service with 4:3 picture aspect ratio and old-fashioned graphics would not be there at all if the national project to make Finland the leading country of digital interactive TV in the world would have succeeded and Superteletext would have taken over the European market. However, most of the Finnish television viewers are not even aware of this context as teletext services were introduced also on DVB digital TV already in January 2002.

This chapter provides an overview of the development of teletext in Finland so far, based on previous research and public documents. It examines the origins of the teletext and evaluates the reasons for its success as well as its future prospects in Finland using the perspectives of both political economy and social shaping of technologies. Despite its limitations when compared to other digital media and especially the Internet, teletext is still able to provide services valued by its audience. Although it has survived the first digital transition of television, it will face a new transition from a less advantageous position than before. Ultimately, its fate depends on the future of terrestrial broadcast TV as a cultural form, a media business and a communication technology.

Keywords: Finland, teletext, broadcasting, digital television, interactivity, Superteletext

Introduction

Every week as about 1.7 million Finns turn on the teletext on their broadcast TV receiver or the teletext application on their computer or smartphone, they are facing a living monument of failure in technologically deterministic new media development and a reminder of the unfulfilled promises of the digital TV. This text-based service with 4:3 picture aspect ratio and old-fashioned graphics would not be there at all if the national project to make Finland the leading country of digital interactive TV in the world would have succeeded and Superteletext would have taken over the European market. However, most

of the Finnish television viewers are not even aware of this context as teletext services were introduced also on DVB digital TV already in January 2002.

Besides the story of Superteletext, this chapter provides an overview of the development of teletext in Finland so far based on previous research and public documents. In addition, it examines the origins of the teletext and evaluates the reasons for its success as well as its future prospects in Finland using the perspectives of both political economy (Mosco 1996; Galperin 2004) and social shaping of technologies (MacKenzie & Wajcman 1999; Lievrouw 2006). Despite of its obvious limitations when compared to other digital media and especially the Internet, teletext is still able to provide services valued by its audience. Although it has survived the first digital technology transition of television, it will face a next transition from less advantageous position than before. Ultimately, its fate depends on the future of terrestrial broadcast TV as a cultural form, a media business and a communication technology.

Teletext arrives in Finland

Finnish public service broadcaster Yleisradio (Yle) made the first teletext experiments already in 1977 with equipment borrowed from the British Broadcasting Corporation (BBC). The tests were very successful, but the Finnish TV broadcasters were by no means convinced about the need for this new service. The Yle director general, Erkki Raatikainen thought that teletext would be just waste of money and Tauno Äijälä, the senior vice president of Mainostelevisio[1] (MTV), the only commercial TV broadcaster at the time, saw teletext mainly as a transitory technology on the way to more developed and interactive videotex (Rämö 2011; Simola 2011; Äijälä 1980).

Most of his term as director general (1970-1979), Raatikainen had been struggling with a budget deficit caused by inflation, increasing personnel costs and investments in broadcast infrastructure. The financial situation started to improve after the license fee system reform in 1976. When the price for color TV fee became substantially higher than before and the number of new color TV sets continued to grow, also Yle revenues started to grow (Salokangas 1996). But it took two more years after Raatikainen had left and a report with an international review (Sweden, the UK, the Netherlands and France) of already existing teletext services by a special Yle committee before regular Yle teletext services were introduced on October 7, 1981. (Saarikoski 2014)

Besides the Yle project group itself, the launch of new service probably first noted in about 1000 households in the Åland Islands. They had bought new TV receivers already after Swedish Television (SVT) had introduced teletext in 1979. Despite the existing services in a neighboring country and previous experiments in Finland, Yle teletext was not introduced as a permanent

service, but as a two-year project, which had to prove out its usefulness. In public, teletext was described as an electronic newspaper or magazine, useful especially for people with hearing defects. The Government of Finland made special subsidies available for deaf people who bought teletext processors or teletext receivers: 1981 was, after all the International Year of the Disabled Persons and Finland was still building a welfare society. At the same time, more and more households were buying color TV sets, and an increasing number of these new receivers had teletext functionality. It was estimated that after first year of operation, already about 100000 people in Finland were able to access the 80 pages of Yle teletext. (Saarikoski 2014; Matilainen 2001; Rämö 2011; Ilmonen 1996)

It is interesting how cautious strategy Yle first had on teletext as a new media, although it was a rather small investment when compared to color TV production. But at the time, teletext was widely considered mainly as the second best option, which would not become the dominant form of new technology (Äijälä 1980). Sanoma, the publisher of Helsingin Sanomat, the leading daily newspaper in Finland had been developing a cable-based interactive videotex system together with Nokia and Helsinki Telephone Company since 1975 in order to make sure that they would get their share of the new electronic media business. As a result, Telset was launched in Helsinki as an experiment already in 1978 and two years later as the second commercial videotex service in Europe after Prestel in the UK. (Äijälä 1980; Vesterinen & Gröhn 1982)

Within the next four years, regional telephone companies and newspapers like Turun Sanomat and Aamulehti established eight more Telset companies in Finland (Andersson 1984; Saarikoski 2009). So in the early 1980s the Finnish newspapers were not interested in the same new media platform as the broadcasters, but instead they were developing their own. However, Telset videotex turned out to be difficult and expensive to use – and unprofitable as a business in Finland – so the services were closed down rather soon (Saarikoski 2009; Sterling 2006; Lievrouw 2006). After making large investments in a failed system, Sanoma was not interested in any new media for a while and even started its Internet services later than other big Finnish media companies (Lindblom 2009). At the same time, broadcast teletext gained steadily more users – and by the end of the 1980s, also Yle strategies on new media became less cautious.

Just like all TV programming in the 1980s, also Yle teletext services were available only between 9.00 and 22.00 o'clock (Reinikainen & Sundsten 2012). The amount of teletext content was gradually growing so that in 1984 there were 250 separate teletext pages available. At this point every page was added to teletext by writing it manually in to the system, but the first experiments with more automated data transfer had already been made. The results of the World Championships in Athletics in Helsinki in August 1983 were available on teletext

at the same time as the results were shown at the stadium (Himberg 2008). Sports news and results got their own section in Yle teletext in 1984. Live updates from ice-hockey games came in 1988 and gradually Yle started to follow in real time on teletext also domestic ball games and the UK premiere league. (Turtiainen 2010) Sports gave a model for co-operation with external content providers and in 2003, Yle teletext had altogether 25 outside partners (Hintikka 2003).

Teletext convinced the general public in Finland about its value as a news media at the latest in 1986. The Yle teletext services gave the Finns the latest information about the development of Chernobyl nuclear accident even between the news bulletins, but it still took five more years before Yle made teletext available around the clock. In 1991, *Yle TV1* started to broadcast test screen between programs also in the night, which made it possible to provide 24 hour teletext service on TV for the 700000 users (Rämö 2011; YLE 2011a).

Figure 1. Front page of Yle teletext Internet service on December 28, 1996

Source: The Internet Archive (2014).

The first nationwide commercial TV channel in Finland, *Kolmoskanava* started in 1986, but this joint operation of Yle, MTV Oy [later MTV3] and Nokia (Hellman 2012) provided regular Yle teletext services instead of any of its own. Kolmoskanava was eventually replaced by *MTV3,* which started the second teletext service in Finland a year later in 1994. Yle teletext had now a competitor, which might have been one of the reasons why Yle started to update teletext content also during the night in 1995 (MTV3 2014; Yle 2011a). Another reason was that the company was again getting prepared to expand into new media, this time with much higher pace and intensity than earlier.

Yle launched its first websites in 1995 and a year later, expanded also its teletext services to the Internet. Besides recordings of radio and TV news bul-

letins it provided a selection of about 200 teletext pages of news and sports on which were updated every 10 minutes. So the latest news on Yle web service were on the teletext application (Lindblom 2009; Reinikainen & Sundsten 2012).

In 1996, Yle revised its strategies for the digital future: the company believed that the new digital television and the Internet were coming closer to each other, if not merging completely. This is why Yle was interested in creating new services with better fit into to digital multimedia environment. Yle teletext became part of this effort as the company was seeking synergies between teletext and Internet news production and because Yle was planning to upgrade it into Internet age (Lindblom 2009; Wallden 2004). It is obvious that teletext as a media had already been domesticated in Finland (Turtianen 2010) by the mid-1990s, when the Finnish media industry decided to reinvent teletext. But if there was still a need to improve teletext, how this imperfect and inadequate system had been born and taken in to use in the first place?

The European origins of teletext

Teletext is a fascinating case example of how media culture and technology are interdependent and how seemingly indifferent technical issues may later turn out to be culturally significant – and vice versa. The origins of teletext are in year 1891, when the engineers of an American electrical equipment manufacturer Westinghouse selected 60 Hz as the AC mains power frequency – and AEG engineers in Germany ended up choosing 50 Hz as their power frequency (Owen 1997). A lot has happened since, but the mains power frequency in the US has remained different from Europe. And because the frame frequency of the first monochrome TV standard in the world (NTSC) adopted in 1941 was directly based on the US power frequency, the new American television system was completely out of sync with the post-war European electricity.

A pragmatic solution to this problem was developed by a group of Soviet engineers in Germany after WW II. Instead of using extra power frequency converters, the system itself was tweaked by adding the number of lines in the TV picture from 525 to 625. This approach resulted in cheaper receiver sets, and besides making synchronization possible, it also gave better picture resolution – and eventually the 625-line version of the 50 Hz NTSC variant became the leading TV standard in Europe. Consequently, while the backward compatible NTSC color TV (1953) had still 525 lines, in Europe both the French SECAM (1956) and German PAL (1961) color TV systems were based on 625 lines (Fickers & O'Dwyer 2012; Fickers 2010; de Bruin & Smits 1999). Some of these lines were not visible at all, because they formed so-called vertical blanking interval (VBI) between the pictures. Originally, the VBI made it possible to produce relatively simple and cheap TV sets, but as the receivers

became more sophisticated, most of the blank space lost its original purpose. The number of the VBI lines in NTSC was 39, but in 625-line systems there were 50 blank lines and eventually 30 were left completely out of use (Fischer 2010; Anderson 2013; Ilmonen 1996).

The first attempt to utilize the empty VBI lines for other purposes was made in the 1960s by the Radio Corporation of America (RCA). The company experimented with a facsimile system (Homefax) using a video camera and a single VBI line, but abandoned the concept by 1968. The extra line capacity of analog TV remained unused until a group of engineers at the BBC tried the VBI spare lines in PAL system for delivering TV subtitles for people with hearing defect. The BBC research and development department soon realized that delivering digitally encoded text on TV network could be used also for wider purposes. The new system was introduced to the public as Ceefax ("see facts") in 1972 and test transmissions in the UK were started two years later. At first only two VBI lines were in teletext use, but the number was increased to six in 1976 and by 1996 to 12. Alternative teletext systems were developed in France (Antiope) and Canada (Telidon), but by 1987 the British system jointly developed by the BBC and IBA had become the leading European standard as World System Teletext (WST) with services in 41 countries. All main teletext systems eventually had also interactive sister services (Prestel/Teletel/Telidon) as videotex, using two-way cable TV or telephone connection instead of one-way broadcast networks. Despite serious attempts to introduce teletext and videotex services also in the US, they never became very popular (EC 1987; Graham 1989; Ilmonen 1996; Sterling 2006; Lievrouw 2006).

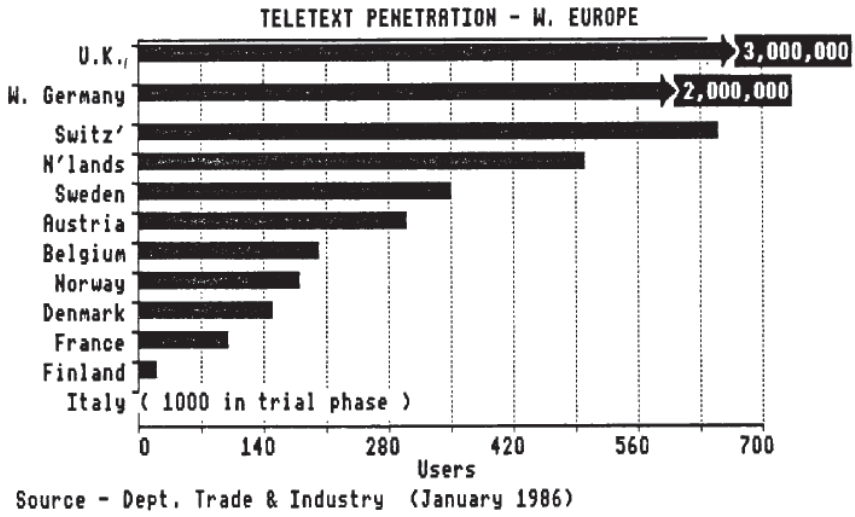

Figure 2. Major European teletext services in 1986[2]

Source: EC (1987).

Teletext as a European PSB innovation and approach to Information Society

This brief overview of the origins of teletext reveals an interesting transatlantic tension, which has made teletext a distinctively European innovation. In the US, there was no institution like the BBC, which would have had in the early 1970s sufficient public funding and strong motive to tinker with the spare lines of analog TV in the name of public service. RCA had already given a shot at VBI lines, but could not see any commercial market. Just as Sterling (2006) and Lievrouw (2006) have pointed out, in the US there were no government PTTs or strong national public service broadcasters, which could have paid the costs of teletext experiments. In addition, the US was unable to decide the teletext standard in time and finally, there was no obvious market for the new service. Meanwhile in Europe, the British teletext was designed to have a perfect match with PAL standard, the European public service ideology as well as the contemporary structure of PSB organizations. The new textual dimension did not challenge the established boundaries between TV and radio and it provided a new, informative service for the public without any extra charge.

The relative success of teletext and videotex in Europe in the 1980s as well as their complete failure in the US seems to have had an important impact on the later US and European strategies on the Internet. Still in 1983, most Americans had "never read a newspaper, paid a check, or shopped for groceries over their TV sets" (Sterling 2006, 45), which was seen as a main problem for marketing the new services. But only ten years later, the US National Information Infrastructure (NII) initiative suggested that the new interactive digital TV would become one of the main gateways to the services of the information society, partly because there were more TV sets than telephones in the US households (Galperin 2004). This American vision of the future could not be based on any domestic experience as there had not been any successful television-based digital information services in the US by the time (Sterling 2006). But in Europe, where videotex was already in use and where especially teletext services were strong, the idea of interactive digital TV probably seemed to be just a logical extension of the earlier development. It was soon adopted both into the EU-level and national strategies without too much questioning.

The rise of Superteletext in Finland 1998-2001

In 1998, the largest media and telecom companies, leading digital media research institutions and Finnish electronics industry decided to reinvent teletext. This idea was not born out of thin air, but instead as a result of long-term invest-

ments in technological research and target-oriented national policy decisions. Nokia and Yleisradio had been closely involved in the development of European digital broadcasting standards since the late 1980s. So when the Finnish government made the formal decision about digitalization of all broadcasting in 1996, it had good reasons to believe that Finland would benefit by becoming an early adopter of digital terrestrial broadcasting and leading the way. As interactive DVB television – and at the time also DAB radio – were essential parts of the national Information Society strategy, the Government was hoping to create a new markets for domestic manufacturers like Nokia and its partners (Yle 1997; Wallden 2004; Brown 2005; Ala-Fossi 2012a). This policy was more about improving national competitivity than citizen welfare.

Besides new devices, Finland was going to develop new digital services and solutions for the European market. This is why *FutureTV* -project was established to develop interactive systems of digital television only few months after the European DVB project had introduced the first version of Multimedia Home Platform (MHP), a new Java-based programming environment in 1997. The academic partners of the three-year-long national project were Digital Media Institute at the Tampere University of Technology, Hypermedialaboratory at the University of Tampere and Telecommunications Software and Multimedialaboratory at the Helsinki University of Technology. The funding came from the Finnish Funding Agency for Innovation (Tekes), Elisa, MTV3, Nokia, Sonera, Swelcom (Sanoma), Finnish Lottery (Veikkaus) and Yleisradio. The project soon found out that an enhanced version of teletext could become one of the central services of digital TV and the development of Superteletext [Superteksti-TV] was started (Wallden 2004).

At that time, about 60 percent of Finnish households were able to use teletext with their TV sets and about 70 percent of them were using the service several times a week especially to check the domestic news, weather and sports results. So the users had already a pretty good idea what they expected from a teletext service and the challenge of the developers was to find the best ways to improve that experience on the MHP platform (Wallden 2004). In addition, the users were getting new ideas of how things should work: the number of people with access to the Internet at home increased during the project from less than 20 percent to about 50 percent (StatFin 2006). The MHP-based teletext did not have the earlier restrictions, but its capacity was still limited. It was possible to use up to 1000 pages, more impressive graphics, HTML-links – and even interactivity, if there was a return channel available, but Superteletext was by no means Internet on TV. As a result, the system was not as easy and fast to use as regular teletext, and despite of its new computer-like interface, it was not as versatile and extensive as the Internet (Rinnetmäki & Pöyhtäri 2001; Rinnetmäki 2004; Wallden 2004).

Figure 3. Yle Superteletext front page in August 2001

Source: Wallden (2004).

It seems that Superteletext could have had problems in meeting the user expectations, but eventually it had even bigger problems in meeting the potential users. When the first new licenses for digital television were granted in 1999, the channels were supposed to launch DVB services already by the Sydney Olympics in September 2000 – or at latest by the end of August 2001, otherwise the licenses were going to expire. Quite soon after this optimistic licensing decision, it was noticed that there were practically no DVB receivers available yet – and by the early 2001 the availability of more advanced DVB receivers with full MHP functionality became a major concern in Finland. Both the commercial broadcasters and the key Ministers would have been ready to postpone the introduction of digital TV to make it sure that also the new interactive services could be taken into use from the very beginning (Miettinen 2006; Näränen 2006).

The defeat of Superteletext in Finland 2002-2007

However, Yle wanted to stick with the original timetable in order to give the terrestrial digital TV a competitive advantage over satellite services, and to avoid

any fragmentation of the market. And after a consultant report commissioned by the Ministry of Transport and Communication promised that the first DVB receivers following the latest MHP standard (version 1.0) would be available in the fall, the Government kept the original schedule in place. So in August 2001, Finland became the first country in the world to launch terrestrial DVB transmissions with Superteletext and full MHP functionality. However, the first devices capable for DVB-T-MHP reception did not reach Finland until the end of year 2002, and as long as people were able to buy only cheaper "regular" type of DVB-T receivers with no MHP, it was impossible for them to use Superteletext (Hintikka 2003; Miettinen 2006; Näränen 2006).

In order to avoid a situation where people would have been getting more enhanced TV services on analog than on digital, in January 2002 Yle decided to "add analog teletext into the service selection of the digital TV" as it was eloquently but erroneously expressed in a company press release. (Yle 2002) However, those people who were finally able to buy one of the more expensive MHP receivers and to try Superteletext, were mostly disappointed. The pages did not necessarily update the information automatically as soon as it became available like in the traditional teletext, but they had to be refreshed manually (Turtiainen 2010).

Despite this setback with receivers both Yle and commercial *MTV3* continued to invest in their MHP services, while the other leading commercial channel owned by Sanoma, *Nelonen* had only a limited interest. In 2003, Yle even introduced a new and improved version of the Superteletext user interface and expanded the service. But as the number of users was not growing, the commercial channels were gradually losing their interest in MHP. In 2004, both MTV3 and Yle decided to stop MHP development and the end of 2005, *Nelonen* and *MTV3* shut down MHP services including Superteletext. Most TV viewers did not notice this. There were never more than 30 000 MHP receivers and about 1000 return channels for interactive TV services in Finland. Yle continued for two more years, but when the last MHP server broke down in December 2007, Superteletext was closed without any notice or press release (Miettinen 2006; Näränen 2006; Järvinen 2008).

Finland never became the leading country of MHP and the investments in interactive digital services and solutions were not turned into important new sources of income. Even Nokia lost its interest in broadcast receiver production relatively soon. It dropped DAB development already in 1997 and DVB-T production in 2006 (Ala-Fossi 2012a). In addition, DVB digital television with MHP interactivity never became such a public service bus to the services of Information Society as it was promoted in a joint TV campaign of the new digital TV channels during the spring of 2001. People soon bypassed the bus lane on broadband Internet (Näränen 2006; Hintikka 2003).

Figure 4. Yle Superteletext front page in September 2003

Source: Näränen (2006).

Superteletext as such failed, but not only because of its technical limitations or defective concept design, which did not meet the user expectations. It fell in between the strong and path-dependent market position of teletext and the rise of the Internet – and thanks to policy decisions on the introduction of DVB, it never really got a chance. But if Superteletext had only a short life and a silent funeral, some of its heritage is still alive in new Java-based mobile teletext applications.

Teletext enters mobile and social media

Sofia Digital is a Finnish software company, established in 2000 by some of the pioneers of the Finnish FutureTV- project. One of its first main contracts was to develop a new browser for Superteletext (Wallden 2004), and the company continued to work on teletext-related projects in co-operation with Nokia. In 2006, they released the first teletext solution for Mobile TV. It was soon developed to use either broadcast teletext feed from DVB-H mobile TV or alternatively Internet feed over 3G connection on a mobile phone (Sofia Digital 2006; Balan 2007). This is how teletext made its way to handheld devices. Despite serious efforts, DVB-H turned out to be a failure (Ala-Fossi 2012b), but teletext appli-

cations for mobile phones on all platforms (Sofia Digital 2013) have become increasingly popular also in Finland. The share of mobile teletext users was already 9 percent in 2014, while 15 percent was using Internet teletext services with a computer – or more and more often with a tablet. However, 97 percent are still reading teletext with a TV set, so in most cases a mobile phone or a tablet is just a second screen for using teletext services. (Rämö 2014).

After entering the mobile delivery platforms, teletext has also been mixed with interactive mobile and social media. MTV3 has been offering a commercial SMS-based teletext chat also for mobile Internet users since 2008 (MTV3 2008), while Yle started to mix Twitter and live teletext in 2010. The original idea to publish Twitter messages as teletext came from Swedish SVT, but the software for collecting all the tweets with a certain hashtag (like #euroviisut) for moderated publishing on a teletext page as subtitles was written by Yle engineers. After the first experiments during the Eurovision 2010 song contest, it has been used to deliver tweets on teletext also during other live broadcasts like general and presidential elections, big sports events and song contests as well as current affairs discussions (Koivisto 2012). Another Yle experiment is Über-teletext [Über-Teksti-TV], which refers indirectly to the failure of Superteletext. The system introduced in 2010 is basically an Internet application, which offers a user interface with multiple teletext pages on the screen at the same time. Since 2011, the users have been also able tailor the interface and Yle has opened the application programming interface (API) of the Internet teletext service for outside developers under a Creative Commons license (Haakana 2011).

Why teletext has remained so popular?

The three most popular contents on both Yle and MTV3 teletext services on all platforms are still news, sports and weather information. The news contents on teletext are especially appreciated by professionals in administrative or financial sector as well as by retired people, and these heavy users are usually looking after the latest news headlines on the front page of the service as well as domestic and international news (Reinikainen & Sundsten 2012; Rämö 2014; MTV3 2014). One of them is the former president of Finland and Nobel Peace Prize laureate Martti Ahtisaari, who has publicly referred to "the latest news on teletext" (Tolkki 2014).

For sports-minded people teletext became important already in the 1980s, because it was the first medium, which was able to deliver the sports results in real time between the news bulletins. Currently Yle teletext sports pages have over 620 000 users and 500 000 of them are following also the game results of Finnish national ice hockey league on teletext (Turtiainen 2010; Reinikainen & Sundsten 2012; Rämö 2014). Some people are not interested in sports results

just for fun but because they make bets over the results. Turtianen (2010) argues that teletext had a perfect match with sports betting since the beginning and it is one of the reasons for its longevity. Interestingly enough, gambling is probably not the only vice supporting teletext as some of the most loyal advertisers on MTV3 teletext are selling adult entertainment and quickie cash loans (Hakola 2009).

In addition, it is quite easy to understand that 48 percent of about 750000 people in Finland with a hearing defect are using teletext in every single day. (Taloustutkimus 2013) But why so many people with normal hearing and access to latest information, high-quality images and instant interactivity on the Internet do still prefer to use teletext? Year after year the Finnish teletext users praise the easiness and fastness of using the service, and appreciate its contents, which are both up-to-date as well as in very compact and digestible form (Taloustutkimus 2013; Koivisto 2013; Rämö 2014). Teletext is distributed on universally accessible broadcast TV networks, so it can be used also outside urban areas with relatively simple and reliable devices – and without any extra charge. It takes only few seconds to turn on the TV and teletext. Second, the users know that the evaluation, selection and updating of the news available on teletext at any given time is still made by a team of capable professional journalists instead of an algorithm.

Third, one of the secrets of the continuing success of teletext is that some of its weaknesses have turned out to be its strengths. Teletext pages have very strict limitations: each and every page has only 24 rows and there cannot be more than 40 characters on each row. In ordinary teletext page with a headline, there is no more than 16 rows available for text. This means that the restrictions for one-page teletext news are almost as strict as the classic form of sonnet (14 lines). Even if teletext does not require rhymes, the texts have to be well written to tell the news in a short form. Finally, the simple graphics does not need much bandwidth, so the delivery remains relatively cheap and fast on all platforms. Nowadays, some of the users may even think that the 7-bit graphics of teletext are also fashionable or cute retro – but on the other hand, some people also just ignore the service because of its old-fashioned and limited visual appearance. Despite the highly topical contents and fast updates, the visual image of teletext is a prisoner of the 1970s. It signifies and symbolizes the past (Reinikainen & Sundsten 2012; Turtiainen 2010).

Teletext is still going strong, but its heyday is already over

Although in 2014 teletext still has 1.7 million users in Finland, the size of the audience has been shrinking for the last decade. The use of teletext started to decrease in 2005, but Yle teletext was not declining until 2010. Yle alone

reached then 1.7 million users every week. (Turtiainen 2010; Yle 2010) 2011 seems to have been a watershed year at Yle, because both their website (yle.fi) and teletext pages had then about 1.6 million weekly users. Two years later, the amount of weekly website users was more than doubled (3.4 million) while teletext users were no longer mentioned in the audience report (Yle 2011b; Yle 2013) Currently, Yle teletext has 1.2 million weekly users and the other leading teletext provider MTV3 has 880 000 users every week. This means that Yle has lost 0.5 million teletext users in five years. The amount of daily users of Yle teletext has declined after 2011 about 29 percent from 1.1 million to 780 000. MTV3 has now 543 000 daily teletext users, which is 11 percent less than three years earlier (Yle 2010; Rämö 2014; MTV3 2014).

Although teletext is still popular among people over 25 years, the share of younger generations has been declining ever since 2007 – and this abandonment from teletext is not tied to any specific device. People under 25 are using less teletext on TV, on computer as well as on mobile phone. Also the share of female users (36 percent) has been slowly decreasing since the turn of the century (over 40 percent). (Rämö 2014; Yle 2010; Yle 2011b) There has not been any research especially on the Finnish non-users of teletext, but in web-based survey for female teletext users Reinikainen and Sundsten (2012) got responses also from people who do not use teletext. The most common reason (48 percent) was that they preferred the Internet instead, while teletext was seen as too old-fashioned, boring and difficult to use (Reinikainen & Sundsten 2012).

Terrestrial digital television in Finland has currently 9 multiplexes and 29 free-to-air TV channels but no more than 5 different teletext services as both the absolute number of services and the proportion of the channels with teletext has decreased recently. Besides Yle teletext on four channels (*Yle TV1, Yle TV2, Yle Fem* and *Yle Teema*), MTV3 Tekstikanava can be accessed on three channels (*MTV3, Sub* and *Ava*) after Subteksti was closed down in 2013. Sanoma offers Tekstinelonen on two channels (*Nelonen* and *Liv*), but no longer on *Jim*. The newcomers, SBS (*TV5, Kutonen*) and Fox Finland (*Fox*) have launched their TV channels during the last decade without any teletext services. Teletext on DVB-T requires extra bandwidth so dropping the service and replacing it with a website is a way to be more cost-efficient, especially if your target audience is not likely to miss teletext in the first place. But teletext can still be a profitable business.

As it was an industry norm in the 1990s to offer a teletext on every new TV channel as soon as possible, both *MTV3* (1993) and *Nelonen* (1997) launched their teletext services in the year following the introduction of the channel. *MTV3* decided to create a new business by selling teletext space for all sorts of advertising and SMS services and supported this effort by offering an increasing amount of news and entertainment. Sanoma has probably tried to avoid com-

petition with the company newspapers like Helsingin Sanomat and it never had a clear strategy on teletext. Tekstinelonen started to lose audience after 2007 and since 2009 there has not been any news: only few online news headlines and some program information, making the service a shadow of former itself.[3] MTV3 Tekstikanava with its much more diverse and wide journalistic content has remained commercially viable (Jantunen 2009; Reinikainen & Sundsten 2012; Yle 2010; MTV3 2014).

Discussion: is there future for teletext?

Teletext has turned out to be a more diehard media than it was ever expected. It has beaten its interactive rival technologies not only once, but twice. Both videotex and Superteletext failed although they were designed to be more sophisticated, interactive systems. Moreover, even though teletext was originally based on certain obsolete characteristics and unused capacity of analog television, it has successfully survived also the digitalization of TV in all Nordic countries including Finland (Kirchner 2012). It has remained popular not only as a free-to-use, fast, reliable and easy-to-use news media – but also because it has been a great tool for sports betting and an efficient platform for advertising some socially less respected commercial services like adult entertainment and quickie loans. It is a living evidence how the success and longevity of media technology is never a direct consequence of its technological superiority or better capacity – even if there would be a consensus what the "best" option could be (MacKenzie & Wajcman 1999; Lievrouw 2006).

Although the introduction of digital TV and the Internet has not killed teletext, there are several new and serious challenges for teletext rising on the horizon. First, the transition into all-digital TV has fundamentally changed the political economy of teletext production and distribution. In the analog era, teletext service required special investment in production of teletext content, while the distribution used the existing channel capacity, and did not create additional expenses for the broadcaster, who owned the network. In the digital era, the situation is exactly the opposite as teletext content is a byproduct of Internet content production, but its distribution on digital TV channel requires a certain amount of additional bandwidth, which now has its own separate price, as the DTT networks are not necessarily owned by the broadcaster(s) any more (Galperin 2004; Brown 2005). As teletext audiences are declining, the broadcast channels providing teletext will seriously consider how long they will pay this extra cost. A new option for providing interactive information services on more developed TV sets without using any extra broadcast bandwidth is Hybrid Broadcast Broadband TV (HbbTV), which has been available in Finland since 2012 (Yle 2012).

The second challenge is the limitations of teletext as such and in relation to use of new media. People who have got used to traditional teletext may think that new teletext mobile and Internet applications are just great, but the digital natives do not necessarily understand the excellence of the fast news and information service behind its crude and old-fashioned interface. This is also the bottleneck in combining broadcast teletext with social media like Twitter. Although the mix of these two could be a great way to enhance the social dimension of live TV by shared experiences (Tuomi 2013), its true importance remains to be seen as active participation requires simultaneous use of both broadcast TV with teletext on and a second screen with a Twitter account.

