Public Service Media in the 'Network' Era

A Comparison of Remits, Funding, and Debate in 17 Countries

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Abstract

This chapter presents findings from a recent comparative study on public service media and their regulation as regards their remit, funding, services and debate. Based on a literature review, the authors propose three ways in which the network paradigm can be useful for studying public service media: 1) to discuss how public service media embrace the internet, 2) to describe a more profound process of change affecting public service media, and 3) to locate public service media organisations in relation to national and international (stakeholder)-networks. Using this framework to (re-)interpret our findings enables a comparison of the 'network era' with its precursor, the 'digital age', and reveals starting points for further research.

Keywords: network paradigm, digital age, post network era, market shares, public service media reform, public service media stakeholders

Introduction

Today, discourse about media emphasises the notion of being 'networked'. Yochai Benkler (2006) and Manuel Castells (2011) have been especially influential in promoting the network paradigm, which in their view represents a fundamental shift of the power relations in society. The rapidly increasing availability and uses of new information and communication technology (ICT) have disrupted legacy institutions that are challenged by decentralised networks. Top-down hierarchies face bottom-up resistance (Gonzáles-Bailón 2013). Legacy institutions are challenged by the need to 'stand their ground' and also adapt successfully to the new media environment, and this certainly includes public service media (PSM) organisations.

In a recent study for the Swiss Ofcom[1], we gathered comparative data about PSM in 17 Western countries.[2] Like many scholars (see Donders 2012: 9), we used the 'digital age' term to describe the circumstances of PSM. Our goal was to identify commonalities and differences in four main areas: formulation of the remit, regulation and key figures in funding for public and commercial media, offers and market shares, and

debates and reforms. We wanted to compare how PSM in Western countries have adapted to the 'digital age', in a sense the precursor to and for the 'networked society'.

The fact that all PSM organisations face similar challenges makes this an ideal object for comparative research (Raats & Pauwels 2011). Comparison enables identifying both specifics and commonalities, detecting trends and innovations in policymaking, and is conducive to typology development (Thomaß 2010). This is needed due a lack of broad comparative research projects in this field (Raats & Pauwels 2011; Puppis and d'Haenens 2012). Furthermore, media policy research is often criticised for a lack of theoretical discussion (Woldt 2005). In this chapter, we present relevant findings from our comparative study and use the network paradigm as the lens for (re-)interpretation.

In order to clarify how the network paradigm has been used in research about PSM, the chapter begins with a literature review. We identify varying points of view (methodological, conceptual, and practical) and consider popular buzzwords that target different aspects of the network notion. After an overview of our research design and method, we present some key findings that are especially pertinent to the focus of this book. Finally, we draw conclusions about the current state of PSM in the 'network era' on the basis of empirical evidence and evaluate the value of the network concept as a theoretical perspective for PSM research.

The network paradigm and public service media

The network paradigm has become popular in many academic disciplines in the social sciences in recent years. Its primary value lies in encouraging close examination of the "ties connecting any two, three or more individuals, organisations, or institutions" (Grote 2011: 2) rather than only analysing the individual characteristics of a research subject or object. Network theorists assume that looking at social relations is highly relevant because they are the "key to explain both individual actions and collective outcomes", especially unexpected policy results (Schmidt 2007: 2-3).

In fact, however, our review of the literature found that the network paradigm has been applied in different and sometimes contradictory ways. Based on this review, we propose three ways in which the network paradigm can be useful for studying PSM: 1) to discuss how PSM embraces the internet, 2) to describe a more profound process of change affecting PSM, and 3) to locate PSM organisations in relation to national and international (stakeholder)-networks.

Some see the popularity of the network paradigm as mainly an academic trend triggered by new technical-analytical tools based on mathematics – i.e. network analysis. Rather than metaphorically saying that groups are 'closely-knit' or individuals 'act in isolation', researchers can use these new tools to quantify and verify clusters (Grote 2011; see also Watts 2004). In this perspective, the paradigm is not a 'proper' theory or even a new approach; it is a methodological toolbox for visualising 'relational thinking' that has a long tradition in the social sciences (Schmidt 2007: 2).