In some aspects, teletext reminds the mp3 audio format. They were both born as byproducts of other projects and despite their shortcomings they became popular among the users. Obviously not because they were able to deliver the best technical quality but because they were able to "expand the limits of possible in the structures of everyday life" (Carlsson & Walden 2007, 7-8) However, audio can be more resistant against aging. At the same time as it has been claimed that young people have actually started to prefer the compressed sound of mp3 to more high quality audio, in their eyes broadcast teletext with its 7-bit graphics has become a relic of the past.

Perhaps the most important question for teletext is what the future of broadcast television is. Finland is already getting prepared for the next transition of digital TV according the plan drafted in Communications Policy Programme for Electronic Media (2012). Terrestrial TV broadcasting will make a gradual transition from DVB-T standard into DVB-T2 after 2017 in order to clear the 700 MHz band, which is to be reallocated for mobile broadband. As a part of this plan, Yle and the three leading commercial TV channels – *MTV3, Nelonen* and *Fox* redefined as "public interest channels" – are obliged to broadcast nationwide on both DVB-T and DVB-T2 until 2026. (MINTC 2014)

Simulcasting on two standards for the same audience is not cost-efficient and it is not sure that the Finnish TV companies will provide teletext on both DVB-T and DVB-T2 multiplex. Teletext is not specified as a part of Yle remit nor as a task for the commercial "public interest channels" so the channels may even drop teletext. *MTV3* and *Nelonen* have already been cutting their spending on broadcast journalism because of heavy losses. In 2014, Yle had to reduce altogether 160 people, most of them from TV production, partly because the company had to save 10 m€ after not getting an index increase for its tax based funding in 2015 – and the savings spree is not likely to be over.

Even if teletext services could survive the economic problems of the Finnish broadcasters, the public service Yle does not see much future for teletext – or DTT beyond the year 2030. The company long-term vision on audiovisual media delivery assumes that at the latest by 2040 IP networks may even dominate Yle content delivery (Holopainen 2014). In this context, it is still possible

that broadcast teletext in Finland may reach the age of 40 in 2021, but it is a completely different question whether there is ever going to be the 50th anniversary of Finnish teletext.

Notes

1. Advertising TV.
2. The report states that Finland had an established teletext service using WST standard, while Denmark and Norway had trials with the same system. Figure 2 most probably presents these three countries in an incorrect order. (EC 1987)
3. In 2015, Sanoma has finally ceased all journalistic and informational services on teletext. Tekstinelonen offers now only advertising and dating services.

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7 Super Teletext

A Social Shaping of Teletext as Locating Newness in a Media Convergence Future

Pernilla Severson

Abstract

This is a study of teletext's role in the development of digital terrestrial television in Sweden, particularly as *super teletext,* focusing on the public service television company Sveriges Television (Swedish Television) (SVT), and this company's policy documents, both strategy documents and public service audits, in the period 1996-2002. The purpose is to articulate and deepen our understanding of teletext's involvement in this development, guided by the following questions: What were the arguments SVT used for approaching and developing teletext? How did teletext's placement in the organization change? What general understanding about the dynamics of media change can be found in teletext development? The analysis is made from the general epistemological standpoint of social shaping of technology, the specific media convergence theory often used as a hypothesis for digital media development, and an identifiable concept to highlight the local and situated aspect of newness in media technology development. The main results suggest that super teletext initially made it possible for teletext to be a part of locating newness in a media convergence future in: connecting teletext to a media convergence hypothesis; serving as an aligning-symbol between TV and PC; functioning as an argument for technological experiments; ascribing newness as a way of securing public service values in a digital future. Later, super teletext was described as inferior to teletext, in a combination of lacking interactivity and going beyond teletext's close relationship with news and the tradition of news culture.

Keywords: super teletext, public service broadcasting, convergence, social shaping of technology, newness

Introduction

This chapter aims to add to our understanding of teletext as a relatively unseen but central part of media development, considering both academic research and policy actions. The empirical case in this chapter is teletext's role in the development of digital terrestrial television in Sweden particularly as *super*

teletext – teletext in a digital TV context involving multimedia content and interactivity – focusing on the public service television company Sveriges Television (Swedish Television) (SVT), and this company's policy documents, both strategy document and public service audits made, 1996-2002.

The purpose is to articulate and deepen an understanding of teletext's involvement in this development. To this end, the following questions are explored:

- What were the arguments SVT used for approaching and developing teletext?
- How did teletext's placement in the organization change?
- What general understanding about the dynamics of media change can be found in teletext development?

First, the arguments concerning what and why teletext should be in a digital environment for television, what claims, with premises and conclusions that exist, aid understanding of what decisions were made, and on what grounds. Second, articulations of teletext's placement in the organization, and what changes were made concerning this, aid the understanding of teletext's involvement concerning locating teletext as part of a technological development, part of a news operation and whether or not it is integrated within the organization. Third, articulating and deepening the understanding of teletext's inclusion in digital terrestrial television for public service television broadcasters helps to analyse the general understanding of the dynamics of media change. The first question is concerned with policy-oriented aspects: the main arguments for what teletext should be. The second question is linked to the placing of teletext articulated in the policy documents: the actual work of creating the teletext material and locating teletext within the company. The third question connects the first two questions and adopts a perspective for an understanding of the dynamics of media change: what relevance this study has for knowledge production, for other studies not only on teletext, but also on media development more generally.

The empirical base for this study is policy documents. Document analysis is a common historical method, using documents to find *information* more than studying their *content* and *form*. The guiding methodological approach in this study is a qualitative content analysis. Qualitative content analysis emphasizes themes and topics of the categories and their distribution, meanings and relations within the data under investigation (Pfeil & Zaphiris 2010). The qualitative content analysis process is to identify, code and categorize patterns or themes in the empirical material (Patton 1990). In policy documents, I distinguish meanings and discuss possible results and consequences. The selected and analysed policy documents in this study of teletext are two different primary sources from the company SVT: strategy documents and public service audits

covering 1996-2002. The selection of these policy documents is made because these texts are relevant and rich material concerning both visions and realities. Strategy documents are and were used to convey a direction towards the future. Public service audits are and were an evaluative effort about how development was acted upon and revised. These company records as conveyed in strategy documents and public service audits hold a promise of an official truth, providing an account of how the company wishes to be perceived and are held accountable for. As for all document analysis, there is a risk of being either too descriptive (and adding more meaning than already stated in the document) or lacking valid arguments of what the document can represent (May 2011). To deal with this criticism the analytical process is guided by the research questions. And to make meaning of the material in a qualitative content analysis, the articulation and application of theories is made a crucial part.

Theoretical approaches to teletext

The analysis is theoretically infused with a prismatic approach to the dynamics of media change, consisting of a general epistemological standpoint of *social shaping of technology*, the specific *media convergence theory* often used as a hypothesis for digital media development, and an identifiable concept to highlight the local and situated aspect of *newness* in media technology development.

A general epistemological standpoint in this chapter is the *social shaping of technology* (SST), a theoretical approach to media development emphasizing more than the cause-and-effect perspective of technological determinism. MacKenzie and Wajcman (1985; 1999) collected and synthesized approaches that articulate how technologies are part of social shaping, not merely adapting to technological change: the relationship between technology and society is one of mutual shaping. This means that some technologies are, in given social circumstances, more compatible with some social relations than with others. It also means that new technology typically emerges not from flashes of disembodied inspiration but from existing technology by a process of gradual change and new combinations of the existing technology.

In this book, teletext is a media technology approached as an important precondition of new technology. In this context, teletext would provide the basis of devices and techniques to be modified and serve as a set of intellectual resources available for imaginative use in new settings. According to the social shaping of technology, teletext is more than a precondition of digital media; it has the potential of being an active shaping force in digital media development. As MacKenzie and Wajcman (1999) emphasize, technology and society are mutually constitutive where technology is connected with the economy, politics, different organizations and culture.

An important aspect of the social shaping of technology is the presence of market and state decisions. If technological systems are economic enterprises (involved directly or indirectly in market competition) technical change is made inevitable, and technical change outside a particular country can exert massive pressure for technical change inside it. In technical innovation, future costs and future profits are key factors – involving the cost of labour as a vital issue. Therefore, it is relevant to study in what ways teletext is made part of the economy as the presence of the market, and whether teletext is justified on the grounds that it saves labour costs. The state is also a social institution, which shapes technological change, and the single most important way the state has shaped technology has been through sponsoring military technology. In this chapter, the public service television context makes it particularly relevant to study the ways in which teletext is made part of a state-sponsored activity. Both the market and state-sponsored technologies are connected, as the materiality of teletext can matter: the very materiality of machines is crucial to their social role and the different assessments of what counts as being technologically desirable. Teletext's superiority or inferiority as technology in relation to digital media is to be explained, not taken for granted, as emerging from complex processes involving both human actors and materialities. MacKenzie (1990) shows how technologists can strive to keep their technologies under the radar, trying to be opaque to scrutiny from the political system and to be able to resist having to comply with political demands.

Social shaping of teletext means resisting a cause-and-effect perspective based on technology, approaching teletext instead as an existing technology travelling into a process of gradual change, as well as new combinations and renegotiations between human agency and materialities. In this chapter, social shaping is used both to argue for and to create prerequisites for an analytical exploration of teletext and compatibilty and/or exclusion with social relations and television technologies.

Media convergence theory is often used as a hypothesis for digital media development. Since the mid-1990s, digitalization and convergence have increasingly been part of mass media debate (Syvertsen 2001) and within research, as presented by Jenkins (2004; 2006). Media convergence can be visions, hopes, and hypotheses concerning the relationships between different media and its social agents involved in everything from decision-making on media to producing, distributing and using media in different forms (Severson 2004). In this chapter the approach is media convergence as theory, consisting of relationships with assumptions on possible observations, which helps to classify, understand, and predict.

In many ways I am using the social shaping of technology to approach media convergence as a more theoretical concept. Media convergence is rel-

evant for teletext because, when television is being digitized, teletext travels into digitalization within a medium that used to be analogue. And at the same time, teletext can be understood as part of a media convergence context without digitalization: an example of analogue media convergence. According to Jenkins (2004), media convergence theory describes something "that allows us to identify major sites of tension and transition shaping the media environment for the coming decade" and that is "more than simply a technological shift," involving potential "to alter the relationship between existing technologies, industries, markets, genres and audiences" (Jenkins 2004: 33). Jenkins popularized the concept of convergence culture in his 2006 book of the same name, aiming to describe a process of change as both top-down and bottom-up; manufacturers and users both shape technology. Nine sites are ascribed as being where producers and consumers do important negotiations. These sites are all projecting towards an Internet-connected digital future. The sites are the following: audience measurement, media content, digital economy, media ownership, media aesthetics, intellectual property rights, relations between producers and consumers, globalization, and citizenships. Each site is connected with a key question, ranging from whether fan communities will be the new beneficiaries of audience measurement to the relationships between publics, politics and corporate media involving issues of intellectual property, freedom of expression, and models of cosmopolitanism and democracy.

This sense of media convergence is based in the articulated power relations in society linked to the economy and bringing the possibility to reconfigure media power and reshape media aesthetics and economy. Participatory possibilities include the connecting, crowd-culture aspects, where commodities are used as resources for production of meaning and where peer-to-peer-technology challenges distribution and ownership. Broadcasting is made part of media convergence in the interplay between agenda setters and grassroots media: "Broadcasting will place issues on the national agenda and define core values. Grassroots media will reframe those issues for different publics and ensure that everyone has a chance to be heard" (Jenkins 2004: 35).

More recent discussions of Jenkins' approach concern a critique of the assumptions of media convergence having implications for society and politics. A more nuanced perspective is proposed, reframing media convergence as a search for specificity where differentiation and stratification is included. This perspective of specificity comprises convergence practices in historical continuities and differences, including issues of locating change and its agents as well as the power and ideology of capitalism (Hay & Couldry 2011).

In relation to teletext, media convergence theory seems to create a form of culture jamming based in digital technologies, in that the theory builds on locating newness based on digital media artefacts. According to Jenkins, the process of media convergence is, first, the relationship between different media

technologies and, in a latter phase, a fully-integrated system. This is a linear proposition based on technological adoption:

> The rate of convergence will be uneven within a given culture, with those who are most affluent and most technologically literate becoming the early adapters and other segments of the population struggling to catch up. (Jenkins 2004: 35).

Teletext is a fully-integrated system, only with television and not with digital media artefacts. This creates a different starting point for the media convergence process if one sees it as something attached not only to digitization. Teletext shows the possibility of media convergence being part also of analogue media development. Newness would then serve as a more apt analytical concept to deal with teletext development in relation to other media development.

Newness can help us understand what is new, not through a definition of what super teletext *is* but through what new aspects are *ascribed* as a phenomenon. In this chapter, newness is approached as proposed by media researcher Sonia Livingstone and by design anthropologist Lucy Suchman. Livingstone (1999) states that what is new about new media is not a question of technology but about locating it within cultural processes. Livingstone argues that discourses of *new* are mainly extrapolations from the past in combination with speculations about the future, which resonates well with the social shaping of technology. Newness is situated as being in the realm of "it depends" and highlights a different time scale for technological development compared with social change. Research, then, must be able to distinguish change from progress, and technological change from social change. For teletext, this would mean both discerning between teletext as transformation and teletext as improvement and distinguishing – or maybe relating – technology and the social as agents for change.

Suchman focuses on the local and situated aspect of newness, where attribution of the value of newness is a local preoccupation: newness is produced and is part of translation work in a given time and place. As regards teletext, this means the local preoccupation in this chapter can be Sweden, where a certain newness of teletext is produced as super teletext. Newness as a local preoccupation can also be understood as part of and placed in a company's organization. Suchman (2011) argues that novelty requires imitation or likenesses, making originals and copies not different in kind so much as in time and place, resulting in translation invariably producing difference. What newness can mean, instead, is inventiveness, connected with the opening up of possibilities in a certain situation. This calls for an analysis of teletext focused on what possibilities are opened up and, as done in this chapter, an analysis of what difference is produced regarding super teletext in digital terrestrial television,

In entrepreneurship, newness is used to define and measure innovation in a better way, for example by exploring what is new, how new it is, and to

whom it is new. In this setting of newness (as part of entrepreneurship), it is used to differentiate innovation from change (for a discussion see Johannessen et al. 2001). Prescriptions of what to see in teletext thus resemble the link to market-orientation. Accordingly, there is a certain need to control, adjust, forecast and plan, prompted by a lag between the material culture (technology) and the rest of culture (adaptive culture).

What the concept of newness offers, as proposed by Suchman, is ways of seeing, organizing and understanding teletext and not from the need to control, adjust, forecast and plan. Newness is instead a sensitizing concept used to understand the social shaping of technology. In this context, newness relates to social shaping of technology, as Winner (1993) argues: Technologies are inherently political, because technologies can be designed, consciously or unconsciously, to open certain social options and close others. Some technologies are, in given social circumstances, more compatible with some social relations than with others. What social options are opened and closed for super teletext? And how can super teletext be argued in this given social circumstance as more compatible with some social relations than with others?

Contextualizing the specificity of teletext practices in history

This section refers to studies on both teletext and on super teletext. These studies are points of references, making it possible to contextualize the specificity of teletext practices in history by showing which research has been made and what it is characterized by. The studies on super teletext are technologically oriented, resounding linear technological-deterministic approaches. In the studies on launching and early development of Swedish teletext, audiences are made part of teletext development in a way that also includes the social in the shaping of teletext. All studies emphasize teletext and super teletext as being forms of television. Studies on Swedish teletext history illustrate a context of moving from teletext as text for inclusive TV to being an extra text-based service to television.

By placing teletext and super teletext in history, a valuable horizon of understanding is created. Graziplene (2000) argues that teletext was initiated as a new idea for news dissemination, building on the innovation and spreading of a British technological standard. Teletext was in this initial phase situated as linked to news and to technology. Cesar et al. (2004) present super teletext as a characteristic of teletext, highlighting its bridging function in digital terrestrial television development: “Digital television helps to realize the next evolutionary step for teletext services with the introduction of information portal services also known as super teletext services” (Cesar et al. 2004: 23). A few years later, Lekakos et al. (2008) describe super teletext as a traditional teletext service,

with multimedia content broadcast with the digital TV compression standard. Super teletext was in these studies scripted in relation to existing teletext genre content and to technological development: digitalization of television.

A more social science-oriented perspective on super teletext is part of Jensen's (2005) work on interactive television. Super teletext in this context is distinguished as one of three forms of interactive television, also named Enhanced TV, bearing characteristics of multimedia more than interactivity: "low-technology discount solutions with limited aspects of interactivity"; that is, adding text and graphics to video content. It is considered a discount solution because it "is being sent through the free capacity in the actual broadcast signal" (Jensen 2005: 89). Jensen argues that this form of interactive television belongs to a "crawl" phase, which should be followed by a walk phase, and then a run phase – the adoption processes needed to allow viewers to become interactive users. Super teletext in this context was also linked to user behaviour and to the potential and desirable development of interactive television services.

Teletext in media development in Sweden was primarily developed as a way to expand public service television's news operations. When teletext was initiated in Sweden, with the 1977 Radio-TV Bill, it was primarily approached as a technology that met the need for subtitling for the hearing impaired. Teletext tests started in 1978 and regular teletext broadcasts began in 1980, served by a specially assigned teletext-editorial organization within SVT. After this initial approach of seeing and using teletext as a way to meet the public-service ideal of catering for all audiences, it soon became clear that teletext was mainly used for news. Teletext was also seen and used as a fast medium by its audiences (Hadenius & Weibull 1993; 1999).

In studies made by SVT, teletext is made part of several inquiries. A number of ambitious experiments took place during the 1979 election, such as covering the election for the hearing-impaired. In this experiment, there was a panel of 160 hearing-impaired individuals who received devices from SVT. SVT's goal with the experiments was to investigate the use of the service, and the study was important for decision-making concerning the future of teletext: "The benefits of the technology as documented in that study led to the introduction of regular services the following year" (SR/PUB 1993: 33). Then, in 1993, it was stated: "Although teletext is widely used today, it is still primarily regarded as an aid to the hearing impaired, and that group's needs have remained in focus throughout" (SR/PUB 1993: 33). Teletext was also intended to help immigrants better understand spoken Swedish (SR/PUB 1993).

Teletext development was embedded in social practices, politics, ideology and also capitalism. In Björkegren's (1996) business financial analysis of television, teletext is argued as proving his vision of the future; namely, as an example of interactive, viewer-controlled television with more readers than

any daily newspaper. In this study by Björkegren, television is approached as a company, and in this context, teletext is aligned with interactivity expected in a future promising large market shares.

A summarizing comment on Swedish teletext is that teletext gives the impression of having had policy support mainly for catering to minority needs. The state was an important agent in Swedish teletext technological development, ascribing it as part of the public-service remit, negotiating an opportunity of enhancing, not changing, public service broadcasting. Audience patterns of using teletext for news appear to be a surprise, a perceived sidetrack from a producer perspective. This can be seen as of the same proportions as text messages (SMS), in mobile phones (Hillebrand 2010). As a genre, news has also been a strong force for public service as a legitimate form – the *raison d'être* of public service. Technologically, media convergence is not part of the discussions in the beginning of teletext development in Sweden, rather teletext is approached as something part of and enhancing television: being an artefact that is part of the actual television receiver. This has changed with digital media, even if teletext is still possibly part of the artefact; the alternative possibilities for teletext in earlier studies are first ascribed to social relations of access and are only later expanded to the usage of fast news. It is in the context of digital media with interactivity that teletext becomes part of a development in which teletext is a competitive advantage and a part of interactive television as the television of the future. A historical version of teletext involves no expectations of teletext as the bearer of interactivity, even if analogue television has these characteristics. Political decisions created an initial driving force of teletext as the bearer of inclusion for those with impaired hearing and for immigrants, based in language and in text.

Teletext in digital terrestrial public service television in Sweden

The development of digital terrestrial public service television in Sweden was made possible through political involvement. In spring 1997, parliament decided to introduce digital terrestrial television. The objectives of the state's policy on mass media were to guarantee freedom of expression, while accessibility and diversity guided the decision (Government Bill 1996/97: 67). In digitizing the nationwide distribution network, the state wanted to safeguard consumer choice by including a wide range of programmes from both public service and commercial broadcasters. The first phase in digitization of terrestrial television involved limited broadcasts to approximately 50 per cent of the population. Parliament decided in autumn 2000 to expand the digital TV broadcasts throughout the country (SOU 2001: 90). The state investigation that led to the decision to fully switch to the digital terrestrial net was built on the arguments about the

importance of state control. These arguments emphasized that the state had a greater ability to control terrestrial channels, since these channels would have to follow the Radio and Television Act (Hadenius et al. 2011).

Approaching teletext in this development, with the different backgrounds from earlier empirical studies and applying the theoretical concepts in a qualitative analysis of policy documents, suggests three themes as especially interesting. One theme is that teletext is made part of media convergence as PC-TV and Hybrid-TV, where teletext was located in envisioning hopes of interactivity based on technology in forms of a presence of super teletext (among other things). Another theme is how the newness of teletext was opening up the possibilities of super teletext being used to create specific arguments for digital instead of analogue television. A third theme is how the social shaping of organizing teletext and super teletext became a process of first placing it in initial digital TV development in technology-driven departments and, later, in a news organization. As a result, super teletext was replaced with teletext-as-usual, even after technological problems were resolved.

Teletext as part of media convergence

In the development of digital television in Sweden, teletext was continuity rather than disruption, illustrating the hopes for technological media convergence of computers and television. Teletext became a concrete example of interactive services that were already known and that were possibly to be enhanced with digital television.

For SVT, digital television made possible the convergence between the TV and the PC. In the strategy document from 1998, SVT describes digital TV as something creating more channels, better sound and images, and primarily generating the add-on-services marked by interactivity. Already at this point, teletext was presented as an existing interactive service to be further developed and was seen as one part of convergence (with the TV-PC as another):

> With digital broadcasting, we can also develop interactive services that we have offered for over twenty years in teletext that now can take a big step forward. (SVT Strategy document 1998: 4)

> Compared to the PC world the TV is a monitor (...) Parallels between the PC are obvious (...) technology sets no clear boundaries and the distinction between what is today regarded as television, data and telecommunications will be erased. (SVT Strategy document 1998: 6)

> In time SVT24 will offer comprehensive interactive services with text and sound and image that the viewer can select. We can offer analysis and backgrounds as well as links to supplementary information on the Internet. These

> services will be built gradually. Initially, there will be an upgraded teletext service. (SVT Strategy document, 1998: 7)

There is a section in the strategy document called "What is interactivity?" where interactitivity is described as developing from the viewer interacting with television programmes via telephone "to vote or participate in a quiz, etc." to the viewer affecting what happens: "This is what we talk of as real or true interactivity" (SVT Strategy document 1998 14). Teletext gets a recognizable place, both historically and in future developments:

> Swedish Television will gradually expand the interactive services that emanates from the TV. In 1999, this will be an expanded teletext. (SVT Strategy document 1998: 14)

The SVT public service audit from 1997 states that on the Internet, Swedish Television teletext pages were the most used and the most frequently used material (SVT PSU 1997). The SVT public service audit from 1998 reports that according to Internet web editors' own guidelines their goal is to: "develop new interactive services, such as news services 24 hours a day based on teletext material and moving images-stories from Rapport and Aktuellt, which teaches and mentally prepares us for the new interactive possibilities digital TV can offer" (SVT PSU 1998: 48). Teletext is made part of the Internet both as a new way of distributing its content and as part of the content, making possible the development of interactive services.

In SVT's public service audit from 1998, there is a statement on how the Web editorial office is approaching the future, working to "learn and mentally prepare ourselves for new opportunities interactive digital TV can offer us" (SVT PSU 1998: 48). The plan was to gradually expand the interactive services via TV, which during 1999 mainly meant an enhanced teletext. According to SVT, the potential in digital TV development during this period depends on the interplay between production and audience: "Ingenuity, audience reactions and economic realities will determine what we will see as additional services in the coming years in the digital media world" (SVT Strategy document 1998: 14). In the public service audit from 1999, teletext is also presented as compatible with the mobile phone; the plans for teletext mentioned as being able to "provide the basis for a mobile news service with WAP technology in mobile phones" (SVT PSU 1999: 111). Hopes for convergence are replaced with ideas on how teletext, TV and Internet can complement each other. In policy documents, technological standards and TV-culture seemingly shape teletext as part of a complementary development.

In the SVT public service audit from 1999, digital TV is highly visible as this was the year that digital broadcasting was initiated. Besides, widescreen, interactive services are ascribed as unique for digitally-distributed television. Teletext is mentioned as being part of the digital material, being broadcast "in

vision": a non-interactive text-based broadcast. Teletext is also present in the context of the regionally-based experimental channel SVT Mälarkanalen as part of a hybrid TV concept: "A solution where the frame is divided into three fields. The left field, which covers about half of the frame, to contain teletext-based information, while the right portion of the image can contain at least a moving image field" (SVT PSU 1999: 28). Because receiving equipment is unable to handle interactivity, it is stated in the document that the hybrid pattern was made without planned interactivity, therefore teletext was broadcast as "in vision," where extra aspects of teletext in digital TV were in simultaneous presence in one frame on the screen with other frame(s) of moving images. In the policy document, SVT informs that it decided to cancel the development of interactive services in autumn 1999. The reason is a strategy of waiting for a new and common technical standard, where the European broadcasters collaborate on a common standard for interactive services in digital TV. Receivers with the new standard were expected to be available for consumers by the end of 2000. The plans for 2000 were to develop teletext and the Internet, both together and separately, as well as teletext on mobile phones (SVT PSU 1999). The Internet carries expectations of it providing regional news programmes every day and in adding value to important TV events: "Swedish Television's first website for a large international audience is created for the hosting of the Eurovision Song Contest" (SVT PSU 1999: 111).

The strategy to let teletext, television and the Internet complement each other was further confirmed and supported the following year. In the SVT public service audit from 2000, the development of interactive services was cancelled due to technical limitations, and the mission of the regional experimental channel was replaced with something else in order "to offer a different, useful and complementary TV concept" (SVT PSU 2000: 33). The channel SVT Mälarkanalen had so far been retransmitting television programmes and "regional teletext in vision" (SVT PSU 2000: 33). In 2000, the Internet was made a permanent complement to broadcasting, where the objective of Internet activity is not explicitly mentioned as a method of reaching young people but, in the active sites, most of them are for children and youth (SVT PSU 2000).

In 2001, teletext was attributed value in relation to its originally ascribed significance: translating sound to text. The news channel SVT24 "developed a special method to broadcast live simultaneous interpretation speech subtitles" (SVT PSU 2001: 18). Additionally, teletext is attached to its value as in-vision, broadcast teletext: "rolling exposure in the analogue and digital TV broadcasts" (SVT PSU 2001: 20). Finally, teletext is further acknowledged as linked to temporality and news; for example, being the fastest on reporting on the attacks on the World Trade Centre in New York. In the SVT public service-audit for 2002, (SVT PSU 2002) teletext is in the top ten on the list of visitors to the SVT website. Studies from 2000 and 2001, on the usage of SVT teletext, show that

news and sports are used the most, followed by financial news and betting pages. Teletext is a complement to both TV and the Internet.

Newness of teletext as super teletext

Teletext as super teletext was used in policy documents to create specific arguments for switching from analogue to digital television. Super teletext services were developed through experimenting with different approaches to teletext in a new media environment. It was a scrolling text-based service for news and weather with enhanced graphics. It was also hybrid TV; the frame was divided into a field with teletext-based information and at least one field of moving pictures. Super teletext made it possible to offer additional services such as news and weather, distributed on super teletext pages with text, graphics, still images, and audio and video files. Super teletext was a possibility more than a reality of existing interactive services that built on a concept that was already known, merged with media-convergence hopes, and meeting technological difficulties.

In digitization of terrestrial TV, teletext development is ascribed newness in how digital technology involves the possibility of adding images and interactivity. This aspect of super teletext produces both imitation and likeness, and it produces difference focusing on the audience: getting new content in familiar ways with new opportunities for participants to talk back and be interactive. Inventiveness as new possbilites becomes producing difference mainly in the production: placing and locating teletext as part of a comprehensive news organization. In this social shaping, teletext is cutting labour costs by being part of allocating organizational resources for news production. For the audience, this means getting difference on different platforms – not only TV but also teletext as broadcast (in vision) and the same material on the Internet. Teletext was made compatible initially with hopes for *TVPC* not PCTV as super teletext: television meets the Internet-connected computer rather than the other way around or as being integrated. Later in media development this was renegotiated as locating newness in TV: teletext as "in vision". Further, although the Internet was involved, super teletext was approached from the perspective of being part of a distribution channel based in TV. The promise of newness in super teletext as something based not just in text and language created a dissonance concerning compatibility with teletext's history of being a bearer of inclusion based in language and text. From the beginning, the essence of teletext was text, differing strongly from the visual essence of television. Broadening the concept of text, such as with super teletext, would indeed be a content convergence, but that was not made. What was projected into the digital future was perhaps more the power of short, fast, and accessible text through a screen.

The social shaping of organizing teletext and super teletext

At the beginning of digitizing television, SVT placed teletext and super teletext in technology-driven departments (SVT Strategy document 1996). An initial experiment was a project called *SVT Mälarkanalen*, led by the SVT Technology and Development department (later renamed the Media Lab). The department's mission was broad: to have a holistic perspective concerning all media development. The project was intended to test the hybrid TV concept. However, when the department realized that the receiving-equipment was unable to handle interactivity, a hybrid TV content model was created and tested without planned interactivity. Developing new receiving equipment with interactivity was not an option, as this needed standardization of technology by the European broadcasters in a collaborative effort. For a department focusing on technology, this wait-and-see strategy and cancelling the development of interactive services make sense: with no technology to work with, there is no work. The strategy in the project SVT Mälarkanalen became instead to develop existing well-functioning technologies: teletext and the Internet, both together and separately, as well as teletext on mobile phones.

In the SVT strategy document from 1996 the starting point is the Chinese proverb: When the winds of change are blowing, some people are building shelters and others are building windmills. To follow these winds of change and to be able to take advantage of its opportunities a precondition is specified: "A vibrant company" (SVT Strategy Document 1996: 5). Organization change is declared as necessary to achieve change urged by digitization. Reorganization as centralization is also stated as essential to create an efficient organization including content qualitative as well as cost-efficiency. It is in these ascribed organization aspects – digitization, content quality and cost-efficiency – that the social shaping of organizing teletext and super teletext is located.

Digitization in SVT was inititally managed as a technology development arrangement mainly involving equipment, standardization and tests. Early sense-making of teletext as super teletext therefore mimicked explorations of widescreen, High Definition TV and other similar technology developments. Centralization as a path to creating an efficient organization had a long history within SVT, particularly concerning the organization and reorganization of channels and news. In 1996 the two main TV channels, SVT1 and SVT2, were "[n]o longer competitors but good friends together to better serve our clients; the Swedish TV audience" (SVT Strategy Document 1996: 5). In a section called "From two to one company" the change is described as a strategy to dissolve the hitherto existing link between editorial offices and TV channels. During these times of digitization and reorganization, a contemporary savings requirement from the government is stated in the strategy document. SVT describes this requirement as an explanation of why an organizational change must be forced.

In addition to reorganizing, a centralization of existing departments, new editorial offices and departments were taking shape. 1998, a Web editorial office was established, to "develop new interactive services, like a 24-hour news service based on teletext material" and also to further the development of moving images "learning and mentally preparing us for new interactive possibilities that digital TV can offer" (SVT PSU 1998: 48). With the Web editorial office, teletext was embedded in and constructed as the opportunity for the shaping of interactive potential. For departments within SVT, there were contrasting implementations of digital technology. News editorial offices devoted a lot of energy to implement a new and more effective computer system (SVT PSU 1998). Digitization and the establishment of new departments were costly and the 1998 SVT stated that they had "begun to have significant costs for the preparation of the new digital channels" (SVT PSU 1998: 81). Reorganizing with cost-efficiency in sight is directly linked to these increased significant costs.

Teletext material as a base for developing interactive news services concerned building on existing material and skills, and also relying on existing labour and already-financed activities. Teletext in this form was also placed within a new digital channel, SVT24, which connected the organization and reorganization of both news and teletext. SVT24 started as a service channel distributing news bulletins and also the two traditional news broadcasts, *Rapport* and *Aktuellt*, with a special mission to be on site when something happened and to broadcast live. The long-term goal with SVT24 was to offer comprehensive interactive services with text and and image for the viewer to choose from, and to offer additional information on the Internet. Initially, these interactive services would be an "upgraded teletext service" (SVT Strategy document 1998: 7).

So far there were fifteen different autonomous news editorial offices: six mutually-independent newsrooms for nationwide news (where SVT Teletext was one) and nine different regional newsrooms. When channel SVT24 was launched in March 1999 one more newsroom was added, however SVT24 also resumed the linking of editorial offices and TV channels. In 1999, SVT24 took over responsibility for more and more news broadcasts on the analogue channels (SVT PSU 1999). The company board decided to reorganize all national news operations (*Aktuellt*, *Rapport* and SVT24) as one part of the restructuring of the company that would happen in 2000 "to create clearer structures for planning, management and monitoring of programme activities" (SVT PSU 1999: 7). On 7 June 1999 the board gave a mandate to the CEO to conduct a review of all news operations. The reported causes were, among other things, the cost of operations, the implementation and usage of new production technologies, new forms of work and development of new audience services. The news programmes *Aktuellt* and *Rapport* were undergoing centralization of resources: "A comprehensive reorganization in order to create a common central editorial staff, but maintaining independent broadcasting newsrooms, started during the

year." (SVT PSU 1999: 61). In 2000, SVT24 had an expanded mission: to lead the teletext editorial office and the news web editorial office. The arguments were that SVT24 could develop necessary competences for news around the clock for television, teletext and the Internet (SVT PSU 2000). The new central news organization was established in the capital, Stockholm; nevertheless, the different newsrooms would still be independent.

In 2001, teletext became part of a development context aiming to deepen information on sports. Teletext's sports editorial office was integrated with the existing organization of sports news to increase impact. At the same time, SVT began to emphasize the Internet as a priority for development, and to downgrade the regional digital channels and close them down. A new department, SVT Web, was initiated: "A joint department for web activities was created and staffed" (SVT PSU 2001: 19). SVT24's responsibility for broadcasting for the news programme *Rapport* was, in 2001, withdrawn and returned to Rapport. SVT24 continue to manage the teletext editorial office and the news web editorial office (SVT PSU 2001). Despite integration and cooperation, teletext was still an autonomous department: "SVT teletext has independent news coverage alongside the other news programmes" (SVT PSU 2001: 19). In 2002, SVT24 continued to manage teletext and the news web editorial office. SVT Web is described as acting to complement TV broadcasts by adding value in different forms. Programme editorial offices created and updated most of the web content. The central web editorial office coordinated published content and were responsible for navigation, development and overall planning and investments (SVT PSU 2002). With these changes, super teletext was replaced by teletext and teletext in vision rather than developing teletext and the Internet as interactive possibilities in line with super teletext.

The social shaping of organizing also involves the development of new ways of understanding and communicating SVT as a company: a multimedia company, a professional organization and a learning organization. In the strategy document for 2002-2005, SVT is referred as "a multimedia company with interactive services, giving the audience more choice and extended service" (SVT Strategy document 2002: 4). SVT was also aiming at being a professional organization:

> SVT will develop into a cohesive company with close cooperation between entities, editorial boards and departments. The organization shall be governed with objectives and be based on decentralization and independent decisions within a given framework. Authority, resources and accountability should match. (SVT Strategy document 2002: 8)

Being a professional organization is also described as being a learning organization, where co-workers should have the competence and will to "develop and evolve in a changing media world" (SVT Strategy document 2002: 8).

Before digital TV, teletext had been a relatively small independent department. Digital TV involved a centralization of resources, illustrated by organizing editorial offices increasingly linking teletext to news. Digital television raised SVT's hopes that this allocation of resources would strengthen the news genre. The mission for the centralized news organization was to develop the specific skills required for news around the clock in a multimedia ecology. News is a core area for public service broadcasting, and, with teletext's history of being valuable to audiences by providing news, it is not suprising that teletext is linked to a news organization. However, this meant super teletext was totally replaced by teletext in vision and teletext as usual, even after technological impediments were eliminated. In the social shaping of teletext as super teletext the placing of development in the organization is important. Super teletext then meant technological experiments, adapting to and exploring possibilities from technological options. And when a more content-driven department, like the news, included teletext in its operations, teletext became predestined to be another form of distribution of the news. The economy is an important explanatory factor in this course of events. In the allocation of resources to the new centralized news editorial office, teletext was primarily a promise of strengthening the news genre (as perceived in the news editorial office) rather than a promise of an interactive future. Understanding and communicating SVT as a multimedia company, a professional organization and as a learning organization reconfigured interactivity beyond super teletext.

Conclusions

Super teletext was a social shaping of teletext, locating newness in a media convergence future in:

- Connecting teletext to a media convergence hypothesis.
- Serving as an aligning-symbol between TV and PC (starting with television and adding the digital).
- Functioning as an argument for technological experiments.
- Ascribing newness as a way of securing public service values in a digital future.

Super teletext was also a social shaping of teletext, locating newness in a media convergence future and abandoning super teletext in favour of teletext:

- Being a deficient technology.
- Lacking interactivity.
- Going beyond news.

Weaving together teletext in media development means locating it in its different social relationships, in its different countries and in organizations. Technology seems to stand for a more generalizable aspect, bringing the same technological possibilities to different countries and organizations. The connections made, with both the social and other media technologies, are particularly relevant. Some technologies are, in given social circumstances, more compatible with some social relations than with others. In Sweden, teletext's close relationship with news and the tradition of news culture served to create an imagination of teletext as part of the broadcast medium rathern than as part of an interactive imagination. A comparative study with other countries would be beneficial to further understand these aspects of teletext.

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8 The Icelandic Public Service Broadcaster RÚV's Teletext Service Textavarpið and Media Change

Ole J. Mjøs

Abstract

This chapter explores the development of the Icelandic public service broadcaster, RÚV's, teletext service. The aim is to show how teletext can provide new perspectives on other media platforms such as the Internet, and further our understanding of change and continuity in media development. The chapter examines these issues by, first, introducing the Icelandic television context in which teletext has emerged, and, second, tracing the historical development of teletext through three phases. The pioneering phase runs from the launch of teletext in 1991 until RÚV established an online presence in 1997. In the second phase, 1997-2008, Iceland became the country in Europe with the highest Internet penetration, and the web became a major competitor for the teletext. The third phase takes us up until the end of 2014, and is characterized by the demise of the original teletext service. The study of the three phases shows how teletext was a pioneering medium in utilizing new technology to distribute content and a precursor for RÚV's online service. At the same time, teletext's possibilities for instant publishing created tensions with traditional television and radio news practices and traditions.

Keywords: teletext, public service broadcasting, Iceland, RÚV, media change and continuity

Introduction

Iceland, with a population of around 330,000, is the smallest of the Nordic countries. In comparison to the other Nordic countries – Norway, Sweden, Denmark and Finland – Iceland is in many ways marginalized in media and communications research. Yet, Iceland has a long established national media system and is part of a strong public service broadcasting tradition – from which the Icelandic teletext service, Textavarpið, evolved. As in the other Nordic countries, the Icelandic public service broadcaster, Ríkisútvarpið (RÚV), first emerged in the interwar-period, in 1930, as public radio service. Throughout the 1950s and 1960s, public television was introduced across the region, in-

cluding Iceland. Still, while being part of a shared public service broadcasting tradition, like all other national systems, Icelandic broadcasting is also shaped by specific historical developments and political contexts (Harrie 2009; Karlsson 2006; Syvertsen et al. 2014).

This chapter explores the emergence and development of RÚV's teletext within the Icelandic television sector. The aim is to show how the study of teletext can provide new perspectives on other media such as the Internet, and further our understanding of change and continuity in media development. The chapter then emphasizes the significance of "continuity in international media history" (Chapman 2005: 3) in addition to change, and the ways in which they intersect and interrelate: "Very often change ends up being analysed more thoroughly, because it is attention-grabbing and more dramatic. In contrast, the existence of continuity may be assumed, but can be left unmentioned." (Chapman 2005: 5) In doing so, the chapter takes the specificities of the Icelandic media system into account, while at the same time interpreting these insights "derived from cross national or comparative studies" – i.e. the Nordic media system and public service tradition (Syvertsen et al. 2015: 6; Syvertsen, et al. 2014).

The chapter examines these issues by first introducing the Icelandic television context in which teletext has emerged, and, second, by tracing the historical development of teletext through three phases. The pioneering phase runs from the launch of teletext in 1991 until RÚV established an online presence in 1997. In the second phase, 1997-2008, Iceland became the country in Europe with the highest Internet penetration, and the Internet represented a new, major competitor for the teletext which eventually became part of RÚV´s centralized news department. However, in this period, teletext and RÚV's online expansion was closely linked. The third, last, phase takes us up until the end of 2014, and is characterized by the demise of the original teletext service as its purposes and functions are taken over by other RÚV services.

There is very limited research on teletext in Iceland. Therefore the main methodological approach for data collection is expert interviews (Flick 2009) with former and current employees of RÚV that have either firsthand experience of developing and running the service or have knowledge about the service's position within the Icelandic public service broadcaster. The people interviewed for this chapter are Ágúst Tómasson, Head of Teletext, RÚV, 1992-2007; Ingólfur Bjarni Sigfússon, Head of New Media, RÚV; Geir Magnússon, Head of Teletext, RÚV, 1991-1992: Gísli Jónasson, Supervisor of RÚV teletext; and Valgeir Vilhjálmsson, Head of Audience and Market Research, RÚV. They were located through both "snowball sampling" and "convenience sampling" (Bryman 2012). In addition, the chapter draws on previous relevant research as well as corporate and public information and industry data from Icelandic and Nordic sources.

The Icelandic television sector

Television was introduced to Iceland mainly through "external influences" (Karlsson 2006: 28). The radio monopoly in Iceland was infringed as early as 1951 when American NATO personnel at the US military base in Keflavik launched a radio service consisting of popular music. Only four years later, in 1955, the Americans followed up with the launch of a dedicated television service for people living on the military base. At first, Icelanders living in nearby villages could also receive the television transmission but, in 1962, the transmission signals were amplified so that the population of Iceland's capitol Reykjavik and the surrounding area could also pick it up (Magnússon and Oddasdóttir 2014 Valsdóttir 2014). The programming consisted of American popular entertainment and children's programming, and the presence of the American television station "became a significant political issue and added to a debate focused both on the military presence in the country and the preservation and future of an independent national culture" (Valsdóttir 2014: 1163). The presence of the American television station was described as a "cultural 'invasion'" and following "a fierce debate about foreign cultural influence" (Karlsson 2006: 27), RÚV started television broadcasting in 1966, as one of the last public service broadcasters in Europe. In accordance with the Icelandic Public Service Broadcasting Act, RÚV-TV is obliged to offer diverse television programming to the population, promote the Icelandic language, history and cultural heritage, and honour democratic rules, human rights and the freedom of speech and opinion (RÚV 2014). In the wake of the establishment of RÚV's television channel, the reach of the US television station on Iceland was reduced to covering only the Keflavík military base (Helgason 2012).

As in the other Nordic countries, achieving universal television distribution was a priority in Iceland (Syvertsen et al. 2014). By 1970, 85 per cent of the Icelandic population had access to television (Karlsson 2006), compared to 95 per cent in Norway (Bastiansen and Syvertsen 1996). At first, RÚV's television offering was limited to a few hours programming in the evening, three nights a week. There was no television service in July until 1983 or television on Thursdays until 1987. In 1986, the television monopoly officially ended when the commercial Icelandic television channel Stöð 2 was established, and later, in 1999, the commercial channel Skjár 1 was launched. Since the monopoly ended, RÚV's television output has increased substantially, and the launch of RÚV's teletext in 1991 represented a part of its expansion (Karlsson 2006). Since 1 April 2007, RÚV has been an independent, state-owned limited liability company.

In addition to the early challenges to RÚV 's radio and television monopoly, the Icelandic public service broadcaster's position stands out in a European context in several ways. RÚV has almost the lowest level of public funding of

public service broadcasters in Europe. Although the majority of the Icelandic public service broadcaster's income comes from a media tax paid by all taxpayers, a large part of its income is derived from advertising and sponsoring. In Europe, only the public service broadcasters in Lithuania, Romania and Portugal receive less public funding than RÚV (Harrie, 2013). This stands in stark contrast to the other Nordic public service broadcasters that receive between 93 and 98 per cent of its funding from public sources (see Table 1).

Table 1. Share of public service funding among Nordic public service broadcaster (per cent)

Country	Organization	Public funding share of revenue
Sweden	SR	97.5
Norway	NRK	95.8
Finland	YLE	94.8
Sweden	SVT	93.6
Iceland	RÚV	62.8

Source: Harrie, 2013: 70.

The high level of private funding of RÚV may partly be explained by the historical role of the state and policies that have shaped the structure and regulation of the Icelandic media sector. In contrast to the Nordic countries, "the role of the State concerning the media has solely been to ensure free competition in the field as provided through general market measurements" (Karlsson 2006: 38). This is also reflected in the Icelandic press, where there is an "absence of almost any subsidy or regulatory measures" (Karlsson 2004: 228). As a consequence of limited state involvement and lax regulation, a defining historical characteristic of the Icelandic media sector is the strong concentration of ownership: "Despite obvious and alarming signs of unhealthy consolidation in the traditional media, newspapers, radio and television, there has strangely enough been near unanimous consent across the political spectrum that the media should be left to themselves" (Karlsson 2006: 38). By 2010, there were no limitations on cross media ownership between newspapers and broadcast media (Gudmundsson 2010). In 2011, a new media law was passed with the aim of increasing press freedom within broadcasting, the press and online media. A media commission, an administrative committee under the Minister of Education, Science and Culture, was also established to monitor advertising and sponsorship and issue broadcasting licences in Iceland (The Media Commission 2014). The law does not give the Media Commission authority to address or deal with issues of media concentration independently but, in 2013, a bill was passed as an amendment to the new media law that gives Icelandic Competition Authority the power to deal with issues of competition and plurality in regards to media companies (Freedom House 2014).

Today, the television market continues to be highly concentrated and is controlled by three of the largest media companies on Iceland: RÚV, the regional conglomerate 365 miðlar ehf. and Skjárinn ehf. The companies Árvakur and Birtíngur's main business activities lie within publishing. Icelandic interests own all five companies (see Table 2).

Table 2. The largest domestic media companies in 2013

Media Company	Revenue (ISK millions)	Revenue (Euro million est.)
365 miðlar ehf	10.742	
RÚV	5.437	33.7
Árvakur	3.259	20.1
Sjárinn ehf.	2.387	14.8
Birtíngur	624	3.9

Source: Statistics Iceland, 2014c.

Some argue it is the size of the Icelandic market that prevents new television players achieving any significant presence:

> In this small society any attempt at setting up a broadcasting service is burdened with financial difficulties. Even considering RÚV's license fees and Stöð 2´s subscription fees and the added income of commercials it is difficult to maintain three fully fledged television services in such a small market. (Valsdóttir 2014: 1165)

The concentration of media ownership is also reflected in the market share of television audiences. In 2010, the Icelandic commercial television channels, owned by Iceland's largest media company 365 miðlar ehf, and fronted by the Stöð 2 television channel, had a share of 43 per cent (Harrie 2013: 31), while RÚV 's television channel achieved an audience share of 49 per cent – the highest share of public service television viewing in the Nordic countries and in Europe (see Table 3). The European public service broadcasters that come closest to RÚV's television audience shares outside the Nordic region are the BBC in the UK (48 per cent) and the German public service broadcaster (42 per cent) (Harrie 2013: 73).

Table 3. Share of viewing of publicly funded TV channels in the Nordic countries, 2010 (per cent)

Country	Share (%)
Iceland	49
Finland	45
Norway	41
Sweden	35
Denmark	28

Source: Harrie, 2013.

While RÚV's television offering is skewed towards informative programming content, the privately-owned television channels place greater emphasis on fiction and entertainment, including sitcoms, reality-TV, and shows (Karlsson & Broddason 2010). By 2012, the Icelandic television market continued to be dominated by three television channels, which had a combined daily audience share of 94.6 per cent: RÚV´s television channel, Sjónvarpið (RÚV-TV) continued to dominate with a share of 56.3 per cent; the two major private commercial television channels, Stöð 2 and Skjár 1, had audience shares of 29.1 per cent and 9.1 per cent respectively (Mavise 2014).

As with RÚV's television service launched in the mid-1960s, the teletext service emerged late in Iceland. In fact, the public service broadcasters' teletext service Textavarpið, launched in 1991, was a gift, according to the Ágúst Tómasson, Head of RÚV's Teletext (1992-2007): "(Teletext) was started on our 25th anniversary of Icelandic television (RÚV), so it was a birthday present" (Tómasson 2014). And, as with the formation of RÚV, its teletext service emerged out of a Nordic context. Nordvision was formed in 1959 to strengthen public service television in the Nordic region, and its partners are the public service broadcasters in the Nordic countries – including RÚV. The aim of Nordvision is to co-produce and exchange television programming, but also to facilitate the sharing of knowledge among its partners (Mjøs 2011; Nordvision 2014). Nordvision's rationale is based on:

> A common culture and history and many similarities between the Nordic populations are the main reasons for the strong collaboration. Employees at the different partners have been able to share experience because they are collaborators not competitors. (Nordvision 2009)

The developers of the teletext also benefited from the Nordvision organization:

> [O]nce a year I went out the other Scandinavian countries, we had teletext meetings, it was Nordvision, and once a year we had a meeting, one year in Reykjavik, the next year in Norway and Finland and Sweden and Denmark – we went around. And, our (teletext) system is based on the Scandinavian ideas about sport and news and everything. (Tómasson 2014)

The popularity of RÚV's television channel, coupled with the benefits from its collaboration with the Nordic public service broadcasters, gave RÚV a strong platform for its teletext service. Yet, the establishment of teletext and its position within the larger RÚV organization has been far from unproblematic, and technological shifts, coupled with increased competition and shifting media practices, have led to the current marginalization of the service. By tracing the history of teletext in Iceland we detect three distinct phases that places teletext within media development and media change. The chapter argues that teletext has been a pioneering medium in utilizing new technology to distribute public

service content and information to the Icelandic population, and an important precursor for RÚV's online endeavours – both in terms of journalistic practice within a multimedia environment, content production and distribution, and in terms of technological development within a national media organization.

The pioneering phase: 1991-1997

When teletext was launched, RÚV had one news department for radio and another for television. Teletext was organized directly under the Head of Television. The first Head of RÚV's teletext, Geir Magnússon (1991-1992) started working a few months before the launch of the service. Magnússon organized the layouts and collaborated with the graphic designers who designed the teletext, and technicians who were responsible for the technical aspects:

> We were the two employees after it was put on air on 30. September 1991. We had some problems in the beginning with writing the news reporters which had been written for radio or television by the news reporters. We also had problems with our Icelandic special characters which were not in many teletext receivers. (Magnússon 2014)

Furthermore, Valgeir Vilhjálmsson, RÚV´s current Head of Audience and Market Research, recalls the lack of compatibility of the television sets:

> The problem for teletext in the beginning was that the TV-sets were not able to use the teletext information, in the beginning you couldn't even reach it. So only 17 per cent of the population had TVs at that time that could receive teletext. (Vilhjálmsson 2014)

Despite initial challenges, the penetration of teletext throughout the 1990s increased steadily and by the turn of the millennium around 85 per cent of Icelandic households had access to RÚV's teletext service (see Figure 1).

Geir Magnússon, points out that: "Most popular where news, weather, sports and (information on) television programs (and) road conditions. I think teletext service has been an important factor for RÚV as a better service to the audience." (Magnússon, 2014). In sparsely-populated Iceland, with a cold and changeable climate, accurate weather reports and information on road conditions are important. In the mid-1990s, teletext became the key national distributor of such information:

> [I]n Iceland it meant a lot, because the state road company, called Vegagerðin went out every morning, to see if there was snow on the roads, and if people could drive, and what the conditions were. And they wrote some codes in computers, and it automatically went through teletext. So this was probably our best service, in a worldwide context. Every Icelander could, at seven

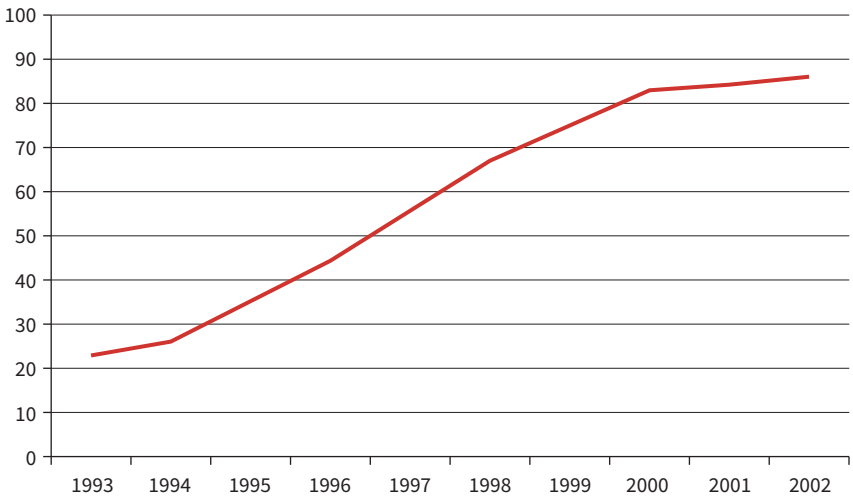

Figure 1. Icelandic households with teletext, 1993-2002 (per cent)

Source: Statistics Iceland 2014d.

> o'clock in the morning, go on to teletext and see if there were some road-blocks, because of snow or bad weather or something. (Tómasson 2014)

Information on flights was also distributed directly via the teletext:

> At that time Iceland Air wasn't the best at being on time, , so people were calling to Keflavík (airport), but when we took up this online system with flights it was very (popular) to use. (Tómasson 2014)

Teletext also distributed sports results directly from the national sports betting company. In fact, teletext pioneered the distribution of content on mobile telephones, and sports results were particularly popular:

> You could text and get the teletext pages on your phone, before WAP, in Iceland, as a text message. You could text some telephone number and ask for maybe page 390, the sports results page, and you could see people in the stadiums texting to get the results from the other matches. (Tómasson 2014)

Later in the 1990s, teletext was distributed to mobile phones using the wireless application protocol (WAP). This was the only RÚV service on mobile phones at the time and it was implemented in an experimental way:

> I don't even know if the heads in RÚV knew anything about it, because it was always something that just went on. I called some guy and that guy told me I had a good idea, so we put the teletext on, and of course sometimes it was the other way around. Because they needed some content in these telephones. They were familiar with it. I know the teletext was one of the

> most popular contents of this WAP system. People knew the page numbers. (Tómasson 2014)

However, there were limits to what the teletext employees could publish. While they had access to the news computer system used by the radio and television news rooms, teletext could only publish news after it had been broadcast. Furthermore, teletext employees were not allowed to produce news independently: "It had to be published first on radio and television, and then teletext. But, this changed gradually. It was – together with radio – the first 24/7 news, but teletext was not allowed to publish as news happened" (Tómasson, 2014). The disagreement in publishing practices caused tension within RÚV:

> [Teletext] never gained any substantial part of RÚV, I think. We were working very hard, we were trying to do things, but there were only three of us so we couldn't do everything we wanted. In the beginning it was only [a] service. It was weather, television programmes and radio programmes and a little bit more, but we didn't have any access to news. No news in the beginning, and then only the headlines. And it was maybe my biggest fight there, having news. (Tómasson, 2014)

A major event contributed to changing this news publishing policy as teletext published the news story first:

> [W]hen Lady Diana died … the lady who was working at teletext at that time called me at home and asked me: "Can I write this story in the teletext?", because it was in the morning, and of course I said "Yes, do it." Probably that was our first scoop. (Tómasson 2014)

At the time, newspapers in Iceland were not published every day of the week. In the early 1990s, the days of newspaper publication was only Tuesday, Wednesday, and Friday. Around 1997, and at the time Lady Diana died, newspapers were also published on Mondays and Saturdays. If something happened on a Saturday or Sunday in Iceland, like elections, the newspapers did not publish it until Monday or Tuesday. One could listen to radio, but teletext was the only place you could read news. Lady Diana died on the Sunday and therefore the teletext staff decided to publish the story. Similarly, during election night, and particularly if it was on a Saturday, teletext were allowed to publish the news and polling and voting data.

Teletext and the Internet: 1997-2008

In 1997, RÚV's teletext was "put online for the first time, and at that time it was the only online news service in Iceland" (Vilhjálmsson 2014). In fact, "teletext was the first free-of-charge Icelandic news service on the Internet. *Morgun-*

blaðið started to publish news on the Internet, but they charged people for it in the beginning. But we went online with the teletext." (Tómasson 2014) At the time, teletext was RÚV's sole online offering:

I know about Sweden, and I think it was like that also [in Norway] that the people working in teletext were [the ones] calling for [and working for] online services. They were the first people employed there [online services]. People went from teletext to online. They saw the value of that [and] they knew how to do it. Not technically, but the idea. That is the main point. That's my way of seeing it. And the teletext-people had the experience of what people want to have online, directly. (Tómasson 2014)

The teletext personnel's skills and experience in rapid publishing represented an internal force at RÚV for quicker distribution of news online as well. This development was encouraged by external developments. As with television in the 1970s, and teletext in the 1990s, universal access to the Internet for nearly all Icelandic households was achieved rapidly (see Figure 2)

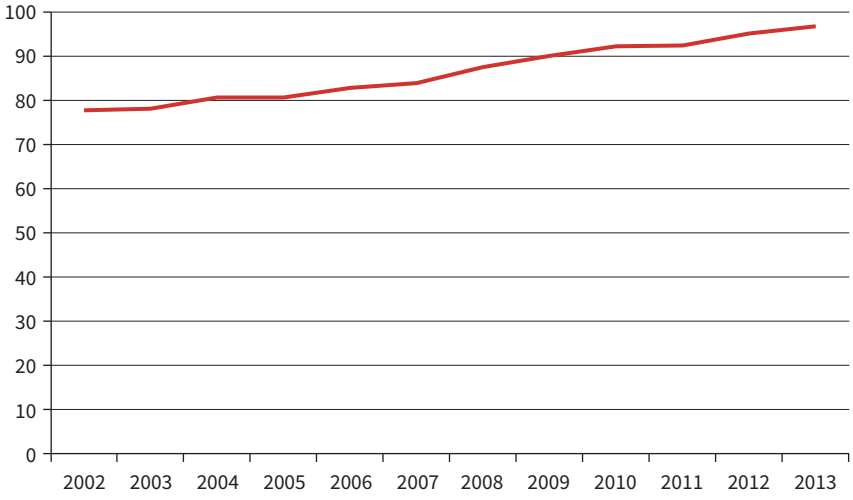

Figure 2. Icelandic households with Internet access, 2002-2013 (per cent)

Source: Statistics Iceland, 2014a.

The expansion of Internet access in Iceland contributed to tensions within RÚV in the early 2000s. The characteristic of this new technology and the possibilities for instant distribution of news and information stood in contrast to particularly established practices within television news:

> [A]fter the Internet came, people saw how ridiculous it was to keep (news) from people. Maybe the television news department was working on something big to publish at seven o'clock, in the main headlines. Of course if we

> did that it could ruin their whole story and no one else had it, but everything else we could publish when we had just found out about it. (Tómasson 2014)

Initially, the Icelandic teletext service was published in its original form on ruv.is: "We converted it [the analogue teletext] and published on the Internet" (Tómasson 2014). And, gradually, it was the teletext employees who became responsible for publishing on RÚV's Internet site, according to Gisli Jónasson, the current supervisor of teletext:

> [F]rom 2001 we took over the news on the web and that definitely increased our work and responsibility and I'm very proud to say that the three of us [the RÚV employees in charge of the teletext] were always very responsible and competitive about what we published; trust was the keyword. We were also always determined to keep the news in teletext, but shortly after the teletext was brought under the newsroom, in 2008, that changed and the teletext department was closed down. (Jónasson 2014)

However, the tension between television and radio and teletext continued into the online era:

> I know that when it was decided to publish news from the newsrooms on the teletext, the reporters protested and wanted to get paid extra for every story that was published on the teletext. That didn't happen, . I am sorry to say, because I'm sure that it would have benefited everyone involved. (Jónasson 2014)

Still, in 2002 and 2005 teletext was still much in use, according to RÚV's market research.

In April 2005, 25 per cent of Icelandic households with teletext access used the service several times daily, compared to 20 per cent in March 2002. In April 2005, only 21 per cent never used teletext in March 2002, and this figure decreased to 13 per cent (see Table 4).

Table 4. Teletext use among Icelandic households, March 2002 and April 2005 (per cent)

	Several times a day	Daily	3-5 times a week	1-2 times a week	1-3 times a month	More rarely	Never
March 2002	16	20	14	11	10	8	21
Aprol 2005	14	25	17	11	10	11	13

Source: RÚV (2005) Dagbókarkönnun 2002 & 2005. (Dairy survey) Textavarpið. IMG Gallup.

In fact, the number of households with access to teletext increased from 86 per cent in March 2002 to 93 per cent in April 2005. Information on RÚV programming continued to be the most popular information for users, followed by domestic news, weather, sports, information on flights, and foreign news (see Table 5).

Table 5. Teletext access and use of different content among Icelandic households, March 2002 and April 2005 (per cent)

		Use					
	Access	News	Foreign affairs	Sports	Weather	Programming guide RÚV	Flights
March 2002	86	33	13	26	29	43	15
April 2005	93	37	13	26	29	49	25

Source: RÚV (2005) Dagbókarkönnun 2002 & 2005. (Dairy survey) Textavarpið. IMG Gallup.