Another position suggests that the network paradigm has become popular because it helps making sense of an ongoing transformation of reality (Grote 2011; Pal 2011). In particular, some researchers started noticing new forms of political actions that challenge the historic tendency to prioritise centralised planning (Gibson 2007), actions that blur the line between public and private governance (Pal 2011). The idea and practice of stable policy networks with limited and controlled membership (normally governmental agencies, professionals, think tanks, and academics) are being replaced by rapidly changing, dynamic, and transnational "issue and protest networks" (Mingus 2017: 4). '

Researchers who don't normally study media and communications highlight the role of ICT in network building (e.g. Pal 2011: 4). Barry Gibson (2007: 2) describes how ICT has "enabled a significant increase in the capacity of networks […] that are no longer bounded geographically". Although the idea of a 'social network' has long been used to describe a group of people that are connected, thanks to ICT it has become a synonym for a variety of technical platforms (Facebook, Twitter, Weibo, etc.) that individuals use to share information (Ray 2009) or to organise bottom up politics (Gonzáles-Bailón 2013).

Researchers with a specific interest in media organisations use the network paradigm, but not much in the sense of technical-analytical tools. The paradigm is used for qualitative network analysis as a way to analyse media governance (see Löblich & Pfaff-Rüdiger 2011 for an overview), and mainly as a theoretical approach or narrative to explain the disruptive transformations that affect media organisations as a consequence of digitalisation.

Some authors use network terminology to discuss how PSM should use the internet to facilitate social networks. Petros Iosifidis (2011) summarises the position of many critical scholars in this regard (e.g. Tambini & Cowling 2004; Lowe & Bardoel 2007; Coleman & Blumler 2008). They argue that public service broadcasters are uniquely positioned to provide an 'online public sphere' because their remit prioritises universalism, they often have high credibility as a source of information, and they are financed by collective funding. However, to truly fill this role, the transition from public service broadcasting (PSB) to public service media (PSM) requires 'reinventing' the historical paradigm to enable becoming more democratic, interactive and decentralised organisations.

In essence, then, broadcasting organisations (including PSB) should not use the internet simply as another distribution channel, but rather to facilitate something new and needed in social networking. Eun Hwa Jung and Justin Walden (2015) conducted a survey of young college students in the USA. Based on the findings, they advise broadcasting managers to do more than stream TV programmes online if they want to survive the growing online competition. Graham Murdoch (2005) made an argument for the development of a 'digital commons', suggesting that PSM should join forces with other cultural organisations like libraries, museums and schools, interest groups, and movements to become a "central node in the network" of the new digital cultural commons. His thesis is updated in a chapter in the present book.

There are legal and competitive challenges, however, to the idea of PSM in this role. Karl-Heinz Ladeur and Tobias Gystomzyk (2014) show how the regulatory logic of linear broadcasting 'clashes' with the logic of non-linear communications networks. Using Eli Noams' (1995) 'network of networks' term, with online advertising as their empirical case, they argue that the regulation of the online sphere is dominated by the logic of a "level playing field" advocated by a liberalised telecommunications sector, rather than the logic of broadcasting regulation that priorities creating a public sphere.

The 'networked' society or economy is also used as a way to describe structural change. As earlier mentioned, an important aspect of Castells' theory of an emerging global network society hinges on changing power relations that contest the traditionally dominant role of national governments and legacy institutions. Benkler (2006) applied this idea to the media, arguing that in a networked information environment the internet decreases the costs of becoming a speaker in comparison with mass media. Benkler envisioned that mass media would be replaced by a wealth of decentralised communications networks in and through which information is circulated via multidirectional connections.