Despite its popularity, Gísli Jónasson emphasizes that teletext began its demise in the mid-2000s: "It's safe to say that from 2006 the role of Textavarpið has decreased step by step, mainly because of the web" (Jónasson 2014). Teletext was particularly vulnerable to competition from the Internet. By 2005, Iceland already had the highest level of Internet penetration in Europe. While an average of 48 per cent of households in the EU countries had Internet access, as many as 84 per cent of Icelandic households had an Internet connection, and 81 per cent of Icelanders between 16 and 74 years were regular Internet users, compared to 43 per cent in the EU (Statistics Iceland 2006). By 2013, 96.7 per cent of households had access to the Internet, compared to 72 per cent of the population in EU countries (Statistics Iceland 2014b).

The end of the Icelandic teletext? 2008-2014

The diminishing position of teletext within RÚV can also be explained by the various reorganizations taking place within the public service broadcaster. While teletext in 1991 had been directly under the Head of Television, it was later moved to the marketing department. After that it became part of the television news department, and in 2008 teletext merged with the radio, television and online news department into one RÚV news department. Teletext lost its autonomy and the resources spent on teletext were reduced. By 2014, no one knows how many Icelanders use RÚV's teletext as the latest data on teletext and its usage dates back to 2005 (Vilhjálmsson 2014). While the role and position of teletext today is quite different from the 1990s and early 2000s, the service continues to being used, according to Gísli Jónasson:

> [The position of teletext] has changed very much. There are definitely fewer users, but they are very loyal, for example those who follow sport-results and/or are monitoring the traffic on the roads. I also think that a majority of the teletext users are over forty and live in the countryside and I am sure that a lack of Internet access plays a big role as to why they choose this media form instead of surfing the net. (Jónasson 2014)

As in other parts of Europe, the subtitle function provided by teletext is used particularly by the hearing-impaired: "You can get subtitles for all Icelandic pre-recorded programmes, which is up here on page 888 on the teletext service. And also the news, which is live, you can get texting for. It's automatically put on page 888 on teletext. I think most of the use is like that right now. (Vilhjálmsson, 2014) Despite teletext's gradual demise, the relationship between the service and the online news production continues:

> The news service on teletext is a part of the online news desk. When the editor goes in to the web editing system, writes a headline, writes an intro, writes a story, uploads a picture, inserts a video, if it's one of the ten bigger stories or teletext hasn't been updated for a long time, then the intro text of the online news story is put on the teletext. It is usually a small text that has some sort of beginning and end that fits in the limited teletext space. (Sigfússon 2014)

RÚV does not employ people full-time to run the teletext. Jónasson is the only one with specific responsibilities: "[M]y job now is to put the rest on the screen and to see that it's working properly. In fact, I work now in the IT-crowd and my teletext-role is in fact an odd job as the good old teletext is sadly no more" (Jónasson, 2014). As teletext is not given priority, certain technical problems may occur:

> We refined that system a little bit so it's easier for them to switch stories back and forth. But it sometimes happens that the system gets a bit mangled and doesn't understand what the web editing system is trying to do, and publishes the same stories on two pages (…) or sometimes there's a discrepancy between the space that the web editing system says is available on teletext and the space that is actually available on teletext. So, sometimes you will have a story sort of missing a few words to make sense, the few last words of a last sentence are missing, and that will also piss people quite a bit off. (Sigfússon 2014)

Teletext has been outcompeted by online services, but in many ways it represented a forerunner to the current 24/7 news logic, and RÚV's online services:

> The main idea about teletext is the same as in online because we were not dependent on time. It's the now o'clock news in teletext. You could always publish the latest news. You didn't have to wait for publishing time, as in newspapers or in radio broadcasting, so we could think about teletext in the same way we think about the Internet now. Although the technique was not as good, the idea was the same. (Tómasson 2014)

Today, while teletext continues to exist, RÚV has initiated a television service with similar functions but in a different form: "a new generation of [teletext].

(…) It's a mix of news and weather information and something we did fairly quickly, a few years ago, and it was a success. We didn't expect that" (Sigfússon 2014). This service was broadcast when there was no ordinary television programming scheduled and started when the television programming for the night finished – around 01:00. This service is currently being improved:

> Now we're going to upgrade that, and a lot of the information that we will publish there [will be published] automatically, or preferably without anyone having to do too much with it. [It] will be stuff that is originating from teletext: lottery numbers, weather forecast, transportation information, [and] news stories that will come from online. … but, we'll brand some of the service as coming from teletext, just to remind people that it's still there, and just sort of to keep the [teletext] brand alive. (Sigfússon 2014)

Gísli Jónasson, the RÚV employee responsible for running RÚV's teletext, points out that a basic service, as the teletext is, "maybe telling us that perhaps things are made too complicated in the modern media and some people just want the facts in a narrow and clear fashion" (Jónasson 2014).

Conclusion

The study of the three phases of RÚV's teletext service development provides insight into change and continuity within media development. Teletext has been a pioneering medium in utilizing new technology to distribute public service content and information to the Icelandic population and an important precursor for RÚV's online endeavours – both in terms of news production and distribution practices. At the same time, its position within RÚV has been contested. The possibilities for instant publishing and distribution of news and information created tensions with television and radio news practices and traditions. In the first phase, RÚV relied on the Nordic public service broadcasting collaboration, and, despite start-up problems, RÚV's extremely popular television channel served as a solid platform for the teletext service. In the second phase, as the penetration of the Internet increased rapidly in Iceland and new online services emerged, teletext pioneered the Icelandic public service broadcaster's online offerings. During this period, the teletext service became part of RÚV´s centralized news department. The third phase is in many ways the story of the phasing out of the traditional teletext within RÚV, and its functions being taken over by other services and new production and distribution forms. One may argue that the story of teletext represents a missing piece in media history and, thereby, provides new perspectives on media development. By examining RÚV's teletext in both the national and international context, our understanding of not just change but also continuity in media development is

increased. The significance and role of teletext in Iceland and in media history emerge when we consider the service in relation to the general development of RÚV within the Icelandic media and political systems while, at the same time, considering it as part of a Nordic media system and public service tradition.

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9 Freedom of Information and Divides in the Digital Age

Teletext and Internet Use in Norway

Hallvard Moe

Abstract

This chapter discusses freedom of information in a digital age, and argues that to understand how media in the digital age matter for citizens who try to get informed, we need a comprehensive approach that is not only aware of the historical, cultural and political context but also considers how traditional media of the analogue era are being used today. For that purpose, the chapter discusses the development of teletext use among different groups of the population in Norway over time, and compare these findings with the use of Internet services. It is argued that even within a relatively egalitarian society such as the Norwegian, we have to be alert to systematic differences in media use. Such differences exist and have consequences when citizens exercise their freedom of information. Importantly, the divisions vary among media, and are not constant.

Keywords: freedom of information, media use, Norway, Internet, teletext

Introduction

While normative theories of democracy differ in many aspects, they share one basic prescription: The media should inform citizens about issues that matter for citizens' ability to rule society (e.g. Ferree et al. 2002). How well the media succeed and how their performance can be improved remain core questions for scholars. Those scholars who look at the receiving end, at media use, over the last decades have paid much attention to the "digital," whether conceived as an issue of "digital divides" or of "digital literacy." But to understand how media in the digital age matter for citizens who try to get informed, we need a comprehensive approach that is not only aware of the historical, cultural and political context but also considers how traditional media of the analogue era are being used today.

Looking at the case of Norway, a Nordic welfare state also characterized by egalitarianism in media use (Syvertsen et al. 2014), I want to discuss the

development of teletext use among different groups of the population over time, and compare these findings with the use of Internet services. Comparing survey-based user statistics of teletext from 1995 till 2014 with the more recent data on Internet use, I will argue that even within a relatively egalitarian society such as the Norwegian, we have to be alert to systematic differences in media use. Such differences exist and have consequences when citizens exercise their freedom of information. Importantly, the divisions vary among media, and are not constant.

I will show how the use of Internet services in Norway follows a well-known pattern: in a nutshell, the urban, young and well-educated were not only the early adopters but continue to keep ahead of the elderly, those living in rural areas, and the less-educated. In contrast, the use of teletext follows a distinctly different path, with evidence of an increased use over time among those excluded from digital media. What the case of teletext illustrates is that any understanding of how citizens use media, and the divisions among them in this regard, needs to account for traditional as well as emerging media forms. We have to be aware that not every new medium follows the same route in its diffusion, just as the birth of a new medium does not entail the death of an old one. A prerequisite for a discussion of freedom of information in a digital age, then, is a nuanced approach to the media, with attention given to how different technological, political and cultural contexts matter for how different media are being used, and by whom.

Teletext use in Norway, I will argue, serves this aim well: teletext is a consistently under-researched medium. Beyond the general point that any medium from the analogue era – radio, television or newspapers – still matters, a focus on teletext allows us to highlight the diverse and often overlooked ways in which different media contribute to the exercise of freedom of information. Furthermore, teletext can be seen as a forerunner to online services in the sense that it allowed for individualization of consumption through a "pull"-form of use, in a period where all other media were consistently "push"-based. On that basis, a comparison with Internet use should make us aware of sometimes-overlooked differences. The context presented by the Norwegian media system should allow for a nuanced discussion, since it is a context with, at the outset, small social divides.

In what follows, I first elaborate on the fundamental claim regarding the role of the media for the public sphere and for freedom of information. Next, I describe the key characteristics of the media in Norway to give context to the analysis of media use. I subsequently provide a brief institutional history of teletext in the country. The data and its limitations are then explained, followed by a discussion of key findings from the comparative analysis of the user statistics of teletext and Internet services, focusing on differences in use according to education, habitation, age and occupation. Finally, the

conclusion ties together the findings and points to the wider impact of the argument presented here.

In essence, the aim of the chapter is to dig into the history of use to provide a better understanding of teletext, to bring teletext to our attention and shed light on how we assess media use in a digital age, and how we ground claims about informed citizens.

The public sphere, freedom of information and the media

The stated aims of media policy across Europe is to promote pluralism in content and expressions, stimulate broad participation in political and cultural discourse, and simultaneously uphold a public sphere that a majority of citizens can connect with (e.g. Syvertsen 2004, on Norway). These aims rest on a specific idea of the users as citizens: Through the public sphere, users should be informed about political issues, form their identities in engagement with various forms of symbolic material, and develop the full capacity needed for democratic life. This requires freedom of speech, but, equally important, freedom of information. Freedom of information covers the receiving end of speech, and can be defined as the right to receive access not only to news and current affairs but also to a varied menu of political, moral and aesthetic ideas as well as cultural experiences. Freedom of information is a well-established right, laid down for instance by the US Supreme Court, and in the so-called infrastructural requirement in the Norwegian Constitution (e.g. Gripsrud 2002). The point is that, while actual policy measures and motivations differ, the stated aims of media policy rest on a certain idea of citizens, and that this idea ascribes specific tasks for the media and for media use.

The public sphere of modernizing societies in the 18th century is a prerequisite for this freedom and for democracy. Still, the actually-existing public sphere was always formally restricted (Habermas 1990), e.g. by requirements of land ownership, as well as informally, for example by social mechanisms of exclusion or discursive norms (Fraser 1992; Mouffe 1999). Exclusion is therefore an ever-present key issue for public sphere research, as is the way in which fringe publics have mattered, from pamphlets to novel forms of online communication (e.g. Moe 2010).

In the 21st century, the conditions for the public sphere have been thoroughly altered. These alterations are related to three key societal developments coming to the fore in the 1990s (Moe & Gripsrud 2010): strengthened globalization, increased marketization and a sector-wide digitalization. The result is a public sphere where it is easy to speak up, but difficult to get heard: The immense increase in primarily commercial channels, provided by new technologies, creates new spaces, and across borders. Moreover, traditional cultural hierarchies are

challenged and it becomes tougher to accommodate cultural difference within democracy (Benhabib 2002). Under commercial pressure, pluralism becomes harder to facilitate (Murdock 2005), and social divides are widened, rather than reduced (e.g. Mangset 2012). Broad participation in a shared space becomes challenging when the segmentation of the public sphere risks turning into fragmentation. In parallel, it gets increasingly easy to avoid news (Aalberg et al. 2013; Prior 2007) or create echo chambers with the like-minded to nourish polarization (e.g. Benkler 2006, Sunstein 2007).

An important premise for much of this development is the possibility for citizens to pick and chose media content, not only from an ever-expanding menu but also through technologies that allow for individualization. Despite our impulse to think otherwise, this development did not only make an impact when the Internet became a mainstream media platform in the 2000s. Rather, the basic functions – the ability for users to access information through electronic media whenever they wanted – in many European countries were first introduced by teletext.

The issues at stake here – the ways in which media use actually matters for people's engagement with the public and for their role as citizens – have been studied in different fields. Political communication research into news consumption has shown how national media system characteristics matter for individual-level factors (Aalberg & Curran 2012), also when considering those who avoid news (Blekesaune et al. 2012). Methodologically, this research tends to have a restricted focus on media content predefined as news and a bias towards traditional and offline media. Survey-based studies of social media as a news source exist (e.g. Enjolras et al. 2013; Nielsen & Schrøder 2014) but since they focus on social media exclusively, such analyses obviously fall short of insights across media. What these studies repeatedly tell us is that participation in public debate through social media is still a minority practice. To study citizens' public connections, we need to move beyond freedom of speech and also study freedom of information: the reading and sharing of off- and online media (e.g. Lomborg 2014; Woodstock 2014).

Relevant research on the issue also emerges from a strand of sociology that has the stratification of culture as its central concern. The ideas put forward by Pierre Bourdieu (1984) have been a central reference in this debate, in particular the relevance of his work for understanding culturally- and technologically radically different societies 30 years on. In the Norwegian context, the relevance of socio-cultural differences for cultural distinction has been heavily debated (e.g. Gripsrud et al. 2011 and Hjellbrekke et al. 2015 arguing for, and Skarpenes 2007 arguing against). Such studies offer a solid sociological framework for understanding the role of social resources for public connections. However, the focus on cultural stratification has meant that media use gets little attention

(e.g. Coulangeon & Duval 2015). Scrutiny of distinctions inside genres or in the use of online media is by and large absent.

Research into digital divides, on the other hand, does concern novel technology, specifically media and ICTs. Such research is related to the wider debate on socio-cultural differences, but has been criticized for operating with a simplified, linear understanding of the relationship between digital and social exclusion. As Tsatsou (2011) argues, there is hardly any simple indicator that can serve to define digital divides, or distinguish between those included and those excluded. One challenge in this research is the parallel attention given to global divides and divisions within specific states or communities. More fundamentally, though, research into digital divides seems to assume that use of and interest in ICTs automatically lead to better-informed citizens. However, the actual informative functions of different ICTs for users have to be critically studied before one can make such a claim.

In essence, a focus on digital divides – even one that accounts for "socio-cultural and decision-making dynamics" (Tsatsou 2011: 326) – risks ignoring the analogue divides. If we are interested in understanding how differences in access to, use of, and interest in media and communication matter for the experience of freedom of information, studying just digital platforms will not suffice. We simply cannot know the effects of information diffusion with an eye on digital media alone. While exclusion from certain ICTs may have grave effects on a range of aspects related to personal, professional and public dimensions of people's lives, it would be ill-advised to infer that exclusion from specific new media and communication platforms leads to less freedom of information. This is not to say that digital divides are unimportant or insignificant to study. The point is that to understand holistically the ways in which mediated communication affects freedom of information in specific contexts, we need a broader scope.

Teletext might seem an unlikely candidate to serve as illustrating this point, but precisely in its unlikeliness lies the power of the argument. First, there is value in bringing forward aspects of media use that tend to be forgotten when we discuss the issues at stake here. Teletext use clearly represents such a forgotten aspect (Van den Bulck and Moe forthcoming). Second, as teletext allowed for the kind of consultation, the "pulling in" of media content, we tend to associate with the web and other online platforms, teletext should serve to illustrate not only that divides can be analogue but also that the defining features of the digital blend with other media. Norway provides a useful context for this argument.

The Norwegian media welfare state – from latecomer to early adopter

Norway is a small state, with little more than 5 million inhabitants spread across the country. In terms of political systems, Norway is often described as a Nordic welfare state (e.g. Hilson 2008). In a recent attempt at linking welfare state models from political science with a media system approach, Syvertsen et al. (2014) studied media use, the press, broadcasting and commercial media in the Nordic countries and proposed four shared characteristics of "the Media welfare state":

1) An organization of vital communication services that underscores their character as *public goods,* with extensive cross-subsidies and obligations toward universality;

2) A range of measures used to institutionalize *freedom from editorial interference* and self-governance in day-to-day operations;

3) A *cultural policy that extends to the media* in the form of content obligations and support schemes that aim to secure diversity and quality;

4) A preference for consensual solutions that are durable and involve *cooperation between main stakeholders*: the state, communication industries and the public (Syvertsen et al. 2014: 17).

These features can be found across media sectors. The press, for instance, developed comparatively early in the region, saw a shift away from political pluralism towards a neutral commercial press in the 1970s, and has strong institutionalized professionalism and self-governing bodies. Simultaneously, though, this commercial press enjoys substantial state support in the form of tax reduction schemes as well as direct subsidies to facilitate content pluralism across the country, with the state operating according to the arm's-length principle to avoid impinging on the editorial freedom (Syvertsen et al. 2014: 47ff; also Hallin & Mancini 2004). Broadcast radio was institutionalized as a state monopoly in the early 20th century in the Nordic countries – in Norway with the establishment of a licence fee-funded public service broadcaster, the Norwegian Broadcasting Corporation (NRK). In the decades that followed the end of WWII (and German occupation), the NRK continued as a one-channel monopoly, subscribing to the public service remit as famously formulated by BBC's Director General John Reith (see Reith 1924).

A former colony under Denmark, and later the underdog in a union with Sweden, Norway has been consistently slow in introducing new media technologies for most of its history. This is true for key technologies of telecommunication: Norway was later than its neighbours when introducing the telegraph in the mid-19th century, and when telephone became a viable alternative in the late 19th century, the Norwegian state was "passive and uninvolved" compared at

least to the Swedish (Rinde 2005: 238; Syvertsen et al. 2015: 12). Norway was also, lagging behind most comparable states in broadcasting in the 20th century. Television was only officially introduced in 1960 after several rounds of parliamentary debates and extensive trial periods, making the country among the last in Europe (e.g. Dahl & Bastiansen 1999; Enli et al. 2013). In a similar vein, the Norwegian political majority hesitated to allow television in colour. In 1970, again after parliamentary debate, black and white was abandoned in favour of the bravura of colour. With the advent of satellite and cable television distribution from the late 1970s, the public broadcasting monopoly finally saw the beginning of the end in Norway. From the mid-1980s, local radio and foreign satellite-distributed television channels poked holes in the regulatory regime and, by 1990, a solution for domestic competition was finally presented (e.g. Enli et al. 2013).

Embodying the features identified in the media welfare state, the solution was a broad political compromise that extended the values behind public service broadcasting into the realm of commercial radio and television. The aim was universal service and content pluralism, provided under editorial freedom, in the form of privately-owned advertising-funded radio and television companies, given a license to operate nationwide in exchange for content-obligations, e.g. in news and cultural programming. In 1992, TV2 launched, followed by radio channel P4 in 1994 (e.g. Dahl & Høyer 2003). Though both companies challenged and transformed the idea of public service broadcasting, their channels provided a solid mix of content, including independently produced daily news as well as regular documentary programmes. When digital television distribution came on the agenda in the late 1990s, again, the concerns of the incumbent broadcasters and their ethos as providers of information, educational content and entertainment were in focus (e.g. Moe 2003). By 2007, television distribution was digitalized on all networks.

In the last two decades of the 20th century, though, a change occurred in the relation to new media and communication technologies in Norway. The liberalization of broadcasting coincided with a liberalization of telecommunication and, in the following decades, the former state-owned telecom emerged as a global telecom player in mobile as well as broadband technologies, with extensive ownership in a range of markets, including India and Russia (Syvertsen et al 2014: 96ff). The comparatively early development of mobile phone technologies in the Nordic countries is one factor that helps explain this shift. The oil boom that fuelled the Norwegian economy from the 1970s created a new demand for consumer goods, and must also be taken into consideration. By 2008, Norway was considered among the richest countries in the world, ranking as number two (below Luxemburg) on the OECD's list of GNP per capita.

A decade into the 21st century, Norway, along with its neighbouring Nordic states, consistently ranks among the top in lists of broadband penetration, or more generally in ICT developments (e.g. Syvertsen et al. 2014 for overview). In

1998, 57 per cent of Norwegians had access to a computer at home, compared to 90 per cent in 2008. In 1998, use of the World Wide Web was cumbersome and not widespread – only 22 per cent of the population had Internet access at home. Ten years later, it was of central importance in people's lives (85 per cent having access at home) (see Gripsrud et al. 2011).

The point to underline, based on this history of new media and communication technologies in Norway, is the shift from latecomer to early adopter: The period under scrutiny in this chapter – the 20 years from mid-1990s to 2014 – represents a phase in the history of Norwegian media which differed substantially from the earlier phases in terms of new media pick up. In this period, teletext – as we shall see – developed as a budding medium for consultation safely within the institutions of the established media. By contrast, the growth of Internet-based services, as we know, to a large extent came from outside these institutions.

Syvertsen et al. (2014: 23ff) argue that the media use in Norway, along with the Nordic region in general, shows a high degree of egalitarianism and commonality. The patterns of use seem consistent. There is little evidence to show that different socio-economic groups have access to different media, or that economic factors alone exclude large groups from specific media (Skogerbø & Syvertsen 2008). In general, the rate of newspaper reading is high, and while television watching is lower than in many countries – approximately three hours daily on average in 2014 (MedieNorge 2015) – traditional broadcast media delivered by well-established domestic companies in general remain a staple of people's media diet. In addition, of course, as we shall see, the use of online media has grown steadily over the last 15 years and, for many people, constitutes a key component in the said diet.

For a discussion of freedom of information, media use and social divides, Norway is in some ways a "best case": political stability, a wealthy state and population, newfound role as early adopter of new media and communication technologies, and a continued relevance of the key characteristics described as the media welfare state, namely universalism, cultural policy extended to the media, editorial freedom and a consensus-oriented tradition for collaboration in media policy. The case of Norway, then, is well suited for a nuanced discussion of how differentiation in use of different media – old and new – might matter for our attempts at understanding social divides in a digital era. This, then, is the context for teletext in Norway.

A brief institutional history of Norwegian teletext

Teletext (Norwegian: tekst-TV) was introduced in Norway in 1983. As discussed above, the early 1980s represented the last years of the public monopoly in

broadcasting. Just as with the introduction of television, the emergence of teletext was not seriously considered in any other way than as a part of the NRK (Moe 2012). In contrast to the launch of television, though, teletext grew more dynamically from the bottom up, attracting far less attention.

With parliamentary approval, the public service broadcaster NRK launched the service for a three-year trial period from February (Nilssen 1985: 62-63; Vestbø 2002). Parliament approved an increase in the 1983 budgets of €250,000 for the new media platform (Stortinget Innst. S nr 197 1981-82). Much like elsewhere in Europe, the first years were characterized by the small scale, both in volume and resources. Given the number of inhabitants and the persistent position of Norway as a latecomer in launching new media technologies, the user base for teletext in 1983 was miniscule. The NRK estimated the number of teletext-ready receivers at 10,000 (Nilssen 1985). In arguing for the novelty of teletext for the public service broadcaster, informational services were put front and centre, in addition to the prospects of catering to the hearing impaired through subtitling.

By 1985, two years into the trial period, the number of pages was 125, with news being the major category, and sports, programme guides, and information about teletext as others. Importantly, the NRK knew well that the service constituted a new form of media content distribution – what we later came to know as "on demand":

> News is available as long as the broadcasting signal is turned on. (…) the news is updated continuously. It takes mere seconds from when a news story is ready at the editorial desk till it is distributed across the country. The viewer can read the story in peace, just when it suits him or her (Head of NRK teletext, Nilssen, 1985: 62, author's translation).

With this quite radical potential in mind, the development continued into the 1990s.

When TV2 launched as an advertising-funded nationwide public service channel in 1992, it too featured a teletext service. In contrast to NRK at the time, TV2's teletext featured ads and also included other novel services, such as a rudimentary chat room function and a platform for classified ads. The basis for the TV2 teletext, though, was, similar to the NRK: news provision.

By the mid-1990s, with the advent of the web and digital television, a new potential was seen in teletext. In 1997, the NRK established the commercial subsidiary NRK Aktivum to take care of budding business activities. Aktivum laid its eyes on teletext: In June 1997 the NRK presented an ambitious plan for commercial exploitation of the teletext service. Ads and shopping services on teletext could generate €2.5 million in the coming two years, argued Aktivum. Crucially, Internet activities had to be developed in parallel: "Within a short period of time, these two functions will have melded together" (Wam in Larsen

1997). On this basis, a lengthy policy process started that was about teletext and its relationship to the public service broadcasting remit, and its commercial potential. When, in 2000 after lengthy debates in Parliament, the 'yes' to ads was finally given (Moe 2012), the NRK first launched ads on its teletext service, and then extended the same approach to its web site. As a result, teletext became a test bed for commercial income streams at the NRK, and effectively opened a backdoor for advertising on the website.

In the decades that followed, Norwegian teletext made a journey into the new media platforms of the web and mobile apps. But after 2010, as user numbers began to drop and editorial staff got cut, teletext entered a new phase. In March 2014, the last editorial staff left NRK teletext as the institution switched to a new mode of news production where stories for teletext are transferred from other editorial groups (e.g. Bach & Ashraf 2013).

The starting point for the period under scrutiny here, the mid-1990s, then, is a phase when the NRK's teletext service was well established, and when the teletext services of commercial competitors like the domestic commercial public service channel TV2 complemented the public service content on offer to the Norwegian public. From then on, the user data follow teletext as the web grows into a mainstream media platform in the early 2000s. The end of the period sees the demise of teletext as a stand-alone journalistic entity with the NRK, but, importantly, not the end of teletext in Norway.

The data, and their limitations

The data for the analysis of evolving user numbers and characteristics for the Internet and teletext are based on a representative survey into Norwegians' media use, undertaken by Statistics Norway (The Central Bureau of Statistics), a publicly-funded institution. The survey was first commenced in 1991, and has been repeated yearly under the name "Norsk mediebarometer" (Norwegian media barometer) since 1995. Norsk mediebarometer has included data on teletext use ever since. From 2000, use of the Internet has also been added to the list of questions. Data are collected through interviews spread throughout the year, as well as during both weekdays and weekends, to help cover different modes of media use during different periods (N=2000, among the 9-79 years old). User data for both media can be linked to background variables including gender, age, educational level, line of work, regions of the country, as well as level of urbanization in areas of habitation. The data available do not include information on ethnicity or nationality among the respondents, which means that a comparison of different ethnic groups is beyond the scope of the present analysis.

The upside of the survey data is that they are longitudinal and allow for comparison of changes in use over a prolonged period of time. Also, the survey

provides data points without disruption. Furthermore, the fact that both kinds of media-use data employed in the present analysis stem from the same survey strengthens the reliability of the approach.

Clearly, an analysis based on such survey data has its challenges and limitations, two of which should be mentioned. First, and fundamentally, the surveys are based on people's recollection of media use. The problems with remembering and presenting which media one used a day ago should not be ignored. And while the self-reporting biases of survey data in general are well known, studies have demonstrated that they are substantial for the issue of news consumption specifically (Prior 2009). For the present analysis, though, no viable alternative exists: Although historical data based on tracking of online use in principle could be found, they are hard to collect and access, and have their own reliability issues. Comparable data on teletext use, however, would require panel data of some sort and, even then, it would probably not cover the different pages in use (see also Chapter 2 on problems with archiving teletext).

Second, the data give insight into teletext and Internet use, without specifying exactly what kind of media content was used. With the range of content on offer, we could be looking at everything from gaming through chat rooms to news reading. This is true of teletext as well as the Internet. Anecdotal evidence suggests that sports results services have been what is now called a "driver of traffic" for teletext, bringing users back to routinely check for the latest changes in on-going matches, or to consult updated tables and statistics. In addition, "Internet use" could include both public and private modes of communication, such as emailing, as well as content generation, e.g. on blogs. In short, "use of teletext" and "use of the Internet" covers a lot, some not even overlapping. Given an interest in the exercise of freedom of information, this entails a challenge. However, I assume the ratio of news and current affairs compared to other kinds of uses to be lower for Internet use than for teletext use. This means that I assume there is, as a whole, a bigger element of news consumption among those who report teletext use compared to those who report Internet use. More fundamentally, it is important to stress that news consumption is not the only way in which citizens exercise their freedom of information. It has been the strength of reception studies to show how other genres and different ways of interacting with the media can matter when people orient their attention to society and form their opinions about issues (e.g. Schrøder forthcoming for an overview). It makes sense to be open to quite diverse manifestations of media use when people relate to the public sphere (e.g. Couldry et al. 2007). For the present discussion, this also means that use which does not concentrate on news might matter.

With this in mind, I now turn to presenting key aspects of the use of teletext and Internet among Norwegians from 1995 to 2014.

Comparing the use of teletext and of the Internet in Norway

The key issue in a comparison of teletext and Internet use in the context of freedom of information is whether or not substantial and lasting divisions emerge from the data. In the following, the uses will be discussed in relation to different socio-economic and demographical variables. The findings should, however, be understood against the background of the general user data.

For most of the period under study here, Norwegians report a quite steady use of teletext.[1] In the first 15 years, from 1995 to 2010, over 20 per cent reported using the medium on an average day. The numbers rise consistently in the first years, reach a peak in 2000 (38 per cent), a second, similar peak in 2003, and only in 2007 do the numbers dip below the 30 per cent mark. The real drop in general use is seen in recent years, and by 2014, only 12 per cent report daily use.

The use of the Internet among the general population shows a different pattern: one of steady growth. In 2000, the first year SSB surveyed such use, 27 per cent reported Internet use on an average day (one per cent below the user number of teletext that year). Since then, the data show a growth of 2-6 percent each year: by 2007, when teletext numbers fell below 30 per cent, 66 per cent claim daily Internet use. By 2011, 80 per cent do so and, by 2014, the general daily user number is 88 per cent.

On an overarching level, these data show familiar and expected patterns, as new media grow and older media dwindle. The steady use of teletext is interesting, though, because it reaches its peak well after the web made an impact as a mainstream media platform. The tipping point in the teletext use as seen in 2007 is well into the digital era; at that point in time the ICT industry had left the dotcom crash behind and social network services like Facebook and online video sites such as YouTube were already in operation. The question, then, is how these trends play out if we break the general numbers down according to different user groups.

A first variable that is often used in discussions of digital divides is the educational level, where studies have shown differences between those with higher education compared to those with less (e.g. Tsatsou 2011). These differences can be seen in terms of how much time is spent on different media or types of media content, as well as in terms of specific media outlets used (typically tabloid vs. broadsheet newspapers). The data on teletext use in Norway do not show significant differences along these lines. When the use was at its highest, those with a higher education reported somewhat higher frequency of use compared to those with less education and, as of 2014, we see the result of a trend where users with higher education have abandoned the medium more rapidly than have less-educated users. The consequence is that the less educated are the heaviest users of teletext by 2014, but only marginally so (16 per cent compared to 18 per cent).

The statistics on Internet use show a more familiar pattern, as those with least education lag behind throughout the period. The divide is decreasing in size, though, from 20-30 per cent in the first years after the turn of the millennium, to 8-10 per cent in 2013-2014. Educational level, then, hints at a different user pattern for teletext compared to the familiar findings from studies of divisions in digital media use. Still, it is important to underline the relatively minor divisions that exist in reported Internet use among the Norwegian population, which seems to be in line with a more general diagnosis on the egalitarianism of media use and ICT access mentioned above (e.g. Syvertsen et al. 2014).

A second variable that might matter is linked to patterns of habitation and the differences between urban and rural areas. Here, more significant differences emerge from the comparison. Figure 1 illustrates the development in teletext use from 1995-2014 in rural areas and the most urban areas of Norway, and in Internet use 2000-2014. We should keep in mind here the thin geographical spread of the small population – Norway has only seven cities/areas with more than 100,000 inhabitants. The two categories, then, contrast the biggest cities with the most rural parts.

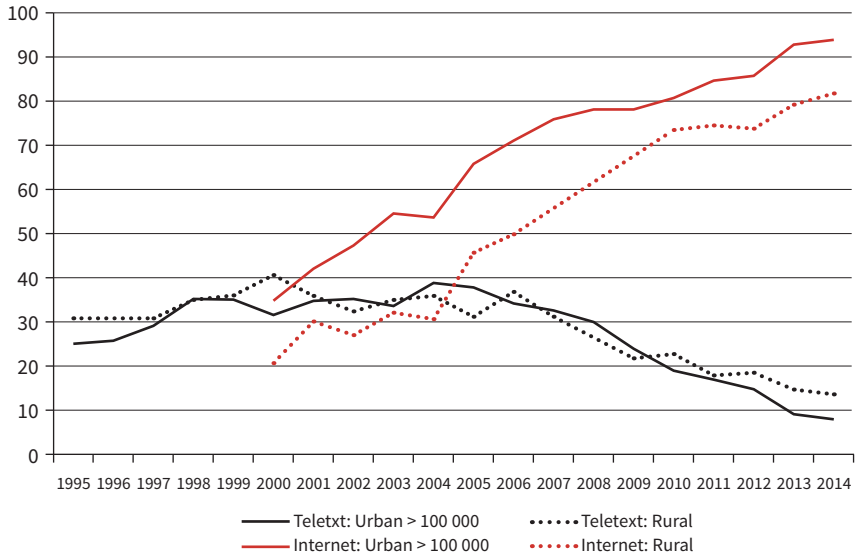

Figure 1. Use of teletext an average day 1995-2014, and use of Internet an average day 2000-2014 in urban and rural areas (per cent)

Source: SSB 1996-2015.

Looking first at Internet use, we indeed see (in Figure 1) a divide: rural areas lag behind urban and, during the period, this divide does not close but stays roughly the same (representing 10-12 per cent over the last five years). Glob-

ally, this is a small division, not least if we keep in mind the thinly-spread population combined with a geography of steep valleys, high mountains and deep fjords, not well suited for the commercial roll out of broadband networks. For teletext use, a first observation could be the lack of a consistent dividing pattern: The two groups take turns as the leading users through the period, but a trend emerges again around 2007, when users in urban areas abandon teletext at a higher rate than those in rural areas. By 2014, almost twice as many use teletext in rural compared to urban areas. For both categories, though, the number is quite low (14 and 8 per cent). In sum, Internet use sees a small, but stable division when focusing on patterns of habitation, with the urban users always being on top, while teletext use has been more egalitarian, even being preferred by the rurally-based users towards the end of the period.

A third variable that might provide further insight into the issue is age. As noted above, age has also been found to be a source of differences in media and ICT use in egalitarian societies such as the Nordic ones (e.g. Syvertsen et al. 2014). Figure 2 shows a comparison of reported teletext and Internet use for five age groups. The two age groups that stand out for both media are 45-66 and 67-79.

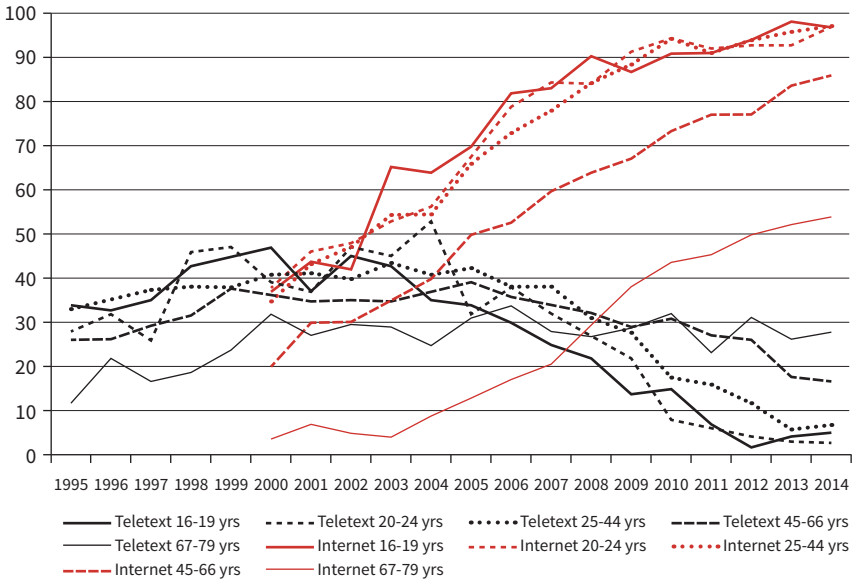

Figure 2. Use of teletext an average day 1995-2014, and use of Internet an average day 2000-2014 in different age groups (per cent)

Source: SSB 1996-2015.

When it comes to Internet use, these older users still have a significant gap to close to catch up with the three younger groups. Since almost all users below

the age of 45 report daily Internet use by 2014, we should assume the gap to be closing at some point. What we can observe is that the 15 years of Internet use reported on so far is too short a period: the oldest user group only climbed above the 50 per cent mark in 2012. Teletext, in comparison, again shows a less clear pattern. Here too, though, the oldest user group is distinguishable as a late adopter but also as a steady user over time. In fact, the reported numbers of use do not show a decreasing trend for this group of teletext users, and the use reported for 2014 (28 per cent) is above the average reported use for that group in the period as a whole (26.3 per cent). By 2014, then, teletext is clearly a medium for the above-45 year olds. Among these groups there is still substantial use on a daily basis.

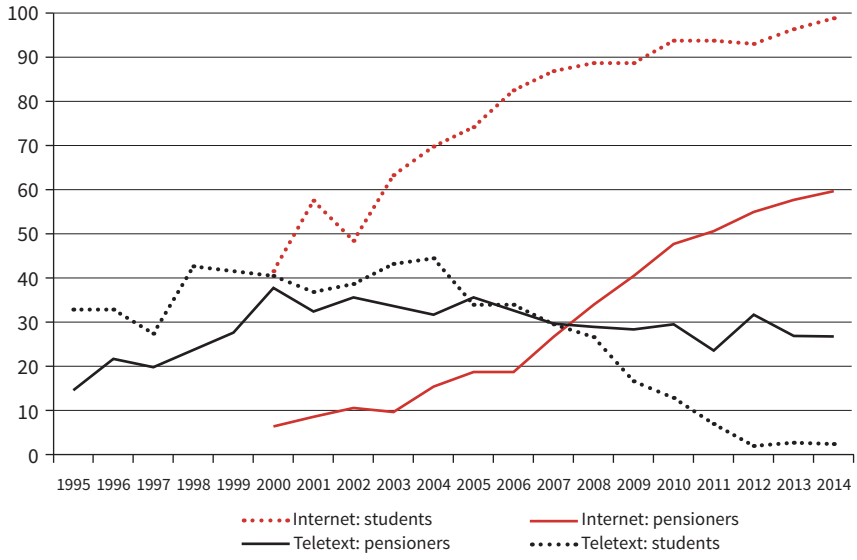

Figure 3. Use of teletext an average day 1995-2014, and use of Internet an average day 2000-2014 among pupils/students respectively pensioners/people on welfare, 16-79 years old (per cent)

Source: SSB 1996-2015.

A fourth way to study the divisions in media use is highlighted in Figure 3. As an extension of the age variable, Figure 3 shows user patterns linked to the occupation category, specifically for two groups: pupils/student and pensioners. The latter category includes retirees, but also people on welfare, thus cutting across age groups. The figure shows the striking uptake of Internet services by students – 99 per cent on an average day by 2014. The figure also shows how pensioners as a group show a substantial increase in their use of the Internet since 2006-2007. By 2014, 60 per cent of this group report daily use, which again is comparatively high on a global scale and points to minor

divides in digital media access and use. For teletext, the findings for the previously discussed variables are reinforced by Figure 3. Teletext is a medium in use by around a third of Norwegian pensioners, and that has been the case for the last 15 years. In comparison, the drop in use identified in the general user data is clear for the student category and, by 2014, teletext is a marginal medium for this group.

Concluding discussion

A first aim of this chapter was to dig into the history of teletext use to provide a better understanding of how the medium has developed during a period when Norway went from a latecomer to an early adopter in terms of new media technologies.

In sum, the variables I have discussed tell us the story of teletext use in Norway as compared to Internet use. They show substantial differences in user patterns over time for different groups of the population. Divides exist in the use of the Internet, chiefly and most persistently so between age groups, but these divides are still minor if we were to compare them with data from other societies. The patterns of use of teletext are less clear, paradoxically partly because the use has been so stable over time. The drop in general activity around 2007 reveals a change as, in the years that follow, teletext emerges as the medium for the oldest age groups (45 and above) and, to some extent, for people on pensions and welfare and inhabitants of rural areas. The technology obviously plays a part here. While I have portrayed teletext as a medium in its own right, it has always been an add-on to television: its main terminal of use is the television set, and any teletext offer is linked to a television broadcaster's channel. As such, on a general level, the diffusion of teletext should be expected to follow the use of television. More specifically, teletext is inexpensive to acquire and use, easy to operate, and the service is not prone to technical glitches. Compared to the Internet, teletext is also safe: a provision by well-known and trusted media institutions like NRK and TV2.

If we take a media-systemic view, the development of teletext use seems to fit well with the general findings of an egalitarian media system where divisions between groups are consistently small on a comparative scale. Still – and this has been the second aim of the chapter – the findings presented here do shed light on how we assess media use in a digital age, and how we ground claims about informed citizens.

I have shown how, even within an egalitarian society like Norway, we need to pay attention to systematic differences in media use. These differences exist and matter when citizens exercise their freedom of information, and the divisions are different for different media. The case of teletext is helpful here,

since it provides a contrasting picture to Internet use, and reminds us not to ignore unexciting or seemingly marginal media forms.

Any understanding of how citizens use media has to account for traditional as well as emerging media. We also have to notice how not every new medium follows the same route when spreading among user groups. To discuss freedom of information in a digital age, a nuanced approach is needed to address how technological, political and cultural contexts matter for how different media are being used, and by whom. User statistics cannot tell us all we need to know, and we cannot conclude, from a finding of differentiation in use of specific media, about social divisions or inequalities in information for citizens. The fact that fewer elderly (or even middle-aged) use the Internet compared to younger citizens surely means the former are missing out on a range of content and practices. But it does not mean these groups are less informed, less active, or even that they have worse prospects for exercising their freedom of information. The exercise of freedom of information takes different forms. I have shown here how teletext has been and remains a medium for citizens' public connection (Couldry et al. 2007); a potential way to relate to the public sphere. The more general point to take from this is that a comprehensive understanding of how media matter for freedom of information needs to look beyond news consumption, to look across old and new technologies, and to be alert to differences seemingly hidden in overarching patterns. To get better insights into such issues, we need different, also qualitative, audience studies approaches that address the use of mediated communication holistically but with attention to specificities. Such studies should also analyse the resilience of teletext use, and how it matters.

Note

1. The data in the following paragraphs are based on SSB 1996; 1997; 1998; 1999; 2000; 2001; 2002; 2003; 2004; 2005; 2006; 2007; 2008; 2009; 2010; 2011; 2012; 2013; 2014; and 2015.

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10 Teletext as a New Media Promoter in Croatia

Surviving War and Transition

Mato Brautović & Tena Perišin

Abstract

The chapter shows the development and usage of a forgotten new media – teletext in Croatia – with an emphasis on the transition from communism to democracy, the role of the war for independence and similar transitional processes that makes the Croatian case different from Scandinavia and Western Europe. The Croatian public broadcaster (HRT) had the opportunity to use all the technological advantages already applied by most of the Western countries and launched the experimental broadcasting of teletext as early as 1982. During the war for independence, teletext was used as a means of bypassing the communication channels controlled by the Yugoslav federal government. After the war, HRT used the teletext service without any forward planning. The "old" medium survived its embedding in the web department and other challenges, thanks to the fact that the audience remained interested. The commercial content facilitate teletext in the sense that the commercial pages and the ads generate valuable income for the broadcasters. It seems that teletext in Croatia is "forgotten" by broadcasters and their management but not by the audience and advertisers. The richness of content (not just news) and advertisements show that "old" media can also be "new", even when they remain in the shadow of technological development.

Keywords: public service broadcasting, teletext, transition, Croatia, war for independence

Introduction

Though stamped as an "old" and "forgotten" medium, teletext in fact is very much alive as a means of distributing news and information. This chapter takes Croatia as a case to discuss how and why. Albeit the media companies and their owners barely develop or invest in teletext, it is still a successful business in Croatia. While digital and multiplatform information services are abundantly available today, there is still a need in Croatia to sustain the teletext system. The users still want teletext, and there is an economic interest among some industries

to get teletext pages for commercial reasons. However, Croatian broadcasters no longer invest in or develop their teletext platforms; it is the audience and the economic interest of other industries that are securing teletext's future.

Very much like the owners, media historians have forgotten about Croatian teletext. Therefore, this chapter is the first attempt to record the history of Croatian and Yugoslav teletext development from the 1980s (when the Croatian Radio television, HRT, under the name of Radio *Television Zagreb* RTZ[1], was still a part of the Yugoslav radio television system) until today. Under such circumstances, a media history study quickly runs into methodological challenges. During our research we found that many of the historical documents were missing, or events were never written down in the first place. Also, we found that key personnel involved in the development of Croatian teletext are now deceased. Therefore, this pioneering work aims to help preserve information on how this technological development flourished, even though it occurred during an extremely turbulent time in history.

The first experimental teletext broadcasting happened while the communist regime was still in place in the early 1980s. But it took almost a decade to be introduced to a wider public during the breakup of Yugoslavia and the war for Croatian independence. The aim of this chapter is to show the development and usage of teletext in Croatia, with emphasis on the social/economic/political ecosystem. With the transition from communism to democracy, the war in the former Yugoslavia, and subsequent independence, Croatian teletext operated in a significantly different context from the one in Scandinavia and the rest of Western Europe at the time.

Our approach includes a combination of qualitative and quantitative methods. In order to better understand the phenomenon and history of teletext in Croatia, we conducted a series of interviews[2] via e-mail with the people closely involved in the implementation and development of teletext with the aim of collecting missing data about teletext development – primarily in the 1980s and 1990s. For the same purpose, we also used document analysis. To get a picture of the current state of teletext, we carried out a content analysis of all the teletext pages of the three national broadcasters – Croatian Radio Television as a public service (HRT) and two commercial stations, Radio Television Luxemburg Group (RTL) and NOVA TV, during one day (25 November 2014), with the aim of determining the type of content, updating and commercialization.

Radio Television Zagreb as a part of Jugoslav Radio Television

The history of Croatian Radio Television (HRT) is inseparable from the history of Radio Television Zagreb (RTZ) as it was named while still part of the Yugoslav Radio Television system (JRT), before Croatia gained independence.

With the country organized as a federation, the broadcasting system was also based on a federative principle. The Yugoslav Radio Television (JRT) programme body was first officially established in 1958 by the radio television stations of Belgrade, Zagreb, Ljubljana and, later, the stations of Sarajevo, Skopje, Titograd, Novi Sad, Pristina (Savičević 1995). JRT, as an umbrella organization, coordinated the television schedules and exchange of programmes (Thompson 1994: 17). As Yugoslavia continued to play its neutral role between the Warsaw Block and NATO countries, despite its communist regime, the influence of the West on the technological development process was obvious. For example, JRT adopted the German PAL system, while the countries under Soviet dominance all adopted the SECAM system (Matković 1995). Western influence was evident even in the programming. Six constituent republics and two autonomous provinces of Yugoslavia had their own radio and television centres and created their own programming schedule.[3] Almost all programmes were aired from all the stations, not always simultaneously. The Serbo-Croat language area TV stations (Television Zagreb, Televison Belgrade, Television Sarajevo, Television Titograd and partly Television Novi Sad) achieved cooperation more easily, so they shared time slots, airing the same TV programmes simultaneously. Although the language spoken in Serbia and Croatia was not exactly the same, it was considered similar enough for the viewers to be able to follow the programmes. Most of the international fiction programming was imported from the West (mostly from the US). The Serbo-Croat language area stations shared the costs of translating films and TV series, shared resources in following big sport events, and aired domestic entertainment and drama programmes simultaneously. At the beginning, in the 1960s, the news was produced by Television Belgrade but, by the middle of the decade, Television Zagreb introduced its own daily news programmes.

The change of name in 1990 coincides with the dissolution of the Yugoslav Federation, demonstrating the split from any regulations or programme exchange that had been dictated from Belgrade. Less than a year later, Slovenia and Croatia proclaimed independence and began the political split from Belgrade that continued with the bloody war which lasted from 1991-1995. The JRT scheme of cooperation was functioning quite well until the end of eighties, when the radio-television system started to break down, paralleling the break-up of Yugoslavia.

Radio Television Zagreb as the leading technology innovator, 1950s-1970s

As JRT was a member of the European Broadcasting Union (EBU), JRT members participated in the Eurovision programme exchange. In line with the EBU decision, in 1967 Radio Television Zagreb was officially declared the technical

EBU headquarters for the whole JRT association. Radio Television Zagreb, as a member of JRT, contributed to the network by sharing its productions and also its knowledge. During the decades of operation within the joint state of Yugoslavia, RTZ was a leading innovator in broadcast technology in the region.

Despite the established views about communist countries and their technological advancements during the Cold War, there was much more cooperation with Western countries than with Eastern Europe. RTZ was the first in Yugoslavia to start television broadcasting, in 1956. It played a key role in the beginning of television broadcasting because it took advantage of its geographic position, with broadcasting signals easily accessible from Italy and Austria. The first television broadcasting started from Zagreb on the 15 May with the equipment borrowed from two French companies. Even the transmitter was borrowed from Compagnie Française Thomson-Houston (CFTH) (Matković 1995: 264). Initially, TV sets were donated by the German electronic and electric company Schaub-Lorenz[4] (Sinobad, personal communication,November 15, 2013) and the first broadcast in Croatia was actually from Austrian television. Although for the first few months RTZ broadcast live the programmes of Austrian ORF and Italian television RAI, by the summer of 1956 it produced its own TV programme. In the field of broadcasting, it is clear that Yugoslavia took advantage of its role as a buffer zone between the West and the East during the Cold War, and Western countries were generously helping the technological development and expertise (Kalinic Ahacic 2013).

The innovation culture was based on regular contacts between the management and journalists from Radio Television Zagreb, and the best mainstream media practices in the US and Western Europe. During a visit to the *New York Times* in the 1960s, the then Director General of Television Zagreb, Ivo Bojanić (Chief Editor 1958-1959; Director General 1963-1972), was introduced to their computerization project. Based on Bojanić's experience, along with documentation from Japanese public broadcaster Nippon Hōsō Kyōkai (NHK), computers were introduced into the accounting and archiving sections. (Kurjan 2001: 255). Besides personal contact, another process helped the introduction of computers to Radio Television Zagreb in the 1960s, characterized by an exponential increase of economic growth and liberalization in Yugolsav politics (Goldstein 2011). Yugoslav media had "increased organizational autonomy, which led to the expansion of facilities" (Robinson 1977: 46). Also, changes in the regulation of the broadcast media as result of liberalization "emphasized the need for technical improvements" (Robins, 1977: 46). Radio Television Zagreb followed the contemporary trend for the use of computers in the broadcast industry, and technological innovations were almost on a par with the US media (DeFleur 1997: 39).

"During the 1960s, television grew from an experimental luxury providing four hours of programming for privileged set owners to a mass medium watched by over 90 percent of total population" (Robinson 1977: 49). Ac-

cording to Stanislav Kliment (2001), Radio Television Zagreb planned to use the first computer in 1961 as part of their project of billing licence fees from more than 450,000 subscribers. Immediately after the formal decision by the management, Radio Television Zagreb (HRT) started to educate workers to use IBM technology. However, the project was stopped in 1962 by the enactment of the federal Law on foreign trade, which prevented the import of IBM products. Computerization was restarted in 1963 and finished in 1965 when Radio Television Zagreb acquired a Gamma 30 computer from Compagnie des maschines BULL Paris. It was the first computer in Croatia, and the sixth in the whole of Yugoslavia (Kliment 2001: 250). The computer training organized by Radio Television Zagreb was the first computer science education in Croatia at the time (Smiljanić 2003). Based on the experiences of Radio Television Zagreb, its engineers later established courses in computer science at the University of Zagreb (Ravlić 2001).

At the end of the 1960s, Radio Television Zagreb ran all their accounting with the Gamma 30 computer. The technological development and the computerization process was slightly slowed down after the "Croatian Spring" in 1971, a political movement that called for democratic and economic reforms in Yugoslavia and, therefore, more rights for Croatia within Yugoslavia. The political movement was suppressed and, as a result of that, some of the key HRT managers and chief editors were dismissed as an effect of the "purge of Croatian nationalists" from leading functions in the media (Kurjan 2011: 255).

This did, however, not stop the technological innovation; it was just a temporary slowdown and, in the 1980s, computers were introduced into the production of radio and TV content, video archiving and planning of TV news production (Kurjan 2001: 256).

Teletext experiments: 1980s

The experiments with teletext implementation began in 1982. By that time RTZ had already acquired experience with text content on the screen with their programme *Videopages*, consisting of news and service information based on inserted written text (Prelog 1982). This was aired for some time, most often at the end of normal programming.

The Programme Committee of the JRT decided in February 1982 to start the experimental use of teletext and chose Radio Television Zagreb and Radio Television Sarajevo (RTS) to test two different systems. RTZ started experimenting with the French system Antiope-Didon (Prelog 1982), and RTS was experimenting with a UK System. The idea was to lay the foundations for the future implementation of teletext. But both stations could watch the other system in action. The experiment in Zagreb started with the installation of the

equipment on 1 June 1982 and it was in use up to 15 December the same year. The advantage of the French system was the possibility of using both Latin and Cyrillic alphabet (Prelog 1982). This was very important as Cyrillic was traditionally used in Serbia, Macedonia, Montenegro and some parts of Bosnia and Herzegovina.

After the RTZ Development/Technical team installed the equipment, the journalists joined and the experimental newsroom was established (Prelog 1982). The first pages were broadcast on 15 July 1982 (Prelog 1982) using 30 per cent of the total capacity (30 out of 100 pages). The content was news, service information and promotional text about the system. Due to the fact that regular TV sets did not have receivers for teletext, a limited number of sets with receivers were distributed to viewers who participated in the first research about teletext use (Prelog 1982).

During the European cup in gymnastics, held in Zagreb, 20-25 October 1982, HRT installed the two teletext receivers in the event's Press office and dedicated 14 pages of the teletext to news and information for the journalists and participants (Prelog 1982).

According to the present HRT Technology Director Duško Zimonja, who graduated with a Master's thesis on teletext, the project team was established for the implementation of teletext. The project leader was Aleksandar Bjelousov, the main engineers Nataša Grubić and Božidar Rogić (Zimonja personal communication, 17 November 2014). In charge of the first experimental teletext newsroom was Zlatan Prelog, the editors were Slavko Cvitković, Stjepan Tomljanović, Vladimir Fučijaš, Branimir Dopuđa, Zoran Slipčević and two interns, Tena Perišin and Dražen Matošec. Although the experiments were successful, teletext was not implemented until 1990. One of the possible reasons can be found in the fact that the number of TV sets equipped with teletext receivers was relatively small (Iveković 2001: 88). At the same time, Radio Television Ljubljana (RTLJ) pushed the project forward and initiated its own teletext service in 1984, being the only member of JRT to implement teletext before 1990. One explanation for this lies in the fact that RTLJ was less involved in the JRT exchange of programmes and news items because the language is considerably different from Serbian or Croatian, and RTLJ was also independent, both financially and in its decision-making.

The content of the experimental teletext of RTZ was very similar to the present. The initial page had a table of contents for other pages. The news content was divided into the following sections: domestic, international, communist party, economy, culture, sports and general service news including events, traffic and weather. The RTZ service pages were the programme schedule, technical instructions about broadcasting, etc. (Prelog 1982).

War for independence and the role of teletext

The media in Yugoslavia were more abundant, diverse and unconstrained, and political control was less oppressive than in any other communist country (Thompson 1994: 5). Viewers enjoyed "a much greater content variety than … anywhere else in Eastern Europe" (Robinson 1977: 213). The media were controlled by the League of Communists of Yugoslavia, through the League's branches in the six republics and two autonomous provinces within Serbia (Kosovo and Vojvodina). Party politics were reflected in the public television stations. After Tito's death in 1980 there were more and more differences between the republics and their leadership. At the end of the eighties, the cooperation and exchange among the republic stations were increasingly controversial, especially in news and current affairs programming (Thompson 1994: 18). At the end of the 1980s, with the rise of Serbian nationalism which flourished under the Serbian Communist Party leader Slobodan Milošević, the flexible JRT arrangement was too fragile to endure. The first station that refused to broadcast TV Belgrade news reports and current affairs programmes was RTZ, and withdrawal from the JRT scheme was inevitable. After the first democratic elections in Croatia in 1990, one of the first decisions of the newly-elected Parliament was the change of name – Radio Television Zagreb became Croatian Radio Television.

Along with the turbulent times, as early as 1989, preparations were under way to implement teletext. In Croatia, there was a significant increase in the number of TV sets equipped with teletext receivers (Iveković 2001: 88). The increase in users was the main trigger for starting the implementation of teletext, nearly eight years after the first experimental phase. The first journalists were recruited from the Faculty of Political Science, Journalism Studies and they took part in the testing, preparation and training, which took place until 1989 (Mrđen, personal communication, 20 November 2014). The teletext was purchased from the FAB Company. During the testing phase, the first pages were published by the engineer Duško Zimonja, responsible for the IT and technical support of teletext from the testing phase until 2004 (Zimonja, personal communication, 18 November 2014). The teletext project had started in 1989, in cooperation with the daily newspaper *Večernji list*, with the idea of information exchange (Tanta 2000: 10). The chief editor of the teletext department was Veljko Iveković, and his deputy Zlatko Herljević, editor of *Večernji list,* was responsible for the areas of work concerning *Večernji list*, and even marketing (Petković, personal communication, 20 November 2014).

After the initial installation of the equipment and organization of the teletext department, HRT launched its teletext on 28 April 1990 (Mrđen, personal communication, 20 November 2014).

There were 100 pages with just a few basic sections. The launch of teletext was overshadowed by two other major events in Croatia: the first parliamentary

elections and Eurovision Song Contest, which was held in Zagreb (5 May), a year after the song that represented Yugoslavia had won the 1989 contest in Lausanne in Switzerland.

The launch of teletext on 28 April 1990, took place on the eve of the breakup of Yugoslavia. On 25 June 1991 Croatia declared independence and the war in Croatia broke out. The Yugoslav army used military force and intervened with the excuse of protecting the Serbian population in Croatia. In September, even Zagreb was shelled. At the same time, the HRT management made the decision to cut the number of journalists, and the number of people in the teletext department was significantly reduced. Out of 11 journalists, 7 were dismissed and the department had 4 journalists working in double shifts to produce teletext pages day and night. They had the support of their chief editor Iveković and *Večernji list*'s editors. Although, at the beginning of the 1990s, only one third of TV-set owners had a modem to access teletext, teletext's specific characteristics, such as immediacy, meant that the teletext news had an important informative role during the War for independence (1991-1995) (Tanta 2000: 9). Warnings of enemy planes approaching, or of shelling, were often published on teletext and people were advised via the medium to go to the air raid shelters.

For many people, especially those living abroad and in other time zones who were watching the programme via satellite, teletext provided fresh information about the events in the country (Petković, personal communication, 20 November 2014).

Sandra Mrđen, journalist and editor of teletext from the early days, remembers the beginnings of teletext: "Teletext was considered an experimental programme, and from 1990 until 1995 our department also prepared 'Videopages' – the selection of the most important news on teletext broadcast late night, at the end of transmission."

Together with the development of NMT mobile network (Mobitel) in 1990 and the establishment of CARNet (1991), teletext was used for bypassing the official communication channels controlled or destroyed by the Yugoslav People's Army (JNA) and the federal government, especially during the war in Croatia, from 1991 to 1992. The news content of HRT teletext was provided by HINA (Croatian Informative News Agency), which was established by the Croatian government in June 1990 (HINA 2014). It can be assumed that all these activities were introduced before the war began in 1991 as part of the Croatian government's strategy leading to the proclamation of independence. The cooperation with *Večernji list* was an advantage due to their network of correspondents all over Croatia. In the beginning, the joint teletext team was based at the HRT building, so the information and news from *Večernji list* was imported into the teletext system via the teleprinter. The teleprinter also enabled access to information from Tanjug (the main Yugoslav news agency) and, from

1991, HINA (Croatian news agency) and other international agencies (Reuters, AFP, AP). Even after Croatia became independent it was possible to access Tanjug as it sent its textual news in digital format for its users via a certain AM transmitter. The technicians from transmitters and communications managed to capture the signal and pass it on to the IT team, who then decoded it and inserted it into the first in-house computer system, named Herald (Šimunović, personal communication, 12 November 2014). Herald was a computer system for the receiving and distribution of agency news which enabled easier access and publishing of the news on teletext.

At that moment, HRT was using the first generation of some tiny little UNIX servers – a PC in 2000 ould be about 20 times stronger than one of these (Šimunović, personal communication, 12 November 2014). Herald functioned by means of several of these servers: the main one received info for example from the Croatian Information News Agency (HINA), and the others downloaded it from the main one. In the similar way it was possible to make connection to the *Večernji list* newsroom.