Interestingly, because of their reliance on industrial networking for electronic distribution, radio and TV stations in the USA have been (called) networks since the late 1920s. In this light, Amanda Lotz in her 2009 reader *Beyond Prime Time: Television Programming in the Post-Network Era* described the potential decline of the American TV industry as the 'post-network-era'. At first glance, the contrast between the 'networked' and 'post-network' era is irritating, but after deeper reflection we realised it is not the term that marks the essential difference between the two eras. Rather, it is the question of how the network(s) – especially via the PSM organisations – can connect people in a fashion that seems 'modern' today: decentralised, multidirectional, and democratic.

Media scholars have also considered how journalism can successfully adapt to the 'networked post-network' environment. As early as 2001, Jo Bardoel and Mark Deuze introduced 'network journalism' to describe how traditional core competencies of journalists can converge with the 'civic potential' afforded online. They viewed network journalism as critical and 'orientational' storytelling for specific groups of audiences across media genres, types, or formats. Ten years later, Charlie Beckett and James Ball (2012) described how journalists are making use of emerging digital, interactive network structures – i.e. how they are successfully adapting. In discussing the case of WikiLeaks, they also point to ethical difficulties in such collaboration.

Without mentioning the internet, Otfried Jarren and colleagues conducted a study in 2001 on 'networked' PSM that compared regulation in Switzerland with five other countries. Based on Niklas Luhmanns' system theory, they argued that PSM organisations are part of a network that consists of distinct but interconnected systems. In their view, the public enterprise is a vital part of the media system as such, but needs to curate ties with the political system (via its remit), the economic system (via its funding), and the society (via viewer councils). The study concluded that balance is key but hard to achieve. Ties to politics and economics are often too strong, and ties to society are generally too weak.

A recent contribution by Jessica Clark and Minna Aslama Horowitz (2014) focused on the American model for PSM, which is particularly networked in structure because it consists of hundreds of local independent channels. They argue for the importance of PSM taking a stakeholder approach for successful innovation, rather than having an isolated view on policy makers, professionals, citizens, funders and scholars separately. Public media managers, especially, need to grasp the interactions between stakeholders to be successful in public media reform efforts and innovation initiatives.

Although he mentions media organisations only in passing, Castells work invites deeper thought about PSM organisations beyond their immediate national environments as bigger or smaller 'nodes' in a 'global network society'. This idea is echoed in publications that discuss the transnational character of PSM, media policy, and the media industry. For example, Sandra Braman's (2010) chapter on an increasingly globalized public sphere challenges existing media policy frameworks, while Katherine Sarikakis (2010) argues the need for a more cosmopolitan organisation of PSM. A third example of research that conceptualises PSM in a transnational network are the studies that address the influence of 'big next-door neighbours' on small media markets (Puppis 2009; Trappel 2010; Lowe & Nissen 2011, see also the chapter in this book by Ruth McElroy and Caitriona Noonan). Small media systems suffer from scarce resources and small markets when competing with big neighbours, and are vulnerable to 'spill over' signals. Small media systems also depend on the media policy making of larger media systems. While these studies do not use the network paradigm to make their point, their arguments are undoubtedly based on relational thinking.

Thus, a variety of approaches and perspectives on networks and networking have been used over the years in efforts to deepen our understanding about changes not only in media but, importantly, in media-society relations. These approaches and perspectives comprise what can be generally described as 'the network paradigm' in media and communication studies. The paradigm is more complex and contradictory than is often recognised. It is obviously important for researching, analysing and considering the roles and functions of public service media in a 'networked society' – however conceived. The results of this literature review ground our (re)interpretation of empirical findings about commonalities and differences in the organisation of PSM in 17 Western countries.

Research design and methods

As earlier noted, our comparative study focused on identifying commonalities and differences in four main areas: formulation of the remit, regulation of public and commercial funding, current offers and market shares, and the most recent debates and reforms (see table 1 below). Our research design consisted of two methods: First, we conducted a qualitative analysis of documents (see Karppinen & Moe 2012). The sample consisted of media laws and decrees, annual reports of PSM organisations, and

structural data for 17 Western countries. Second, we invited country experts – scholars with expertise in media policy research – to validate and complement our findings, and to point out ongoing policy debates.