Despite the favourable development, completely justifying the cooperation, *Večernji list* abandoned the joint teletext project in 1994. That meant that the *Večernji list* journalists left the teletext newsroom at HRT. Luckily enough, the journalists who had come to the teletext newsroom at the very beginning, and as students-freelancers had gained experience, took over the complete editorial work (Tanta 2000). At the time *Večernji list* left the joint teletext project, HRT had already abandoned teleprinters. The main IT newsroom system, Herald, and terminals served as predecessors of today's computers with the possibility to access HINA and international agencies and, later, were even developed as the newsroom computer system capable of exchanging texts (Šimunović, personal communication, 24 November 2014).

The development of teletext began long before the start of HRT Web, and the teletext department had been established earlier than the Web department. Early teletext in many ways had some of the functionality of later online platforms. Teletext was the first to combine computer and broadcast technology, and was technically far more advanced than the rest of the technology in the newsroom (Petković, personal communication, 20 November 2014).

Although HRT launched its web site in 1994, HRT was much more concentrated on its teletext content throughout the 1990s. As there were no other national television stations in Croatia until the 2000s, HRT as a public service developed its teletext pages on the basis of the best practices of other public television broadcasters, including members of the European Broadcasting Union (Petković, personal communication, 20 November 2014.) At the bottom of each news item, HRT's teletext would always cite the source of the information (which was especially important in 1991, while Tanjug's information was still used). Contracts were drawn up for the use of such information, (HINA,

Meteorological and Hydrological Service, Croatian Auto Club, etc.), and there were also arrangements for reciprocal release of information (with *Večernji list*, for example – the information from their Guide for tomorrow's headlines; or with the weekly magazine *Globus* – free horoscope transmission) naming the source or the author (Petković, personal communication, 20 November 2014).

In 2000, HRT bought the equipment (Network Controller) needed for the exporting of teletext content to the Web. HRT started to publish its teletext on the Web in 2001 (D. Šimunović, personal communication, 16 November 2014). Around 2001, HRT teletext had 600 pages of content and a huge number of sections with 500 to 1200 edits per day. The content was still taken from the news agencies (HINA), and not produced by HRT (Iveković 2001: 88). Between 20 per cent and 25 per cent of the population regularly accessed the HRT teletext pages (Iveković 2001: 90).

At the beginning, the teletext licence was from the German company FAB, which had engineers from Slovenia working on the development and had developed its teletext service after the British broadcasting model. (Mrđen, personal communication, 20 November 2014)

"Considering its experience, RTV Slovenia cooperated from the start on the development of teletext in Croatia, providing advisory aid. And since FAB had Slovenians working on the teletext, it was easy to communicate. The cooperation was continuous, and from 2002 to 2006 we even exchanged pages: each teletext around 10 pages (RTV Slovenia used ours, and HRT used Slovenian) news and other information (weather, exchange rates, events, traffic, sports, correspondence, etc.,",recalls Danijela Petković (personal communication, 20 November 2014), noticing that, in Slovenia, the project was also better covered in newspapers such as *Delo*.

As the old FAB was no longer able to serve the growing demands, the new teletext programme Plasma 3, produced by the British company SysMedia, was purchased and launched in 2006. On 15 May, Croatian Television started with the subtitling of programmes and news via teletext (S. Mrđen, personal communication, 20 November 2014). On the organizational level, in 2006 the web and teletext departments were merged into one – the New Media Department (Petković, personal communication, 19 November 2014), with the teletext department placed under the Croatian Television News programme unit. Besides news and information, some of the pages are dedicated to computers, animals, recipes, horoscope, music pages, books, exhibitions, history of sport, Slovenian pages, etc. The HRT teletext also broadcasts information on water levels, airplane departures and arrivals, traffic, the weather forecast and temperatures, and sports betting.

The teletext department is today organized in such a way that there are two teams: – six journalists working with news and service information, and a team of four for promotion content. The working time is from 7 am until midnight.

There are still news programmes that are subtitled manually, and this is done by the teletext staff. The subtitles are prepared in the computer newsroom system iNews and are manually triggered during the newscast (Duić, personal communication, 19 November 2014). The teletext subtitle (the so-called captured subtitling) that enables viewers with disabilities to watch the programme started on 3 February 2007, after years of negotiation, when HRT as a public broadcaster was finally obliged to do so by law. In this instance as well, the advisory function was carried out by RTV Slovenia and by the EBU (European Broadcasting Union) Subtitling Group (Petković, personal communication, 20 November 2014).

Measuring 'viewers'/'readers'

HRT mainly conducted viewer rating surveys requested by the teletext newsroom. According to a survey from 1997, teletext had an audience of 1,161,000 people, which was about a quarter of the population of Croatia at that time when there were people who still owned TV sets without teletext decoders. According to a 2004 survey, the teletext news was viewed regularly by 24 per cent of a 1,100 randomly-chosen sample, and the TV news programme by 50 per cent (D. Petković, personal communication, 19 November 2014). The last survey, conducted from September 19 to October 26 2012 (Ipsos MedicaCT), was not quantitative but qualitative, and participants indicated they approved of the continued quality of the teletext content. Mrđen contextualized this in the interview, saying: "We have kept the viewers' confidence by providing quick and accurate information. The only objection referred to the number of subpages" (S. Mrđen, personal communication, 20 November 2014).

Teletext and mobile platform

According to Veljko Iveković (2001), HRT had the technology for broadcasting teletext by means of WAP technology[5], but HRT waited a few years before the introduction of WAP teletext. At the 36th International IT and New Media Fair, which took place in Zagreb in November 2004, HRT presented WAP teletext (D. Petković, S. Mrđen, S. Radun Špehar, personal communication, 19 November 2014). Unfortunately, HRT was not interested in developing the teletext app for Android or/and iOS platform, but some users were. At least four free teletext apps for HRT teletext can be found on Google Play (Android) and one on the App Store (iOS) – all created by app developers not associated with HRT. The iOS version was created by Boris Erceg, and in 2011 it was downloaded more than 20,000 times (Brezak Brkan 2011). The Android version was created

in March 2011 and had between 10,000 and 50,000 downloads (Google Play 2014). The idea was to connect growing technologies to a service that was considered retro and outdated (Brezak Brkan 2011). Boris Erceg, the iOS version developer, believed that the reason of the popularity of the teletext app could be found in the free betting results provided by HRT teletext (Brezak Brkan 2011). It is the only way of following sports results for free on iOS and the betting apps of the HRT's commercial competitors did not have mobile or web teletext versions (apps). The explanation lies partly in their focus on the web counterparts and Android and IOS apps, but without teletext.

Teletext content today

There have been no recent surveys of the teletext audience in Croatia, but the HRT's "viewers' service" gathers questions and comments from the users, which often include comments about teletext content. According to their comments, questions and HRT's Forum, viewers still regularly follow teletext's news and information on the scheduled TV programmes.

Based on the results of the content analysis conducted on 24-25 November 2014, we found that teletext still offers varied types of content. The content analysis consisted of the following categories: medium, types of content, types of commercial content, types of non-commercial content, types of news content and news sources. The category medium was labelled HRT, RTL and NOVA TV. Types of content labelled were news, general service information, service information about the medium and index pages. General Service information included pages such as the weather forecast, traffic updates, sports results, events, etc. Service information about the medium included pages containing the programme schedules, technical instructions about broadcasting, rules about TV games and text voting, etc. Index pages were selected based on content represented in the "table of contents" or links to other content pages. The types of the news content category proposed by Brown and Atwater (1986) were extended: international, domestic, EU, sports, culture, crime, accidents and disasters, entertainment, economy, and other. The category source of news was labelled as HINA, HRT/RTL/NOVA TV, no source, author's name and surname, web counterpart, and other. The unit of analysis was a teletext page – the first screen opened when you chose the number. The sample was selected in a way that we analysed all the pages accessed during 25 November 2014. The total number of analysed pages was 923. The coding was made by one coder.

The results suggest that the dominant forms available on the various teletexts include news, general service information and service information about the medium and index pages (table of contents). HRT published 405 pages

daily, while NOVA TV 284 and RTL published 234 pages, subpages inside one teletext page excluded because of lengthy loading time. As shown in Table 1, commercial TV stations all had very similar content, while HRT had the highest number of general service information pages and service information about the medium and news.

Table 1. Types of none-commercial content in different TV channels, 2014 (per cent)

	HRT*		RTL**		NOVA TV***	
	%	N	%	N	%	N
News	11,9	48	13,4	38	13,2	31
General service information	25,2	102	21,1	60	26,9	63
Service information	36,5	148	17,3	49	23,9	56
Index	10,6	43	9,5	27	12,4	29
Per cent of all content	84,2	-	61,3	-	76,4	-

* Public service Croatian Radio television
**Commercial station Radio Television Luxemburg Group (RTL)
***Commercial station NOVA TV

News accounted for 11.9 per cent of the total number of pages on HRT teletext, 13,4 per cent in the case of RTL news and 13,2 per cent in the case of NOVA TV news. Similar to the findings made by Brown and Atwater (1986) on videotext, the most common teletext news covered international and domestic politics (Table 2). Commercial broadcasters focused heavily on entertainment, sports and culture news, while the economy and EU relations were emphasized by HRT.

Table 2. Types of news content in different TV channels, 2014 (per cent)

	HRT*		RTL**		NOVA TV***	
	%	N	%	N	%	N
Domestic	16,7	8	7,9	3	12,9	4
International	25	12	13,2	5	29	9
EU	6,3	3	0	0	0	0
Culture	10,4	5	31,6	12	6,5	2
Entertainment	4,2	2	23,7	9	32,3	10
Economy	18,8	9	0	0	3,2	1
Sport	18,8	9	18,4	7	16,1	5
Other	0	0	5,3	2	0	0
Total of news content	-	48	-	38	-	31

Note: for abbreviations, see Table 1.

As shown in Table 3, HRT relied most heavily on HINA and content prepared for broadcasting by HRT, while RTL generally (92.1 per cent) did not show the source of the news. NOVA TV heavily relied on their online journalists from

two of their online counterparts, dnevnik.hr and gol.hr. All three broadcasters guided their teletext viewers to their online counterparts.

Table 3. Source of news in different TV channels, 2014 (per cent)

	HRT*		RTL**		NOVA TV***	
	%	N	%	N	%	N
HINA	64,6	31	0	0	0	0
HRT/RTL/NOVA TV	12,5	6	0	0	0	0
No source	4,2	2	92,1	35	32,3	10
Author's name and surname	0	0	7,9	3	0	0
Web counterpart	0	0	0	0	67,7	21
Other	18,8	9	0	0	0	0
TOTAL of news content	-	48	-	38	-	31

Note: for abbreviations, see Table 1.

Commercial content represented 15.8 per cent of all pages in the case of HRT. RTL had 25.6 per cent of commercial content pages, while NOVA TV had 36.6 per cent of content pages with a commercial purpose. However, these numbers were even higher when we calculated the number of teletext pages with ads: HRT had 16.3 per cent, RTL 54.3 per cent and NOVA TV 80.9 per cent of the total number of analysed content pages. These data show that the business model of teletext is still very successful, which was confirmed in the interviews with teletext editors (Nejašmić, personal communication, 30 November 2014). There is, however, some potential concern regarding the type of the commercial content.

Table 4. Types of commercial content in different TV channels, 2014 (per cent)

	HRT*		RTL**		NOVA TV***	
	%	N	%	N	%	N
Sex	0	0	12,4	29	11,6	33
Divination	0,5	2	9,2	22	2,8	8
Betting and lotteries	14,6	59	0,9	2	6,7	19
Lending	0,5	2	0,9	2	1,1	3
Selling of products	0	0	1,3	3	4,9	14
Other	0,2	1	0,9	2	9,5	27
TOTAL of content	15,8	-	25,6	-	36,6	-

Note: for abbreviations, see Table 1.

As shown in Table 4, HRT had the highest number of pages showing betting and lottery opportunities and results, while RTL had the highest number of pages promoting divination, such as tarot, foretelling the future and removing

spells. NOVA TV had the highest number of sex-related pages such as sex ads, porn videos and sex phones.

Figure 1. Sex- and divination-related ads on page 100 (Nova TV)

The explicit sex-related pages and ads can be found even on the first index pages (Number 100), which resulted in citizens' complaints to the Agency of Electronic Media (AEM)[6], the main electronic media regulator in Croatia. In 2011, AEM decided to solve this problem by warning the broadcasters (AEM 2012) but, as we can see from the results of the content analysis, without success. AEM is probably turning a blind eye because this represents a very important source of income for commercial broadcasters, which are struggling with the profitability of their business (Paparella 2011).

As with the other two commercial broadcasters, HRT teletext had commercial pages from its beginning. Up to 1997, pages were sold by the company Promar, but then was taken over by the Marketing department of HRT (Petković, personal communication, 16 November 2014). As Petković explains: "HRT teletext made a profit in millions at the end of the 1990s, mostly from betting, and later from chat services and mobile networks." (Petković, personal communication, 16 November 2014). Marijan Nejašmić, teletext editor responsible for the commercial content and contracts, confirms that HRT teletext has about 15 per cent of commercial content in average (Nejašmić, personal communication, 30 November 2014). HRT had a practice of separating the commercial from the non-commercial content by reserving higher teletext page numbers

Figure 2. Porn video ads on NOVA TV teletext

for the commercial. On the other hand, RTL and NOVA TV were mixing content without any logical or visual separation. NOVA TV was heavily promoting dnevnik.hr by linking the content and using teletext banners for promotion. As well as this, all the news was very short, with the aim of pitching and sending the readers to the web.

Conclusion

As a result of the political position of Yugoslavia, HRT had the opportunity to become a member of the European Broadcasting Union, and use all the technological advantages already applied by most of the Western European public broadcasters. From its beginnings, RTZ (the predecessor of HRT) had been a technology innovator in Yugoslavia and Eastern Europe, which resulted in the experimental broadcasting of teletext as early as 1982. Unfortunately, a limited number of TV sets equipped with teletext decoders blocked the project up to the early 1990s, when it was also used during the war in Croatia as a means of bypassing the communication channels controlled by the Yugoslav federal government. This early history of teletext showed how one technology led to another, and how international political relations influenced the transfer of technology from the West to the East.

During a later phase, HRT starting operating the teletext service without any forward planning. The "old" media survived its embedment in the web department and other challenges, thanks to the fact that the audience remained interested. When HRT quit developing new ways to receive teletext news, the users jumped in and created the teletext mobile apps. Up to 2014 the users created five apps for the IOS and Android platforms, and one of them had more than 50,000 downloads. From that fact we can see that the problem of stagnation in the development of teletext was taken care of by the individual users, who became new media facilitators for the "old medium."

The commercial content was another facilitator for teletext, especially where commercial broadcasters are concerned. They are no longer interested in the development of teletext, which can be seen from the way they are linking news content with their Web counterparts, but the commercial pages and the ads represent valuable income, and are thus still securing the future of "forgotten" media. It seems that teletext in Croatia is "forgotten" for broadcasters and their management, but not for the audience and advertisers. The richness of content (not just news) and advertisements show us that "old" media can be also "new" even when they remain in the shadow of technological development.

Notes

1. One year before the independence of Croatia, in 1990, Radio Television Zagreb changed its name to Croatian Radio Television (HRT).
2. Damir Šimunović, Head of Strategic Development and International Relations
   Danijela Petković, HRT Teletext Editor at HRT, from 1991
   Sandra Mrđen, HRT Teletext Editor from 1989
   Duško Zimonja, Chief Director of Technology, HRT, responsible for the technical side of Teletext
   Zlatko Sinobad, First Director of Zagreb Radio Television (later named Croatian Radio Television – HRT)
   Igor Duić, Chief Editor of New Media, HRT
   Marijan Nejašmić, HRT Teletext Editor, responsible for the commercial content
3. Radio Television Zagreb, as well as each member of JRT, consisted of the three entities – Radio, Television and Music Production. After the change of name to Croatian Radio Television (HRT) it kept the same basic organization with three entities from 1990 until 2013, when it was restructured into one integrated media service.
4. Schaub-Lorenz was a Germany-based company specializing in manufacturing products for telecommunications and broadcasting.
5. Wireless Application Protocol is a communication protocol for early mobile devices used for Internet access.
6. Agency of Electronic Media, on the basis of the Electronic Media Act, regulates the rights, obligations and legal responsibilities of those that provide audio and audiovisual media services and electronic publication services by electronic communication networks, and the interest of the Republic of Croatia in the field of electronic media.

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11 The Italian Way to Teletext

The History, Structure and Role of Televideo Rai

Luca Barra & Gabriele Balbi

Abstract

Since 1984, Televideo has been a constant presence (even if sometimes unnoticed and neglected) in Italian television as a service provided by the national Public Service Broadcaster Rai. After years of technical and editorial experimentation, in Italy the role of teletext became important especially during the 1980s and the 1990s: it offered a series of textual information and data to a large number of television viewers, generating common practices and shared references, and influencing news production processes as well as the consumer electronics industry. In recent years, with the diffusion of PCs, the world wide web, and digital media, Televideo's role has diminished, yet it still offers its service to mature audiences and experiments some connections with digital outlets. Building on both primary and secondary sources (Rai archives, surveys, production data, printed press, promotional materials, etc.), this chapter aims to trace the history of Italian teletext, through a set of lenses: technology, politics, economy/business, content production, and audience. As a result, the fundamental role of public service TV in developing the "Italian way to teletext" is described, taking into account Televideo's national and regional pages (together with their less successful commercial counterparts). Televideo emerges then as a part of a complex intermedial landscape, supplementing newspapers and TV news as well as anticipating and then connecting television and digital environment.

Keywords: Televideo, Italian teletext, Rai, public service broadcasting, news production, intermediality

Introduction: A different name, a (somewhat) different medium

Televideo, the "Italian way to teletext," begins with an unclear translation of the term: the prefix's connection to the television medium is maintained while the direct reference to written text is replaced by repeating the visual character of the service. The term "Televideo" was adopted during its experimental period (between the end of the 1970s and the early 1980s), probably in the hope of promulgating a more "Italian-sounding" word, and diffused to a national audience on 5 September 1984.

Regardless of its name, Televideo has been a constant (if somewhat unnoticed) presence in the Italian television system, specifically in the services offered by Italy's national public service broadcaster (PSB), Rai. However, a similar (yet less-wealthy) teletext model is also used by some private competitors. In both cases, Televideo is a complex (and sometimes innovative) service with the ability to both permeate viewing practices and create shared habits. Deeply rooted in analogous international experiences, Televideo's history highlights certain "Italian" idiosyncrasies with respect to its technology, its relationship with politics, its commercial model and its editorial strategies. After several years of technical and editorial experimentation conducted primarily in Turin at the Rai Research Centre, the role of the teletext system became extremely important during the 1980s and 1990s. At that time, it offered a series of textual information and composite data to a large audience while influencing television production processes and the consumer electronics industry. In recent years, however, the prevalence of computers and the Internet have rendered Televideo less relevant within the media system. Still, it provides a useful service to mature audiences and even continues to experiment with intersections of newer digital and convergent media.

Italian TV followed essentially the same path as other teletexts used in Europe, sharing the common goals of public service along with the insertion of commercial elements, technological choices and a widespread diffusion during the pre-Internet era. Despite these similarities, national specificities clearly emerged: Televideo's strange relationship with other PSB news departments; certain technological solutions; the use of teletext as a tool in the competition between public and commercial television; and the emphasis on both exclusive news content and other services.

This chapter presents a comprehensive history of Italian Televideo, also offering some commentary on its regional pages and the competition among commercial teletext services in the national landscape.

The goal is to reconstruct and combine five dimensions of Televideo's history: technological developments; institutional influences; business models; content architecture and editorial guidelines; and specific characteristics of viewers and users. In other words, the aim is to adopt a holistic and systemic perspective that combines various research approaches. The historiography of technology will help identify not only Televideo's technical basis but also its relationships with contemporary media and networks. The political economy of communication can provide a valuable background in identifying political and economic relationships among the relevant social groups that encounter Televideo and its underlying institutional and economic policies. Production studies, especially a "production cultures" approach, can provide useful insights into how the logics and goals of the medium were either explicitly defined or indirectly settled. Finally, a background in cultural studies will

help identify how early users *adopt* the new technical possibility and *adapt* it to their household lifestyle. All these research traditions will be integrated in an historical approach that aims to reconstruct the systemic interrelations of different realms in various phases of Televideo history. In terms of historical sources, both primary and secondary sources have been investigated. With respect to the former, archival research has been conducted on documents preserved in Rai and Mediaset facilities in Turin, Rome and Cologno Monzese, on the printed press (national newspapers and magazines, house-organs as the *Radiocorriere*) and on promotional materials developed by press offices and marketing departments. The secondary sources considered are mainly books and papers, often funded by Rai's research department and distributed on a limited basis. The historical reconstruction highlights landmarks in the Italian development of the medium while stressing connections with other devices and media, ultimately tying in with contemporary issues such as the changing (but persistent) role of Televideo in a digital media landscape.

Technology: Low-tech, the Internet before (and together with) the Internet, and convergence

Technical research on Italian teletext was conducted by the Rai Research Centre in Turin beginning in 1977 with trials in Piedmont, Valle d'Aosta and even Switzerland (in cooperation with the Swiss PTT). Initially, two standards were considered: (1) the "traditional" English system, i.e. the founding father of European teletext, with trials beginning in the late 1960s; and (2) the French Didon (*Diffusion de Données*). In November 1980, Rai was authorized to experiment with both systems under the supervision of the Post and Telegraph Ministry and in collaboration with the Istituto Superiore delle Poste e delle Telecomunicazioni and ANIE, Associazione Nazionale delle Industrie Elettroniche, the national association of electronic companies (Rai 1996: 12-13). Therefore, since the beginning, in Italy both public and private bodies were interested in teletext systems: PBS, governments (as was the case everywhere in Europe) and private firms – particularly television manufacturers. A ministry commission decided to adopt the English standard; the real phase of experimentation continued from March 1983 through September 1984, when the service was officially launched.

From a technological point of view, Italian Televideo engaged at least three forms of media. The first – and perhaps most obvious – is television, although Televideo is *not* television in the conventional sense. Its focus is on the text dimension of an audio-visual medium. As opposed to a combination of sound and moving images, teletext relies on speed to produce something simple, such as a newspaper transmitted through a television screen. The functioning of this system is technical but, nevertheless, it can be interesting for the reader: words

are positioned on unused lines to transmit the TV image in a codified language between consecutive images; indeed, there is a space between the moving TV images, a space that is not perceived by human eyes. The Televideo text is positioned in this space between two consecutive images. In the early phase, Televideo pages were made of 24 lines, each with 40 characters.

Televideo is clearly linked with television, which is one of the most popular media in communication history. Specifically, because Televideo is embedded in TV sets themselves, it shares three main characteristics with *classic TV*: one-to-many distribution, user-friendliness and free access. One-to-many distribution is among the most powerful structures of radio and TV broadcasting, as opposed to the flow of telecommunications focused on point-to-point interaction between senders and receivers. For a long time, Italian Televideo was mono-directional. The audience could read pages provided by broadcasters, but Televideo lacked interactive capability. At that time, Televideo reflected the more general process of "de-spatialized simultaneity" recognized by John Thompson (1995) as one of broadcasting's primary characteristics: its ability to synchronize an audience in front of a screen without the audience being connected spatially. Even if Televideo could be compared to newspapers, the synchronization provided by teletext is more powerful than the synchronization of newspapers. There are many pages to access and the audience could make a personal choice among them; nevertheless, if two people choose the same page, they read it at the same time, slowly changing pages at the broadcasters' will. The second common element that Televideo shares with TV is user-friendliness. From onset to the present, Televideo (and teletext in general) has had the potential to evolve in terms of graphics, quality and service (Cannizzo n.d.: 28-32). Nevertheless, in Italy, Rai and then-private broadcasters decided to keep Televideo simple and low-tech for two reasons: (a) the simpler Televideo is, the faster its audience receives news, which is to say that receiving information quickly is considered more important than technical quality; and (b) to use versions of Televideo that were more evolved, audiences had to upgrade their television sets or decoders. A basic benefit of Televideo's popularity was the fact that its service could be used on a classic TV with a decoder. Broadcasters decided to deliberately introduce a new service with a low-tech profile (exactly like that of television) due to their preference for rapid communication and maintenance of the technological *status quo*. A final element shared by Televideo and television is free access. Televideo represents a service that supplements either free TV broadcasting or, better, is included in the fee required by the PSB (which is lower in Italy than in many other European countries).

The second medium connected to Televideo is the telephone. Televideo replicated a similar service launched by SIP in the 1970s called Videotel, which was the unsuccessful Italian version of the famed French Minitel (for more

on Videotel history, see Balbi 2010, Chapter 6). Minitel had a long, popular history in France; it was composed of a series of terminals accessible through telephone lines that provided different types of information in real time. This is why Minitel is now considered the forefather of the contemporary Internet (Schafer & Thierry 2012 and see the chapter on France in this book). Videotel copied Minitel and can also be considered very similar to Televideo, especially if we focus on the primary common goal: providing information. Nevertheless, taking a closer look, Videotel differed from Televideo because it required telephone lines and fees paid by telephone subscribers; it functioned as an on-demand service through which users could ask the telephone company for specific information. Although different, Televideo is linked to the history of the telephone in its struggle to find ways to coexist and collaborate with the medium. In March 1996, an on-demand Televideo experiment was launched exclusively for the Regional Televideo of Lazio. Users could call the broadcaster and request specific pages for their televisions. An extension of this service, *LineaLavoro*, was devoted to labour, employment and open calls for job opportunities. It became quite popular (it was provided to 100,000 telephones in the first year) (Rai 1997), although in recent times stronger connections have been established with devices such as the cell phone (a real Italian passion). Beginning in March 1999, Televideo had the ability to spread news through mobile phones, courtesy of a contract signed with the Italian carrier Wind (*Ultim'ora*, Sport, Weather Forecasts) (Rai 1999: 32). Recently, a devoted app has allowed access to Televideo from new-generation smartphones.

The third medium connected to Televideo is the Internet and – more generally – digital culture. Televideo connected explicitly with digital culture throughout different phases of its history. During the first half of the 1990s, it initiated Telesoftware, a service that allowed the transmission of data among "closed" groups of people or companies. Through this service, computer users could receive free programmes, software and games by linking their computers to televisions. Reflecting a type of analogue version of file sharing, in many ways this service foreshadows the sharing culture typical of the digital era. Since 1997, Televideo has been accessible via the Internet (see www.servizitelevideo.rai.it) with surprising success. In 2000, it received 8 million monthly clicks (Rai 2000: 42) and throughout the 2000s it remained Rai's "most visited website" (Rai 2005: 100). Rai is keen to claim this service as an attempt to create a self-reinforcing "system" between Televideo (or TV in general) and the Internet. According to Rai, Televideo is not in competition with the Internet and even when Rai decided to incorporate its web services in the mid-2000s, it stated that "no innovation … wants to destroy or diminish the well-established brand of Televideo, which has an editorial heritage that has been mastered and consolidated over more than 20 years" (Rai 2004: 49). Furthermore, accessing Televideo via a website increases the different options offered by Rai's teletext, adding a crucial facility

such as the historical research in the Televideo archive (Rai 1999: 32). Thus, the Internet adds a type of memory to "traditional" Italian teletext.

Institutions: The socio-political history of a public service

The development of Televideo was not simply a technological matter. The initial experimentations, as the subsequent diffusions of the national teletext system, were actually led by the Italian PSB, Rai, which is a media institution strictly tied to the State with rigidly defined public service duties. At the same time, it is indirectly controlled by political parties and politicians through the *lottizzazione*, a spoils system that has been deeply embedded in Rai since its monopolistic beginnings and that continued during the subsequent period of deregulation (Grasso 2004: 2013; Monteleone 2003; Ortoleva 1995a). Rai implemented Televideo as part of its statutory duties (as expressed in the *Contratto di servizio*, the regulatory body that provides Rai with its broadcasting licence) and following its PSB policies. From the beginning, Italian teletext was free to access and entirely devoted to providing news and other useful tools to viewers, who were primarily regarded as citizens. Simultaneously, throughout the medium's history many clearly political struggles have emerged.

From its experimental phase in the late 1970s until the official launch in 1984 (Bc, 1981; Bocconetti 1984), Televideo was involved in complex negotiations between public service broadcasters and the State, with a specific ministerial subcommission devoted to defining roles and standards for incoming teletext services (Rai 1996b: 12). On 10 August 1981, together with the renewal of its public service concession, Rai was permitted to begin experimenting with teletext, inspiring curiosity among audiences with regard to television's new "supplementary button" (Agostini 1982). Director of the Research and Studies Division, Giorgio Cingoli, was appointed to the project under the supervision of Massimo Fichera, the Vice Chief Executive Officer for New Technologies and a former RaiDue executive (Fichera 1982). It took several years (and much lobbying) before both technological standards and hardware-industry duties were secured. Authorization to broadcast was granted with two decrees on 3 and 4 August 1984. Whereas the second authorization only permitted Rai to test teletext transmission, this political decision was interpreted as the final step towards the launch of the service, benefitting (and in some ways exploiting) a legislative void that affected the entire television system after the launch of private and commercial networks (Barra & Scaglioni 2013). Unable to decide whether to categorize teletext as "broadcasting" or "telecommunication" (as was common with convergent media services throughout the twentieth century, see Balbi 2010), the status of teletext was not regulated for many years, and occupied only a minor part in larger legislation efforts (Contaldo 1994). As a consequence, Televideo was barely scrutinized in

political and public discourse. However, it always required both a lobbying effort and a close relationship to regulatory power.

When Televideo was officially launched on 5 September 1984, it was still primarily considered a technological instrument and required promotion to convince television viewers to update (or even change) their devices so that they could correctly decode the teletext signal. It also needed to combat suspicion from retailers. Thus, the PSB institution decided to actively devote some of its promotional and broadcasting space to teletext. First, a nightly broadcast on all three Rai channels introduced a selection of Televideo pages to audiences. Second, from 1984 to 1986, a promotional campaign was launched on television and in the press (especially the house organ *Radiocorriere*) that detailed the new service's main characteristics. Under the tagline "*La tv da sfogliare*" (A TV you can browse), many pages gave instructions explaining the practical functions of the data offered by the service, highlighting the free aspect, the diversity of content and the continual updates. Televideo was launched as "the news of the future," with the futuristic part apparently far more important than the actual news. As the service spread rapidly through Italy, its institution was reinforced. Under the stable direction of Giorgio Cingoli, a Televideo Division was created on 8 April 1987. It was divided into a news section, organizational support, a subtitle service, Telesoftware departments and general services. The number of Rai employees involved in the project consistently increased (Rai 1989).

In the 1990s, the journalistic component of Televideo became progressively crucial. A service had already developed and extended to the major national television audience, leaving the Italian teletext to reinforce its editorial content. In March 1991, Giorgio Cingoli was replaced by Aldo Bello, who was willing not only to strengthen the news service with the involvement of 25 full-time journalists but also to reinforce the constant updates and concise manner of presenting news that had emerged as one of the medium's greatest strengths (Azzolini 1991). This was a turning point in Rai's approach to Televideo, which was no longer viewed as a technical feature but, instead, as a vital news outlet, almost as important as the newscasts of other important networks. This change provided the service with a more political role as its managers changed along with Rai governance (and national governments): setting aside its technical aspects, Televideo became just one of several parts of PSB assigned to political parties candidates via the spoils system. The next director, Marcello Del Bosco, began as a co-director with Bello and then took over independently until 1994 – and again from 1995 to 1998. Del Bosco strengthened the role of the newsroom even further, separating the increasingly specialized journalists exclusively devoted to news from the data compilers preparing service and magazine (*televideo di servizio*) components (Grasso 1995), while trying to update the news 24 hours per day, 7 days per week. The 1994 political appointment of another director, Roberto Morrione, was quickly terminated by a judge's decision to reinstate Del

Bosco. The two subsequent managers, Alberto Severi (1999-2002) and Antonio Bagnardi (2002-2013), were chosen following political agreements.

Table 1. Directors of Rai Televideo

Name	Years
Giorgio Cingoli	1984-1991
Aldo Bello	1991-1993
Marcello Del Bosco	1991-1994
Roberto Morrione	1994-1995
Marcello Del Bosco	1995-1999
Alberto Severi	1999-2002
Antonio Bagnardi	2002-2013
Monica Maggioni	2013-2015

Throughout the 1990s, Televideo's public service role led to the development of international and local versions that established different relationships with its viewers/citizens. An international version of Rai teletext was created to broadcast on RaiSat channels' satellite frequencies, providing both multilingual subtitles and English-language pages about Italian news for a (potentially) European and global audience. More importantly, a series of regional Televideo pages was developed to give viewers a full range of additional local news and services. At first, experiments were performed with regional pages during special events such as Milan's April Fair (Buongiorno 1986). A regional teletext version was broadcast in certain regions, beginning with Piemonte and Lazio and continuing with Campania, Calabria, Marche and Umbria until, in the late 1990s, 21 versions corresponded to Rai's local branches. Aired on the third channel, RaiTre, Televideo's regional editions offered local news (in association with Rai's regional newsrooms) and other useful content (local administrative services, deadlines for taxes and bills, pharmacy hours, movie timetables, etc.). Televideo tightened connections with its users, binding its public service duties to a longer and ongoing process of political regionalization.

In 2013, after more than 25 years, the story of Rai's Televideo Division ended with a reorganization of Rai's news outlets. Whereas Antonio Bagnardi's long-standing leadership symbolized the reduced centrality of teletext services in Rai's newsrooms, the digitization process and mainstream diffusion of the Internet further decreased Televideo's relevance in the public discourse and its appeal to consumption practices. Thus, its historical connection with journalism coupled with the need for convergence and synergies in the production process led Televideo to join the wider department of Rai News, the Italian public service broadcaster's 24/7 news channel. The national teletext lost its institutional specificity and began the process of integrating with other Rai news outlets to take into account the challenges of a larger, more complex media environment.

Economics: Business model and competition

The role of Rai as a PSB is surely one of the main forces behind the development of Televideo, attributing great importance to its information role and stimulating both technological improvements and regional services. Meanwhile, however, Televideo also proved – and still proves – effective as a commercial medium, offering advertising space (and the attention of its national and regional viewers) to investors.

As opposed to other national cases, a plan for advertising development had been outlined for Italian teletext from its early years. In 1985, in line with the Italian tradition (which began during the origins of the radio era) of funding PSB with both a license fee and advertising, the new medium was presented to economic operators and private companies as an "important vehicle for advertising" (Adriani 1985). Credibility is considered a fundamental goal for teletext services in every page, forcing strict regulation over news and other information, which is perfectly coherent with its public service role. At the same time, however, the insertion of banners and other forms of advertising in the magazine and service pages of *Televideo di servizio* with top-ten lists and football match results was deemed acceptable. Therefore, the business model of Televideo adhered to a rigid distinction between news pages without advertising and more varied pages allowing some commercial information. Another way to cooperate with companies was through an exchange of editorial content and brand visibility, leading to columns, sections and other pages prepared by corporations on their respective sectors and specificities, thus establishing the corporations themselves as information providers. Additionally, Telesoftware activities allowed the rental of encrypted teletext services for private use by companies and groups such as the Milan Stock Exchange.

Though never envisioned as an advertising carrier, Televideo proved highly effective in stimulating business interest and collecting marketing resources, thanks to the increasing diffusion and textual specificities of the medium, which allowed longer onscreen persistence and a superior quantity of information compared to television commercials. During particular phases of its development, Televideo was attractive to investors and offered a wide range of formats, including static and dynamic pages, banners and other diversions of the screen, *fascicoli* (folders) with a series of subsequent rolling pages, commercial flashes inserted into regular page rotations and so on. Both the use of private pages for investors (often regarding the stock market) and the interactive services provided by Telesoftware contributed to how private companies could use (and finance) teletext. Thus, advertising became a regular source of revenue, unable to cover all of Rai Televideo's editorial costs but helping sustain the public service.

In Italy, teletext proved so commercially effective that other television players, Rai's competitors in the national market, began to experiment with their

own prototypes, testing versions modelled on Televideo. The initial legislative void deterred local and private networks in the technical and editorial competition; however, research conducted on TV viewing habits and forms of teletext consumption (NFO 2003) underlined not only teletext's commercial attractiveness but also its power as the first form of new media. In the early 1990s, many local channels made their own teletexts, filling them with local advertising; in some cases, local network syndicates created shared services such as Cinquestelle's Arianna. Videomusic – an all-music channel broadcast in large areas of Italy – developed Music Fax, which offered content ranging from music to youth culture and a large portion of targeted ads and classified advertising. Telepiù, Italy's first pay-television service, used a special teletext to provide viewers with subscription information.

The real opponent to Televideo, however, appeared relatively late. Canale 5, Italia 1 and Retequattro – Mediaset's three commercial channels owned by Silvio Berlusconi – surfaced as competitors on 24 November 1997. Mediavideo (a title exploiting the suffix used by Rai) was the result of several years of experimentation and long-term observation of similar services, confirmed by a precursory analysis of teletext as "a source of income for TV operators … able to get the attention of advertisers" (Fininvest 1987: 20). Mediavideo's editorial components were very similar to those of Rai, with a large part of its information guaranteed by specific partnerships – for example, its launch partnerships with the national news agency Ansa, the economic newspaper *Il Sole 24 ore* and other magazines. However, Mediavideo's advertising presence was far more developed, with pages, spaces and specific interactive services (*Mediavideo interattivo*) involving the use of the telephone to navigate exclusive pages. The combined interactivity of television and telephone launched new forms of teletext, providing opportunities for home banking, home insurance and other services that have been abandoned in the aftermath of the Internet. Investors could buy banners inside the news and information pages that rotated at a faster pace (R. 1997) and employed the sharp use of several colours (Cianflone 1998). The homepage and the index pages reserved ample segments for advertising with a wide range of options for investors from "special positions in spots with high visibility, inside index pages and editorial parts" to "flexible folders, with a start page and other rolling pages" (Mediaset 1999).

The 2000s were a time of a precursory explosion in advertising investments (NFO 2003; Rembado 2005), followed by a strong reduction that occurred with the transition to digital terrestrial television. In the first phase, the large-scale diffusion of chats and classified advertising primarily paid for via telephone and SMS led to an important increase in revenues for public and private teletext. Later, however, the multiplication of alternate digital sources and the contraction of viewers' attention reduced the medium's profitability and, consequently, investment in its development, resulting in a progressive shift from teletext

to other digital advertising forms (online and mobile). The commercial disappearance of both public Televideo and private local and national teletexts from advertising agencies' radar has ultimately led not only to their withdrawal from many private networks but also to a forced repositioning of both Televideo and Mediavideo, both of whom are experiencing sharply reduced commercial relevance and are fading from commercial analysis and public discourse.

Content: A written newspaper and service provider

All of the political, technological and economic struggles central to Televideo have one major goal: the development of a platform that provides news content and other services to a national television audience in text format with the potential to be continually updated and accessed anytime. With that in mind, a closer analysis of Televideo's editorial content provides useful insight into its logic, strategies, and history.

In its early years, the service was organized following suggestions provided by an experimental panel of general and business users (Rai 1982). All of the information was displayed on an introductory page with a complete menu of possible choices. The general index included page numbers for all of the available content, providing subdivisions in five distinct areas: "the first one was devoted to journalistic news, the second one to various entertainment topics (tourism, gastronomy, health, games, horoscope, etc.), then came the TV programming, the institutional and economic news (school, taxes, stock exchange) and transport (flights, trains, highways)" (Marcelli 1991: 41). Although the sections were rich, well structured and (at least partially) coherent, such an indexing system was unable to provide enough space for subsequent extensions, which was a critical asset for a teletext service that simultaneously displayed approximately 1,100 different pages, by far the largest number in Europe (Rai 1991). Beginning on 10 November 1988, the increase in pages and other services led to the adoption of a new structure of information, and the substitution of the general menu with a hierarchical tree data structure. Thereafter, the first page (100) displayed only the main categories, the major hubs according to which the information was collected and organized. For each of these thematic areas, there was a sub-index leading to other pages and indices. The reorganization of Televideo resulted in seven different *magazzini* (warehouses) continuously filled with content, allowing users to follow different paths to reach information while simultaneously allowing the Rai institution to endlessly develop its service.

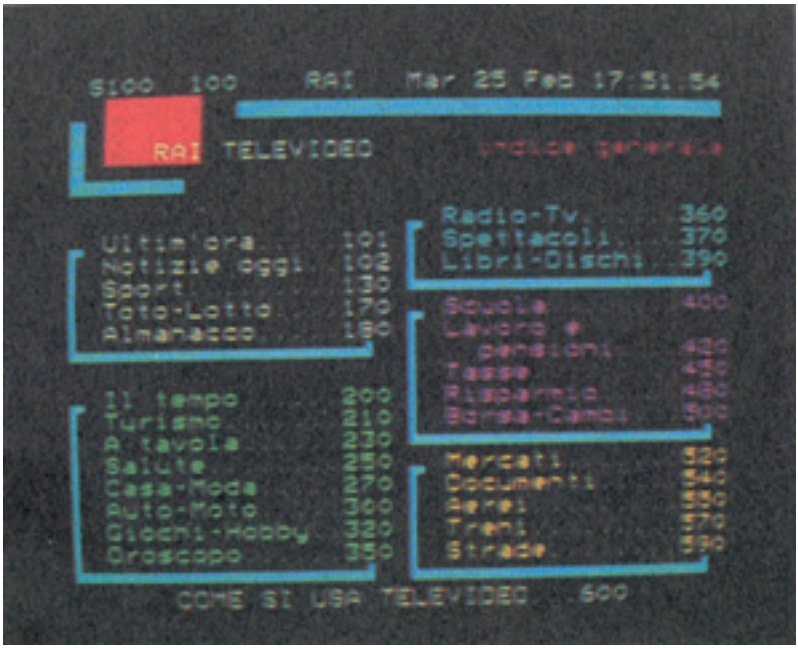

Figure 1. The first page of Televideo in the 1980s (Marcelli, 1991)

The tree structure used in the Italian PSB teletext over more than twenty years divides content into two distinct parts: (1) news, with bulletins on current events constantly updated by a journalistic team in accordance with the same values, routines and criteria utilized by newspapers, radio and television news outlets (Marcelli 1991: 58-90); and (2) service information, i.e. a repository of data, figures and other in-depth materials available for all types of television viewers. From the beginning, Televideo had to provide both "news and public benefit services" (Cingoli 1983); however, the information architecture gradually clarified (perhaps even radicalized) the distinction between the two with structural separations.

News is Televideo's mainstay and therefore occupies the first position in both the index and the page numbers. The first category is composed of general news, including internal and foreign affairs, crime, features, gossip and other general items worthy of mention. The opening page (101), called *Ultim'ora* (breaking news), briefly summarizes the most recent important news item throughout the day without hierarchies other than those related to time. With news agendas following the rhythms of TV newscasts and morning newspapers, this page rapidly became the main asset of Italian teletext, allowing viewers to experience a continuous flow of news and updates. As director Aldo Bello declared (1992), "*Ultim'ora* is the cornerstone, the polar star of Televideo." The subsequent

page (102) helps arrange breaking news in chronological order with a recap of events that have occurred throughout the day. On page 103, the television newspaper really begins with a *Prima pagina* (front page) that inserts links to different articles in a classic journalistic hierarchy, offering a concise view of the main stories. The first *magazzino*, then, is filled with various articles, formatting news into a single page or a number of rolling, subsequent pages. With its unsigned news items, Televideo attempts to provide an essential and (at least partially) objective take on the news. Across the pages, a tendency and "vocation to put political information first" (Marcelli 1991: 93) emerges and is only partially compensated by special sections such as *News flash,* which offer brief annotations of crime news, gossip and other stories.

In general, the strength of Italian teletext lies more in its selection – its short but thorough overview of facts, its promptness, its rapid updates carefully following events as they unfold – than in the depth of the analysis or the presentation of different perspectives. The exceptions are special occasions such as political elections (Marcelli 1990) or large-scale breaking news such the events of 9/11 (Casa 2002). In such situations, Televideo prepares rich and detailed specials with complete data and in-depth analysis. The constant updates, the flexibility in structure and the growth in page views during these events illustrate how Televideo anticipated the Internet and social media by merging the characteristics of broadcasting and ICTs.

Figure 2. The first page of Televideo in the 1990s (online)

Other variations of news continue in Televideo's next two *magazzini*. Starting from page 200 of the index, the sports section gives viewers both real-time updates and the results of major matches and events, along with a general daily take on sports news. More than half of the material concentrates on football, with national championships, European leagues and world competitions often followed *Minuto per minuto* (minute-by-minute). Other sports (basketball, volleyball, cycling, etc.) have their own columns and updates on special events. The third category in the tree data structure (page 300 and beyond) consists of economic news, with constant updates on the stock exchange and other major events, along with summaries and insight into daily news involving the economy, markets and finance.

On page 400, the second, service-oriented part of Televideo begins with detailed information not necessarily meant for constant reading but, instead, as a resource to be consulted as the need arises. No longer a television newspaper, the content here reads more like a magazine or reference book, even a search engine, thanks to the ability to store and provide access to large quantities of updated data. In this part, many allocations have been changed over time, with a constant yet light-handed restructuring in the architecture intended to give prominence to the most useful services (and to take into account the partial competition of the Internet). The section's mainstay can be found on page 500, where a television and entertainment section appears. The content here includes a full account of daily and forthcoming television schedules for both PSB and commercial television, paying special attention to primetime programming, ratings data, textual expansions of single shows, with pages referring to recipes, books and other items cited during broadcasts in a "stable extension of programmes usually inserted into a flow" (Marcelli & Solito 1995: 127-128), and information on radio, books, concerts, theatre, cinema, records, top-ten lists and reviews. Other special Televideo sections are devoted to weather forecasts (page 400 and later, 600), transport (train timetables, planes, highway conditions), lotteries and horoscopes, institutions and public utility services (including taxes, pensions, school news), leisure and hobbies (travel, cooking, health, games), and sponsored sections and commercial information. These sections are often compiled directly by the responsible institutions – i.e. Parliament, the EU (Rai 1996: 30), and the Finance Ministry (Rai 1997: 32) – to create a direct connection with citizens and to provide useful services for the general public. In 2000, an agreement between Rai and the Vatican led to the development of special pages for the Roman Catholic Church Great Jubilee, including information for pilgrims (Rai 1999: 33).

Televideo's complex information architecture ends with "special services." The most important and popular of those services is subtitling, which caters to people with impaired hearing. Included by obligation in the licence for experimentation and later as part of Televideo's public service duties, Hitch-

cock's film *Rear Window* (1954) was the first subtitled programme broadcast on 5 May 1986. Since then, numerous recorded shows have been subtitled, transforming the 777 pages of Televideo into a well-established reference that incorporates announcements, captions and other graphics, made memorable for the entire television audience. Over time, the service expanded: first, with a precise definition of subtitling criteria (Marcelli 1994: 63-64), second, with real-time captioning for TV newscasts and other live programming and, third, with the addition of English-language subtitles intended for foreign audiences, language students and Italy's linguistic minorities (Rai 2005: 101).

As noted above, another special service launched in June 1987 was Telesoftware, a service that facilitated the transmission of coded information through Televideo to a connected PC using a special adapter. Rai experimented with "value-added services" (Atzu & Agamennone 1990), both for commercial purposes (Borsa di Milano, Agip) and for general audiences using didactic software broadcast to national schools or through experimental forms of electronic publishing (i.e. *Calciobit '90*, during Italy's World Cup). In the 1990s, the national newspaper *La Stampa* diffused its entire daily editions via Telesoftware (Del Bosco 1994) so the visually impaired could "read" the newspaper through voice recognition (Agamennone 1991). Tourist guides, fairy-tale books, and even a music course were developed (Raffone 1997). With the diffusion of the Internet in the 2000s, the service was first hidden and then closed.

Through trial, error and established practices (which were largely mirrored by competing teletext services at the national and local levels), the editorial structure of Italian Televideo and its historical developments offer clear accounts of the teletext medium, its idiosyncrasies, its content and its language. The complex balance between the need to constantly update news and to offer fixed data is the main goal for a "written newspaper to be read on video" (Cingoli 1983) where – in opposition to the Latin motto – "*scripta volant*" (Marcelli 1991), written texts are fluid in a strange mirroring of Walter J. Ong's "secondary orality" (1982). The creation of a peculiar writing style distinguished by shortness and clarity, simplicity, coherence of titles and syntax (Violi & Wolf n.d.), along with the development of a specific hierarchy of news values and criteria, illuminate the complex struggle to achieve an identifying voice and a space in a crowded media landscape, posing competition to more established (and richer) news outlets while demonstrating a complementary role in the media system. The evolution of inferences contributed by editorial professionals to the Italian audience, with the subsequent importance given to some topics and services, has led to the emergence and establishment of several *topoi*, (common places) for the viewers, not only enabling them to memorize the numbers of certain pages and reach them directly but also establishing *Ultim'ora* or the 777 pages with subtitles as shared national references.

Audiences: The power of an everyday, personal, on-demand, user-friendly habit

Televideo's audience and users have been studied intermittently and exclusively by Rai itself, which poses a significant source of difficulty in understanding the motivations of Italian users. In different archives, we identified some research reports published in the 1980s and 1990s, although across the 2000s the interest in analysing Televideo's audience seems to have decreased. Another source is the *Annuario Rai*, an annual publication of the Italian PBS aimed at providing an overview of Rai's activity during the previous year. From these scarce data, we deduced the following information about Televideo's audience.

First, as Table 2 shows, Televideo's potential and effective users enlarged during the 1990s, especially due to an increase in television sets capable of receiving teletext signals. Daily consumption surged dramatically in the mid-1990s, and the popularization of Televideo could be best observed in Italian society during those years.

Table 2. Diffusion of Televideo among users, 1988-2005 (number and per cent)

Years	TV sets able to receive teletext	Potential users	Daily "contacts"
End of 1988	3,000,000	Approximately 9,000,000	
Beginning of 1990	4,000,000	Approximately 12,000,000	4,500,000
Beginning of 1991	4,500,000	Approximately 13,500,000	
1995-96	60%		8,000,000
1998	62%		21,300,000
1999	62%		21,300,000
2000	More than 62%		21,000,000
2001	More than 62%		21,000,000
2002	80%		
2003	80%		
2004			24,000,000

Source: Rai.

During the 1980s and 1990s, Rai kept on studying Televideo's users on an annual and periodic basis. Two documents can be used to identify the evolution of Televideo during the 1990s. Eurisko published a research report in 1993 aimed at identifying and "picturing" the audience's service based on a sample of 5,000 people. In 1993, 46 per cent of the Italian population owned a television capable of receiving Televideo. Twenty-eight per cent (approximately 13 million people) had used the service in the previous three months, and the frequency was distributed as follows: 8.2 million used Televideo many times per week, 2.5 million used it once per week, and 2.4 million used it less than

once per week. The users were primarily male (55 per cent), between 25 and 54 years old, with a medium-to-high level of education, and were distributed homogenously among various areas of the country (Rai 1996b: 15).

Another research institute, Doxa, analysed Televideo's audience throughout the 1980s (establishing four panels in 1984, 1985, 1987, 1989) and conducted two studies in 1998 and 1999. The Rai archives in Rome have preserved the 1999 report, which analyses the consumption habits and satisfaction of Televideo's users based on telephone interviews with 3,000 people representing the entire Italian population (slightly less than 50 million people). The document provides a series of very interesting numbers that enable a better understanding of who used Televideo and, especially, their modes of usage. With respect to the users' composition, at that time Televideo users were 60 per cent male and 40 per cent female; on average, they were 34 years old (30 per cent of the users were less than 25 years old, 22 per cent were between 25 and 34, 33 per cent were between 35 and 54, and 13 per cent were more than 54). 43 percent of the sample used Televideo every day, 44 per cent used it from 1 to 4 days per week, and 13 per cent used it less than once per week (Rai 1999b: 5; 14). With respect to users' satisfaction, 67.4 per cent were "very satisfied", 90 per cent found it "easy to access" and 85 per cent found it "useful"; 79.4 per cent were "very satisfied" with the quality reception, 80 per cent were "very satisfied" with the graphics (this is quite surprising considering the poor quality of those graphics) and 81 per cent were "very satisfied" with the content provided (Rai 1999b: 6). Televideo was consulted throughout the day, but especially in the evening: 25.4 per cent used the service in the morning, 33.3 per cent used it in the afternoon, 56.3 per cent used it in the evening, and 13.7 per cent used it at night (Rai 1999b: 31). Finally, with respect to users' reasons for using Televideo, 39.1 per cent replied "to satisfy a precise exigency" and more interestingly, 36.3 per cent replied "without a specific need." These numbers show that Televideo was a popular everyday activity for years and, more in generally, that its users were pleased by the service.

In addition to the data, perhaps the most interesting aspect addresses the cultural significance the service acquired. Surprisingly, some of Televideo's benefits had already emerged by 1982 – two years before the launch of its regular service. At that time, Rai was experimenting with Televideo and decided to finance research on its early potential audience. The sample based its reactions on a draft of what Televideo was and also expressed a desire for future services and content. This research, which was based on focus groups and semi-structured interviews, illuminated what users considered the most and least interesting aspects of Televideo (Rai 1982). Among the most remarkable of those aspects were as follows: (1) choosing the preferred pages according to personal tastes and needs, i.e. the audience's freedom of choice and power to decide was viewed as a plus; (2) being able to access information during

the entire day, especially when desired, which runs counter to mass media logic of schedule and prefigured a desire for personal, tailored consumption; (3) changing the nature of TV itself, transforming the traditional mass medium into a personal medium that fulfils personal, specific needs and, consequently, which provides a public service "able to solve very practical problems" (Rai 1982: 5); and (4) user-friendliness and the opportunity to use the medium at home in a simple format for reading.

At least in this first analysis, the audience seemed uninterested in receiving continuously updated information. The sample claimed that Televideo offered "just enough speed" and that broadcasters could already interrupt normally scheduled programming to provide breaking news. Someone argued that Televideo could be superfluous, saying, "I read newspapers and listen to radio news … if I need to know the train schedule I make a phone call" (Rai 1982: 8). This is very interesting from an historical perspective. On the one hand, it is clear how media users can scarcely imagine better, speedier, more interconnected media because they are often satisfied with contemporary standards and imagine future media simply branching from the ones they are used to (Natale & Balbi 2014). On the other hand, Televideo is a good example of how every medium is profoundly interconnected to both old and new media – a view referred to as the intermedial or systemic perspective. Without this perspective, the characteristics, relevance, and potentials of a single medium could not be understood (Bastiansen 2008; Dahl 1994; Ortoleva 1995b).

Throughout Televideo's history, audiences appreciated what we would call, in a typically "digital" vernacular, its on-demand service, i.e. the podcast-like idea of accessing content where/when preferred and the user-friendliness that appeared in the *Rai Annuari* over the years (Rai 1988-89: 34; 2004: 48). Nevertheless, two additional elements should be noted. The first is that Televideo created a sort of habit, a routine, a standardized way not only to provide information but also to consume it, an idea clearly articulated in the following quote: "Research conducted on the audience of teletext 'readers-viewers' confirm not only the popularity of the news but also great approval indexes in terms of usefulness, quality, rapidity and clarity of information. It is a durable and 'stainless' approval … allowing teletext to regularly outclass its main competitor" (Rai 2004: 48).

Finally, the special attention provided to disabled people must be emphasized. Two examples are: (1) Page 777, on which television programmes are subtitled for deaf people; and (2) a service specific to blind people in which the weekly *Avvenimenti*, the newspaper *La Stampa*, and some novels are transmitted in Ascii code and, later, through Telesoftware and an Internet-connected computer using Braille (Rai 1998: 38; 2004: 50). In this respect, Televideo fulfilled its public service duties completely.

Conclusion: Televideo in the digital age

This chapter has identified characteristics of the Italian approach to teletext in terms of technology, institutional involvement, economics, business, content and audience. From a *technological* point of view, Televideo is linked to low-tech television as an easy-to-use technology, but this does not mean that Italian teletext discarded new technologies. More specifically, it established close connections with the Internet, anticipating some of its popular functions and integrating their applications. Televideo represents an early example of media convergence in its continued efforts to facilitate the fusion of television content, telecommunications (the telephone), and telematics-informatics (an internal document was explicitly entitled "Telematics in every home"). From an *institutional* standpoint, Televideo was developed to create a complex balance between public service needs and other political goals. Consequently, over the years, it shifted from being (1) a primarily technological device requiring regulation and specific policies to (2) a useful service requiring promotion across other media and then (3) a journalistic medium whose main asset was instantaneity and news accuracy granted by carefully selected "journalistic" directors, before (4) progressively losing its independence and becoming just one of many ancillary mediums controlled by the all-news TV channel. From an *economic* perspective, despite its development by the public service broadcaster – and consistent with the increasing presence of commercials on public TV during the 1980s and 1990s – since its beginnings, Televideo was developed extensively as a commercial medium that eventually had the ability to host promotional pages, banners and other forms of advertising, including experiments with phone-driven interactivity. The creation of a new market, along with strong network competition, led to the creation of several private teletext services, sometimes well-defined (as Mediaset's Mediavideo) and sometimes little more than an excuse for advertising, announcements and chat services. Taking a closer look at Televideo *content*, a clear polarization between two different implementations of the public service role emerges. One emphasizes the news – constantly updated and providing information on politics, economics, sports and other topics important to citizens. The other emphasizes service – incorporating useful tools to simplify everyday life and providing data collected by national and local institutions on taxes, transportation, weather forecasts, etc. Subtitling and Telesoftware increased the availability of TV programmes and other data to serve a plurality of viewers for the purpose of including everyone in the imagined community of the audience. Finally, Televideo's *audience* appears to be increasing (even if data on recent decades is lacking) and is difficult to evaluate because of Rai's substantial lack of interest despite its competition with Mediavideo. Still, it is a satisfied audience that accesses Televideo nearly every day and uses it not as a replacement for other media but as an integration. It

is a routine-bound audience, one that appreciates Televideo's standard way of providing information, an audience that if disabled can find in Televideo a very valuable service for accessing television and other media.

In conclusion, we asked ourselves if and to what extent these characteristics of the Italian teletext may change in the future, especially when confronted with digital technologies and the Internet. Televideo (and teletext in general) can be considered a form of "Internet before the Internet" for several reasons. First, specific uses launched with teletext later became popularized with the advent of the Internet and even characterize contemporary Internet: telesoftware is reminiscent of peer-to-peer and sharing culture; constant updating is the crucial element of information flow on the Web; on-demand information and large quantities of constantly available data are the basis of every online site or service; banner advertising (especially in the early days of the Web) and more complex strategies are now the basis of the commercialization of the Internet (more in general this shows how there are more continuities than breaks between analogue and digital media, see Balbi & Magaudda 2014). Second, the main language on which Televideo is based (textuality) is the same that the Internet later adopted, especially during its early history. Third, very popular Televideo services have now been expanded and strengthened by the Internet, i.e. breaking news, information about transportation, weather forecasts, etc.

Thus, a classic question in media historiography emerges: Is Televideo going to disappear *because* of the Internet? In Italy, Televideo seems to have had many opportunities to coexist with the Internet for three primary reasons. First, Televideo is a simple, user-friendly, and "metabolized" service embedded in TV sets and TV is medium that continues to drive Italian society. A second and linked aspect is the fact that for old, poor, and technophobe people, Televideo replaces or integrates the Internet satisfactorily. Users that cannot access the Internet can find free, easily accessible quasi-online information. From this perspective, teletext systems can be viewed as *digital* tools (part of digital terrestrial television) to counteract the so-called digital divide; this digital system reduces digital divide, and the issue is far more complex than demonstrated in the scientific literature. Third, Televideo seems to have a fair chance to survive and coexist with the Internet because it began integrating with the web early on. Internet integration is a strategy that Rai launched in the late 1990s, and its success exemplifies the degree to which Internet users need easy access, clear and brief information, and cohesive graphics (the Televideo online graphics are as poor as those on the TV screen). The classic question, in other words, can be classically answered as follows: new media do not replace old media, but often, the two live together, affecting one another and changing themselves continuously (Balbi 2015; Ortoleva 1995b).

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12 Teletext and Videotex in France

From Innovative Social Media to Objects of Cultural Memory

Lyombe Eko

Abstract

New information and communication technologies facilitated the convergence of various components of the media and resulted in the invention of a plethora of digital consumer electronics appliances and web-based applications. This chapter explores pioneering digital technologies in France–Teletext and the Videotex service, Minitel– that are part of the building blocks of modern information and communication technologies. The chapter explores the transformation of the Télétel/Minitel, the French government-owned and controlled online videotex service from innovative, high technology social media of the last quarter of the 20th Century to objects of technological and cultural memory. The Minitel introduced numerous social media applications that are now taken for granted: the creation of a virtual, online communicational space that we now call cyberspace, bulletin boards, discussion groups, chat rooms, texting/sexting, sex-themed, adult online communication sites with live "animators" (Minitel *roses*), precursors of the phone chat and Webcam phenomenon, electronic commerce, online sexual capitalism (the commercialization of sex-themed content in cyberspace), and online payment systems. For many people in France and French-speaking countries, the Minitel paved the way for a smooth transition to the Internet.

Key words: Télétel/Minitel, Minitel rose, message boards, sexual capitalism, Antiope viewdata, the French exception, telematics. Packet-switching,

Introduction

In 1992, French Senator, Henri Goetschy stood up in the French Senate and raised an issue that he claimed constituted an outrage against public decency: huge, "minimalist" pornographic billboards that advertised so-called *Minitels roses*. These were message boards, chat rooms and other services in the adult, "red light district" of the national videotex service, Minitel. Goetschy added that beside the ubiquitous pornographic Minitel billboard advertisements, which first made their appearance in France in 1986, the erotic Minitel rose message boards had explicit, sex-themed advertising supplements that were inserted into

free newspapers. He complained that these newspapers were easily available to minors. The Senator asked the Minister of Justice what urgent measures the government intended to take to regulate this kind of "obscene" material that "constituted real incitement to the debauchery of minors" (Reglement concernant l'affichage publicitaire pour le minitel rose 1992).