As outlined in the literature review, the network perspective offers three main starting points for interpreting the data. The aspect of embracing the internet is covered by the definition of the remit for non-linear services, by new funding models, and by the supply and demand of online services. The aspect of change is covered largely by the reforms and debates section. The aspect of PSM's national and global networks is implicitly present across categories. Stakeholders are involved in all activities of PSM: As audiences, as decision-makers, or as participants in debates and reforms. Market shares, or levels of funding also indicate PSM's position in national and global networks. However, as we will discuss in the conclusion section, especially the third aspect would gain from further, more directed research.

Table 1.   Categories used for document analysis

Remit
Definition for linear services
Definition for non-linear services
Accountability mechanisms

Funding
Funding model (public & commercial funding)
Finances (licence fees/household levy, public and commercial revenues)
Regulation (decision making process, advertising rules for online and offline)

Supply and Demand
Radio stations (name, programme/target group, market share)
TV stations (name, programme/target group, market share)
Online services

Reforms and Debates
Current reforms and debates

Findings of our study on public service media

As indicated, we treat the findings in four aspects and do so in the order of presentation in Table 1. We therefore begin with comparative findings about the PSM remit.

The PSM remit

The remits for PSM vary in length and are invariably aligned with the national context. Nonetheless, they typically include three elements: genres (e.g. information, educa-

tion, or culture), goals and functions (e.g. inclusion, participation, national identity), and characteristics of journalistic practice (e.g. innovative, balanced, impartial). While all 17 countries feature a universal remit, some have more than one organisation, including some that are mandated to serve specific minority groups (e.g. SBS in Australia). Another characteristic that is quite common is the existence of a quota for proportions of specific content or languages. A quota for the inclusion of work made by independent producers is a third way remits seek to strengthen PSM's ties, in this case with the broad cultural industry.

All countries in our sample included online and non-linear services in PSM's remit. This is legitimated in different ways: that PSM needs to 'follow the technological development' generally, or they should 'apply the remit in a "modern" way', or they need to 'reach their audience on all distribution channels'. In some countries, the remit states that PSM's online and non-linear services are subject to the same rules as their broadcasting channels (e.g. Australia and Wallonia in Belgium), or that the European Audio-visual Media Services Directive (AVMS-D) applies (e.g. Finland, Ireland, and the Netherlands). At the time of this study, Norway was the only country with specific list of genres for PSM online services.

PSM remits routinely differentiate between live and on-demand streaming of broadcast content on the one hand, and 'additional services' on the other. In several countries, providing on-demand streaming is either compulsory for PSM (e.g. Flanders, Denmark and France), or explicitly permitted or encouraged (e.g. Germany, Norway, Austria, and MTS in New Zealand). While most countries do not restrict on-demand services, a few (Austria, Germany and the UK) impose time limits (see Table 2). Furthermore, PSM organisations often inform audiences and users about restrictions on sport broadcasting, movies and series due to intellectual property rights that prohibit streaming.

Table 2.   Restriction for non-linear provision of radio and TV programming

Maximum 7 days	Maximum 30 days	No limit
AT, DE	UK	AU, BE, CA, CH, DK, FI, IE, IT, NL, NZ, SE, UK, USA

Additional services are most strictly regulated in the German-speaking countries. In Switzerland, a clear link to radio and TV programming is compulsory. In Germany, the online presence of PSM must differ from online newspapers, despite delivering current affairs and daily news. In several other countries (e.g. Australia, Flanders, Wallonia in Belgium, Germany, France and Norway), PSM is encouraged to use or provide interactive services such as blogs or fora, or to be active on social media. Some PSM organisations have also established self-regulatory documents for user-generated-content, or for their staffs' use of social media (e.g. Australia, Finland, and the BBC).