In his response, the Minister of Justice stated that he shared the preoccupations of the honourable Senator, and suggested that a recent legal enactment, Law no. 92-684 of 22 July 1992, had amended French Penal Code provisions that penalized crimes against persons, and extended them to the online space of the Minitel. He said the amendments criminalized offences against children, including incitement of children "to debauchery," promoting or attempting to promote the corruption of minors, as well as the distribution of child pornography in real space and on the Minitel. He said the intent of the new law was to sanction the excesses of pornographic Minitel message boards, the so-called adult *Minitel roses*, that constituted an outrage to *bonne moeurs* (morality), and to stop the excesses of pornographic message boards on the Minitel (*Reglementation concernant l'affichage publicitaire pour le minitel rose* 1992).

This debate in the French Senate took place at the height of the popularity and influence of the Télétel/Minitel, the French government-owned and controlled online videotex service that was used by millions of French citizens in the 1980s and 1990s. The Télétel/Minitel emerged from French government policies and investments aimed at making France a leader in developing innovative teletext (printed data texts that could be read and interacted with on television and computer screens) that would make databases available to viewers, revolutionize television viewing, enrich the telephone experience and lead to the emergence of an information society. Two types of teletext or viewdata systems emerged: (1) Broadcast teletext, composed of data pages transmitted through the airwaves like regular TV broadcasts and accessed through special internal or set-top decoders, and (2) videotex, an interactive technology that linked individual users or consumers to computer databases via telecommunications networks (BBC 1982; Fedida and Malik 1979; Olson 1983). Broadcast teletext was a revolutionary development because it was a free digital system based on an amalgamation of computers and broadcast technologies. It enabled broadcasters to present printed information on television screens for purposes of closed-captioning for the deaf and hard of hearing, subtitling of foreign language television programming and, ultimately, presentation of information like the news, weather, stock market data, train, bus and theatre schedules, sports results, and the like. The aim of this chapter is to describe and explain the *raison d'être* and regulation of the Minitel, the online telecommunications videotex forum that emerged from the Antiope viewdata system. The Minitel became the priority viewdata system in France after France Telecom abandoned the country's home-grown broadcast teletext system, the Télétel.

French telecommunications policy and *l'exception française* (The French exception)

Communication law and policy are ensconced in specific national, supranational and international "contextual matrixes," to borrow the expression of Legrand (2003: 240). One such contextual matrix is exceptionalism. This is a politico-cultural logic that emerged from historical, political and cultural processes and strategies (Miège 1989). This chapter is concerned with the role of the French exception as the motor of French information and communication technology (informatics) policy. The French exception is a declaration of Gallic linguistic and cultural specificity; a declaration of French political and cultural difference. It is the ancient worldview through which France emphasizes the uniqueness and specificity of its language, culture, and civilization, in opposition to other languages and cultures (Godin and Chafer 2005; Rosanvallon 2004). In the eighteenth century, Alexis de Tocqueville (1843) situated the French exception, the '*specificité française'* (French specificity), in an historical continuum traceable to the *ancien régime* (Rosanvallon 2004: 109).

The French exception is an official ideology that promotes the *rayonance* (the spreading abroad) of French culture, while protecting it at home from perceived threats posed by the "Anglo-Saxon" (Anglo-American) media and popular culture. The French exception is also a nationalistic exceptionalism, which President Charles de Gaulle (1954: 1) called "*une certaine idée de la France ou elle n'est réellement elle-même que quand elle est au premier rang"* (a certain idea of France whereby she is her real self only when she is at the forefront). The French exception is woven into the very fabric of French information technology policy. In this chapter, we explore how the Minitel, the popular, innovative videotex forum of the 1980s and 1990s, reflected and refracted the French exception. The French exception and its corollary, *l'exception culturelle francaise* (the French cultural exception) are synonymous cultural defensive mechanisms erected against perceived cultural threats from America's mass entertainment, fast culture, (identical to unhealthy fast food), free enterprise religion and excessive cultural capitalism (Kuisel 1993).

Teletext in France: The legacy of Antiope

When France joined the teletext technology race in the late 1960s, it set in place certain policies that led to the development of innovative technologies for processing, storage, retrieval, transmission, and distribution of audiovisual media. One of these innovative technologies was Antiope, a neologism that describes the viewdata phenomenon: *Acquisition numérique et télévisualisation d'images organisées en pages d'écriture* (Digital Acquisition and Remote Visualization of Images Organized in the form of Written Pages). Antiope was

launched in 1972 by the *Centre Commun d'Etudes de Télévision et de Télécommunication* (Joint Centre for the Study of Television and Telecommunications, CCETT). Antiope enabled (1) one-way broadcast teletext, transmission of information from databases to consumers' television screens as printed text and simple graphics that could be accessed via set-top decoders, and (2) videotext, a system of two-way, interactive online dial-up that, for the price of a telephone call, granted the general public access to computer databases through telephone networks and user-friendly, modem-equipped terminals (Schneider et al. 1991). Thus, when used in broadcasting, the Antiope system was a broadcast teletext system and when used in telecommunications, it was a vidéotex system. The name, Antiope, ultimately became associated with broadcast teletext, while the telecommunications-based digital videotex system that was also driven by a variant of the Antiope technology, was known as Télétel. Ultimately, the Télétel videotex system became associated in the public mind with its terminal, the Minitel. The word Minitel is a neologism formed from the words mini, terminal and telephone. It originally referred only to the terminals through which customers accessed the online videotex network managed by the state telecommunications operator, France Télécom. However, Minitel ultimately came to refer to the whole videotex system itself (Cats-Baril & Jelassi 1994).

Antiope and the teletext and videotext systems that emerged from it were developed in the context of stiff geo-political, cultural and technological competition. In the 1960s and 1970s, American multinational information technology, telecommunications and satellite companies were the dominant players in a Europe that was still recovering from the ravages of World War II. The French government decided that American domination posed serious political and cultural threats to French national sovereignty. France feared that the computer and information technology juggernaut, IBM, would dominate the computer industry in France to the point where the company would, to use the expression of Nora and Minc (1978: 6), "encroach upon a traditional sphere of [French] government power, communications". As a result, the government extended its national ideology, *l'exception française* to the computer and information sectors by means of the Antiope viewdata system, aimed at creating a French presence in the much-touted information society made possible by innovative teletext and videotex technologies, thereby forestalling Anglo-American domination of the information and communication technology market in France. In keeping with its socialist constitutional creed, the French government also sought to ensure social equality by providing universal access to the new technologies that added value to broadcast media and telecommunications networks (Nora & Minc 1978).

France therefore entered the broadcast teletext and videotex race to underline its cultural and technological specificity just as it had done in broadcasting with the invention and deployment of its SECAM broadcast standard. The Antiope system was based on a packet-switching technology that was not linked to any

specific mode of data transmission. As a result, it could be used in broadcasting as a teletext system adoptable to the French broadcast television standard, SECAM. Antiope could also be used in telecommunications as the backbone of the interactive Minitel videotex system.

French national TV stations launched broadcast teletext channels and experimental services such as listings of currency exchange rates, stock market data, election and other political data, weather, road and rail transport, theatre, cinema, and other forms of entertainment, TV programming, news and sports summaries (including the live-texting of the Tour de France, Wimbledon, and the 1978 FIFA World Cup). Additionally, broadcast teletext was used to subtitle foreign films, and provide closed-captioning for the deaf and hard of hearing. It was even used in satellite transmissions between France and the United States, where the government-owned transmission engineering corporation, Télédiffusion de France (TDF) hoped Antiope would be adopted by the Federal Communications Commission as the national teletext system.

However, the Antiope broadcast teletext system was faced with a number of economic and technological challenges. French users who wanted to have access to teletext had to purchase an expensive decoder (modem) for their TV sets. Grundig France began producing TV sets equipped with Antiope decoders (for an extra fee) and marketed them as an alternative to expensive set-top decoders, but that did not solve the economic problem. France became technologically isolated in the broadcast teletext market. French government deployment of the Antiope-derived videotext system, the Minitel, with its free terminals and decoders, probably spelled the doom of the rather expensive Antiope broadcast teletext, which required a special television set or an expensive television set-top decoder. The French government essentially promoted the Antiope-based interactive Minitel at the expense of broadcast teletext. While millions of French Citizens subscribed to the Minitel, only a very small fraction of the population had access to broadcast teletext. France ultimately abandoned the Antiope broadcast teletext system in the 1990s and adopted the European World System Teletextt (WST) system for closed-captioning, and subtitling of films and foreign television programming. Due to the fact that the teletext and the videotex systems emerged from Antiope, the rest of this chapter will discuss the interactive, videotex system, the Minitel, which turned out to be the most successful videotex system.

The Antiope-based videotex system: Le Minitel

The use of Antiope for both teletext and videotex systems gave French communicators the ability to deliver printed material on specialized television and computer screens. This was a milestone in digital media interactivity and con-

vergence, which ultimately became full-fledged realities on the Internet and its associated social networking sites. As noted above, broadcast teletext was a one-way communication system, while the videotex (Télétel/Minitel) was a bidirectional, interactive system that linked subscribers, located at home or the office, to computerized databases or central servers via telephone networks. This online interactivity enabled them to engage in information retrieval, commercial and entertainment transactions, and to engage in financial and carryout transactions like paying bills, banking, messaging, telemonitoring (home security), reading news headlines and weather reports, and so on (AT&T Archives 2012; Olson, 1983).

The Minitel was a *grand projet* consistent with the logic of French *ingenieurie culturelle* (cultural engineering). The policy goal was to create a French information society, through selecting, developing, adapting, and regulating technologies that would form the backbone of a national information and communications technology industry. The French information society was to be developed through a policy of modernizing telecommunications infrastructure, and eliminating social inequalities in matters of access to information and communication technologies. The Antiope and the Minitel were therefore part of a strategy of modernization and expansion of French telecommunications infrastructure (Cats-Baril and Jelassi 1994). Schneider et al (1991: 87) suggest that French Videotex policy was: "an element of a wider industrial policy strategy by which the American hegemony in information technology was to be challenged." The French exception was therefore woven into the very fabric of the telecommunications technology policy and, by extension, the Minitel.

Philosophically, the logic of the Minitel was Cartesian. The system conformed to the centralizing logic of French policy-making. It was born of the French government's "*plan télématique*" (telematics plan). The word *t*élématique is a neologism formed from the words telecommunications and *informatique* (computer processing). The plan was intended to ensure French economic stability, social consensus, and national independence vis-à-vis the United States (Nora ad Minc 1978: 1, 4). In order to facilitate the adoption of the Minitel, the regulatory department, the *Direction Général des Télécommunications* (DGT) was given the task of distributing specially manufactured terminals free of charge to all telephone subscribers. It was, in the final analysis, a closed, national, centralized governmental system circumscribed by language and geography.

Not surprisingly, the main method of diffusion of the Minitel technology was a government-directed programme of free terminal distribution that Schneider et al (1991: 193) describe as a [Minitel] "'terminal implantation' initiative that succeeded in distributing millions of terminals at no cost to subscribers, ostensibly in replacement for their discontinued paper telephone directories." In order to increase its usefulness, the government "stimulated private companies

to initiate online informational, communicational and transactional services that would add value to the online experience of its users." At the height of its popularity in the mid-1990s, the Minitel had 10,000 different online service providers, who provided more than 26,000 active services. These services ranged from financial capitalism (banking) to sexual capitalism (pornography and prostitution) on so called *Minitel Rose* sites.

By 1988, the French government had spent over $1.3 billion on the videotex system. Ninety per cent of that money was spent on the manufacture and distribution of free Minitel terminals. The government justified this exorbitant expenditure by framing it as an investment in the industrial production of telecommunications and information technology products that would transform France into an information society (Slaa 1994). Some researchers suggest that the French government essentially gave DGT a blank cheque and asked it to develop the Minitel interactive service no matter how much it cost (Slaa 1994).

The Minitel videotex was the first successful online social medium, a sort of proto-Internet that set the stage for a lot of the applications, features, and services that are now commonly available on the Internet. Nevertheless, the Minitel videotex system was philosophically different from the Internet. While it can be argued that the very decentralized architecture and laissez-faire logic of the Internet reflects American governmentality (Eko 2012), there is no doubt that Antiope in general and the Minitel in particular had a specific Gallic coloration. It was a product of French *dirigisme*, the system of centralized state-capitalism under which the government directs and shapes strategic sectors of the economy, industry, essential utilities and the telecommunications infrastructure for purposes of furthering governmental interests, and attaining certain collective social goals.

The Minitel videotex and the French exception

As we saw earlier, the Minitel was developed to assuage French exceptionalist angst over American domination of computer and satellite telecommunications in the 1970s and 1980s. The choice of the Transpac packet-switching technology, which had been developed by CCNET, the developers of Antiope, was a crucial, ideology-driven policy decision. French telecommunications policy makers, for nationalistic reasons, opted to utilize their home-grown Transpac packet-switching technology rather than the Transmission Control Protocol/Internet Protocol (TCP/IP) developed by the United States Department of Defence for ARPANET, the network that ultimately morphed into the Internet, (Després 2010; Postel 1981). Though it would prove to be a fatal policy option – the Internet rendered the Minitel obsolete – this technological choice was consistent with French preoccupation with questions of national sovereignty

and technological independence. France was preoccupied with insulating itself from the influence of, and competition from, the United States.

Though other European countries had comparable videotex systems, the French Minitel/Télétel model turned out to be the most successful videotex system (Cats-Baril & Jelassi 1994). The Minitel was the first popular online medium of electronic commerce. It predated the World Wide Web, the Internet and broadband networks. This success was due to the fact that the French government had taken proactive steps to ensure equality through universal access to the telephone. This facilitated the rollout of the Minitel. France Télécom, the government-owned telephone corporation, served as the clearinghouse for the financial transactions that made the Minitel and its telematics services functional. All Minitel Service providers delegated to the company the authority for billing and receiving payments for services rendered, in exchange for a percentage commission on receipts. France Télécom billed each Minitel user the standard per minute telephone charge and the telephone bill of Minitel users included a charge for "consumption of telematics services" expressed in telephone units. After collecting funds from users, France Télécom settled the accounts of the public and private Minitel service providers (Sherif 2007). As operator of the Minitel teletext system, France Télécom undertook the following intermediation activities:

> 1) Authentification of Minitel service providers, and guarantor of their good faith and ethical use of computer systems, 2) identification of subscribers through their telephone numbers, 3) certification of subscribers (France Télécom was in possession of their physical and banking information), 4) measurement of real-time actual telephone use on the Minitel, 5) recording of the details of Minitel transactions, 6) gathering data on all transactions associated with specific subscribers for billing purposes, 7) financial intermediation (billing, collection and making payments on behalf of online merchants), 8) reimbursement of merchants after subtracting commission, 9) and payment of royalties to suppliers of proprietary management software. (Sherif 2007: 5)

France Télécom essentially set the parameters of electronic commerce. At its peak in 2000, more than 16 million French citizens used the Minitel. In 1987, the Minitel Rose earned one billion French Francs, of which a third went to state coffers (Reynet 2012). In effect, the Minitel introduced numerous features that we now take for granted on the Internet: electronic commerce, discussion groups, online banking, bulletin boards, chatting, online dating, erotic content, and the like. Since the Minitel operated within the égalité*, liberté, fraternité*, social democratic tradition of France, it allowed everyone who wanted it to be on the Minitel.

The Minitel videotex as cradle of online sexual capitalism

One of the most notable features of the history of the French Minitel videotex system is that sections of it were quickly transformed into spaces of online sexual capitalism known as *Minitels roses*. These sex-themed online services were commercial enterprises whose stock-in-trade was sex, and sex-themed products and services. Numerous bulletin boards and message sites were classified as being part of *le Minitel rose*. These businesses were the first examples of electronic commerce in sexual content (e-sexual commerce) in the age of digital information and communication technology. Many French entrepreneurs made a fortune on the Minitel Rose (which, ironically they subsequently invested in the up-and-coming Internet). Soon, the social problems of real space began to make their presence felt online, as sections of the network morphed into the first adult online dating service, *le Minitel rose*, where French citizens could view "minimalist eroticism," indulge in online *clavardage en ligne* (online chat) and find love online (*Le Monde* 2011). The profitable but cut-throat online sexual capitalism industry that evolved on the Minitel gave rise to the erotic advertisements – and risqué advertising content that we saw politicians and ordinary citizens of France complaining about at the beginning of this chapter. Despite its secular republican ideology, France is a country with a deep Catholic culture. French philosopher, Morin (1990) describes France as a Catho-secular country.

In 1991, a scandal that shook the French political and cultural establishments pointed to some of the social and moral issues engendered by the Minitel. The legal amendments the French Minister of Justice spoke of at the beginning of this chapter had been triggered by a number of French newspapers that exposed and denounced the fact that the Minitel Rose had become a platform for the open advertisement and distribution of illegal child pornography videos, illegal sado-masochistic and violent pornographic material, as well as the illegal promotion of high-class international prostitution (Solé 1993). Despite the technical limitations of the Minitel – it was mostly text-based, had minimal graphical capabilities, did not have full colour, lacked the capacity to upload, download or host pictures – inventive operators of certain pornographic message board sites were able to use text and limited graphics to produce Minitel versions of the notorious sexually violent and sado-masochistic works of Le Marquis de Sade and others (Solé 1993).

Minitel regulatory issues

In response to newspaper exposés and complaints from the general public against pornographic Minitel billboard advertisements in real space, politicians raised the possibility of imposing a 50 per cent surtax on sex-themed *Minitels*

roses. The director of communication of France Télécom minimized the impact of the explicit, sex-themed component of the Minitel. He stated that the adult message boards, the *messageries roses,* which allowed paying subscribers to post messages on message boards and chat with other subscribers, made up only 4 per cent of the Minitel traffic (Solé 1993). Members of the Union of Telematics Professionals disagreed. They stated that the *messageries roses* created 5000 jobs and generated up to 40 per cent of the traffic on the Minitel. This enabled France Télécom to collect more than half a billion Francs. It kept a third of that amount and disbursed the rest to the Minitel service providers (Solé 1993).

Minitel rose's sexual capitalism was so lucrative that many mainstream newspapers, including *Le Nouvel Observateur, Le Parisien*, *La Libération*, *Nice-Matin, Gai Pied,* invested in and reaped profitable returns from sex-themed *Minitels roses* bulletin boards. The Minitel had become, in the words of Solé (1993: 461) a "tentacular, lucrative market whose pornographic networks had become the meeting-point of the sexually unhinged."

As the Minitel rose controversy showed, the novelty of viewdata in general and teletext/videotex in particular, raised a number of regulatory issues. The most important was the application of privacy, media and commerce law to these converging communication platforms. From a regulatory perspective, policy makers adopted a process of adaptation. French regulators did not create a new legal regime to manage the emerging online platform. They simply transferred aspects of broadcast and telecommunications regulation from real space to the online space of the Minitel. As was the case with the real space platforms, the government agency *Direction Général des Télécommunications* (DGT) was the network operator, the service provider, and the regulator. As such, it played a dominant, intermediary role between equipment manufacturers and Minitel consumers (Kern 1986). In keeping with the politico-cultural and bureaucratic nexus in which the Minitel was created, what Foucault (1994: 655) called governentality, the French legislature regulated the network within the framework of the *Code des télécommunications* (Telecommunications Code), and created other regulatory agencies to have oversight over it. These agencies included *Le Conseil Supérieur de la Télématique* (the Superior Council for Telematics, CST), and *le Comité de la Télématique Anonyme* (the Independent Committee on Telematics).

While the Minitel rose gave the French intellectual elite a golden opportunity to engage in philosophic speculation on the nature, social and psychological utility of online expressions of desire, the French government was not amused at what Solé (1993: 460) called the unbridled "telematic expression of desire." The Minitel was clearly a building block of online sexual capitalism. This role was at variance with the original aim of Antiope and its teletext/videotext innovations (Solé 1993). Despite the fact that the government already had a surveillance commission aimed at monitoring the Minitel and removing mes-

sage boards set up to solely promote networks of prostitution and paedophilia, the Ministry of Finance set up a fourteen-member consultative commission which drew up a long list of pornographic Minitel message boards managed by 40 different networks and service providers. The commission succeeded in disconnecting extreme sexual message boards that it considered an affront to decency. Despite complaints against governmental invasion of privacy, the Ministry of Finance announced that it was going to impose a special surtax on pornographic *messageries roses*. Additionally, the consultative commission cancelled the Minitel contracts of bulletin boards which hosted texts and images that, in the view of the commission, constituted offences against public decency (Solé 1993).

We saw at the beginning of this chapter that French lawmakers were concerned about the advertising of erotic Minitel content in real space. We also saw that the Minister of Justice waned to sanction the excesses of pornographic Minitel message boards, the so-called adult *Minitels roses* that constituted, in his view, an outrage to *bonne moeurs* (morality) (Reglementation concernant l'affichage publicitaire pour le minitel rose 1992). As a result, the original laissez-faire policy of France Télécom with respect to Minitel rose content soon gave way to content regulation and cancellation of numerous accounts/sites that governmental Minitel surveillance committees believed constituted outrages to morality.

Conclusion: The national versus the global; the Internet and the Minitel

The Minitel was a product of French bureaucratic centralism, the system of centralized state-capitalism under which the government directs and shapes strategic sectors of the economy, industry, essential utilities and the telecommunications infrastructure for purposes of furthering government interests and attaining certain collective social goals. The Minitel was primarily conceptualized as a government-operated, national cultural space where French cultural values reigned. The Minitel was ultimately doomed by its technological limitations, and bureaucratic centralization that restricted its scope and innovation. The French government was both the patron (funding source) and sovereign (governor and regulator) of the Antiope and its progeny, the Minitel, as well as the telecommunications infrastructures through which the rivers of data flowed. The closed, subscription-based Minitel was not nimble enough to innovate and compete with the mostly open and "free" Internet. In the dynamic, ceaselessly changing world of information and communication technologies, where innovation and reinvention are the coins of the realm, the Minitel became a technological dinosaur. What made it special and popular in France – its cultural specific-

ity, manageable size and national reach – turned out to be its undoing in the age of globalization and the interconnection of nations, cultures and peoples. The arrival of the Internet with its innovative transmission protocols, its open systems, superior graphics, constant stream of new applications, and global reach, transformed the Minitel into a quaint site of cultural memory that could not be saved by sheer cultural nationalism, nostalgia and a core of diehard users. The Minitel was after all a closed, government-controlled, national online space that did not lend itself to experimentation and innovation.

The arrival of the Internet sounded the death knell of the Antiope Minitel videotext system. The French intellectual elite first scorned and dismissed the Internet as an upstart tool of Anglo-Saxon imperialism whose architecture and logic were alien to French thinking (Eko 2001). Though France was first connected to the Internet in 1988, the Internet was not known outside French research centres until the late 1990s when French companies began to take their eyes off the Minitel and see the Internet as an alternative commercial platform (Reynet 2012). As late as the late 1990s, *France Télécom* saw the Internet as nothing but an irrelevant American irritant. After all, the state communications operator was making a tidy profit from its millions of Minitel subscribers (Delaroche 1997). However, the ground quickly shifted under *France Télécom*. The French discovered the Internet despite the Anti-American rhetoric of the intellectual class. The fast data delivery rates, the availability of electronic mail, the World Wide Web, as well as the superior graphical interfaces, and applications on the Internet, made the Minitel look slow, clunky and antiquated (Després 2010). By 2002, 10 years after the American Congress opened up the Internet to the world, the number of Internet users in France surpassed the number of Minitel users (41per cent to 32 per cent) for the very first time (Sherif 2007). While the French elite became horrified at the rapid diffusion of the Internet at the expense of the Minitel, pragmatic politicians and intellectuals urged France to embrace the Internet and "impose the French accent" on those parts of the Internet infrastructure that existed in France and the French-speaking countries of the world (*la Francophonie)*.

France Télécom made concerted efforts to save the fast-fading Minitel. In 2005, it offered a hybrid MinitelWeb or i-Minitel, designed to ensure interoperability between the snail-like Minitel and the lightening-fast Internet. France Télécom stated that, for a fee, its MinitelWeb software would enable Minitel users to upgrade to a high speed Minitel with Internet technology. Customers were told that they could download software from France Télécom's Internet website that would enable them to have access to high speed Internet while maintaining their classic Minitel services. Unfortunately, the original i-Minitel was not compatible with old Minitel terminals or with portable computers, iPads, smartphones, Blackberries, tablet computers and other modern devices that millions of French citizens had come to rely on.

In the face of stiff competition from the Internet, France Télécom announced that it would discontinue its Minitel electronic telephone directory in 2009. That deadline was not respected because more than 2 million subscription-paying French citizens – down from 5-6 million in the 1990s – continued to access Minitel through a new version of i-Minitel, a downloadable application that allowed users to access the service through their computers rather than the government-supplied Minitel "dumb" terminals that were no longer being manufactured. Nevertheless, the Minitel continued its downward spiral. In 2010, France Télécom made a last ditch effort to save it. With the approval of the French government, it announced that it would replace its Antiope-based X.25 packet-switching technology with the American Internet Protocol (TCP/IP), thereby making the Minitel interoperable with the Internet. Though the Minitel was based on traditional telecommunications infrastructure (French telephone landlines and modems) thanks to downloadable interfaces, it could be accessed through the Internet. However, the service continued its downward spiral (Morio 2008).

In 2010 *France Télécom* announced that the Minitel would be officially phased out in 2011. The French politico-cultural establishment had come to terms with the reality of the demise of the Minitel. However, the long death of the Minitel dragged on. In 2012, France Télécom announced once again that it was going to pull the plug on the Minitel, a service then still used by hundreds of thousands of mostly older French citizens. This time economic reality signed its death certificate. The high cost of maintaining the antiquated pack-switching technology, Antiope servers, networks, routers and Minitel terminals became prohibitive. On 30, June 2012, after 30 years of service, the Minitel videotext system was finally taken off life support. It was deactivated in Rennes, the city in which Antiope had been developed in 1972, and where the last functioning pieces of transmission protocol and network equipment were located (Reynet 2012). In the end, the interactive Minitel bequeathed a lot of its French vocabulary – message service, chat rooms, bulletin boards, service providers, and the like – to the Internet. The Minitel videotek system failed because of its bureaucratic over-centralization, its narrow, national cultural focus, and the failure of its operators to think globally.

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Postscript

Lessons from Analyses of a Forgotten Medium

Hallvard Moe & Hilde Van den Bulck

This book started from the assumption that a closer look at teletext could not only help us to better understand the medium, but also to yield some insight into more general issues regarding media technology, media policy, media use and, indeed, media studies. Based on the different contributions, we now attempt in this postscript to collect the threads. The aim is not to summarize but to point forward to the relevance of the work presented here. Three aspects in particular come to the fore as worth considering: the resilience of teletext, the path dependency of teletext, and the policy noise surrounding teletext.

The first aspect that stands out when reading the different contributions in this book concerns the speed of change in media use. Again and again, the country cases remind the reader of how slow this actually is. Established user patterns take time to change. This comes as no surprise to those familiar with the history of media but is still worth highlighting, especially at a moment in history when public discourse seems dominated by the impression of an ever-accelerating technology turnover. Media are resilient in the sense that the emergence of a new medium tends to make the old ones adapt rather than disappear. Video did not kill the radio star. Teletext in Europe is a clear example of this. Throughout its history, teletext morphed from a simple auxiliary subtitle technology to a full-blown information consultation mass medium, incorporated commercial services; it got the digital treatment of so-called super teletext; and it even merged online to the web and smart phone apps. By 2015, the overall user base is clearly diminishing. Yet, even at this stage in its history, teletext is still quite a distance from being a mere relic. Several of the contributions to the book bring out the continued fascination with the technological limitations of teletext. In a world of high definition video, teletext fascinates way beyond its traditional uses. The medium might very well end up as an object of fascination for technology nerds and alternative culture – like the micro cassette or Commodore 64 computer – but the analyses in this book show that teletext still has some way to go.

This resilience is a common thread through the chapters. The second aspect worth emphasizing is equally shared but simultaneously points to differences: Teletext's development is path dependent. Path dependency here refers to the fact that historically-grounded national institutional differences explain continued national differences. Because of path dependency, we should expect earlier policy choices to have a determining influence on later ones (e.g. Humphreys 2012). The various empirical studies of teletext in this book illustrate this. From the very introduction of the medium, the institutional and political settings in each country were key to understand teletext developments. This is not just to state the obvious, that teletext in an affluent country in Northern Europe with a stable democracy and a well-established public service institution like Norway would differ radically from teletext in a war-torn country with a troubled history of public broadcasting like Croatia. Rather, by evoking the concept of path dependency, we point to some explanatory factors connected to the political system and its relations to the media system in general. Studies of teletext can enrich work that seeks to model such overarching systemic relations (e.g. Syvertsen et al 2014).

The third and final aspect that emerges from the chapters in this book is perhaps more surprising. This has to do with the policy and business focus on teletext. In trying to understand why teletext in Europe never really attracted the attention of media researchers, we assumed that part of the explanation lay in a general low interest from policy makers as well as commercial business and other stakeholders. In fact, our initial interest in teletext for a key part grew out of a discussion of how media research in general, and media policy research specifically, seem to gravitate towards the most current policy debate, the most technologically-advanced medium, or the most controversial policy issue, at the expense of older and longer term developments (Van den Bulck & Moe forthcoming; see also Freedman 2010). The impression of teletext as a medium that by and large passed under the radar of stakeholders still stands, but the analyses in this book also make evident that teletext did create some noise. In Switzerland, to mention just one of many examples in the book, the debate between teletext and publishers not only drew attention at the political level but proved exemplary of relations between public service broadcasters, commercial competitors and the state.

The lessons learned from the analyses of teletext across Europe, then, concern key insights for media studies – insights about the longevity of media and their changing relations to other media, and to all of us as users, about the ways in which contexts matter for media, and about how media are regulated and understood on a political level by different stakeholders. As such, the book demonstrates the fruitfulness of looking beyond the immediate and the "hotly debated" to embrace the study of "forgotten" media in our quest for a better understanding of the role of media in society.

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"At last! For years I have been looking for a book such as *Teletext in Europe* where insightful and learned scholars investigate the history of teletext, a medium most often overlooked by media research. In a number of fascinating and pioneering chapters the book succeeds in telling the history of teletext as a medium in its own right, and offers a review of teletext as a medium which paved the way to what became later the new, digital media such as the World Wide Web. *Teletext in Europe* is a most welcome contribution to the history of forgotten but important media."

Niels Brügger, Professor in Internet History, Aarhus University

"Though seemingly unfashionable in a world of superfast broadband and social media apps, this volume shows teletext to be one of the hidden gems of the media sector. Hallvard Moe and Hilde Van den Bulck have skillfully brought together a range of contributions from prominent media scholars that shows us the essential – though until now largely forgotten – role that teletext has played in the development of audiovisual media in Europe and the broader lessons to be learned from it. Sharp, insightful and engaging throughout, this volume is required reading for anyone interested in understanding better issues related to choices about – and the application of – mass communication technologies and services."

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