Many European countries now apply ex ante tests in deciding about the public value and market impact of potential new services before introducing them (see Table 3). Aside from procedural aspects, these tests vary according to the actors executing the test and taking decisions. In most cases, public value tests require a public consultation. Additionally, PSM organisations are held accountable by outside stakeholders in a variety of ways: Via annual reports (all of them), via self-committing strategy documents (e.g. Australia, Canada, Finland, Ireland, Norway and the UK), via evaluations (e.g. Austria, Flanders, Finland, France, Italy, Netherlands, New Zealand, Norway and the UK), or via compulsory surveys of viewer satisfaction (e.g. Italy, US).

Table 3. Ex-ante-tests

	Execution	**Decision**	**Consultation**
AT	Regulator	Regulator	Public hearing
BE/CF	Independent experts appointed by regulator	Independent experts appointed by regulator	Public hearing
BE/VG	Regulator	Government	Diverse
DE	TV- resp. Broadcasting Council	TV- resp. Broadcasting Council	–
FI	Yle Board	Yle Board	Specific actors
IE	Regulator, Broadcasting Minister	Broadcasting Minister	'Affected' parties
NO	Regulator, Competition Agency	Ministry of Culture	Interest groups
SE	Regulator	Regulator	–
UK	BBC Trust, Regulator	BBC Trust	Diverse, public hearing

Funding

Most PSM organisations receive mixed funding from public and commercial revenues (see Table 4). Only the Nordic countries, the UK, and the USA do not allow PSM organisations to sell advertising airtime or space online. In most European countries, public funding is collected via a license fee while all non-European countries in our sample allocate public money from the tax budget. There are exceptions in Europe, i.e. the Flemish and French communities of Belgium, and the Netherlands abandoned the licence fee system and allocate money from the tax budget. France combines both funding models.

Most countries with a traditional license fee were or are debating a change of funding modus. At the time of our study, two countries had introduced new models: Finland replaced the license fee with a broadcasting tax that is a percentage of one's individual tax and imposes a fee on companies above a certain threshold of income. Germany applied a levy on every household regardless of the technical device used to access the services. In a 2015 referendum vote, the Swiss approved a parliamentary decision to introduce a similar household levy by 2019. As both levy and broadcasting

Table 4. Funding models

	Licence fee	**Household levy**	**Broadcasting tax**	**General tax**
Advertising permitted	AT FR IE (RTÉ) IT	CH (SRG TV)* DE (ARD, ZDF)	–	AU (SBS) BE/CF BE/VG (VRT Radio) CA (CBC TV) FR IE (TG4) NL NZ (TVNZ)
Advertising not permitted	DK NO SE UK	CH (SRG Radio)* DE (DRadio)	FI	AU (ABC) BE/VG (VRT TV) CA (CBC Radio) NZ (RNZ) USA

Comments: *) Currently still a license fee, however, a household levy was recently decided by Parliament and approved in a public vote.

tax include many previous non-payers, the change reduces the individual amounts paid in both countries. In Germany, the amount was lowered from € 215.76 to € 210 Euro; in Switzerland, the government promised to reduce the amount from 462 to 400 Swiss Francs.

A comparison of total revenues, and of the fees collected for PSM, shows considerable variance between countries. PSM in large countries (e.g. ARD in Germany, BBC in the UK, France Télévisions, and Rai in Italy) have a much higher budget at their disposal than PSM organisations in small countries (see Figure 1). Moreover, inhabitants of small countries like Denmark and Switzerland pay license fees of more than €300 Euro, while inhabitants of bigger countries like France and Italy are charged less than €150 Euro. However, these differences are moderated by proportionate levels of economic prosperity. When adjusted for average European purchasing power, the Danish and the Swiss license fees are more comparable to other countries.

Another difference is the ratio between public and commercial revenues. The share of public funding is generally above 60 per cent for PSM, with the highest percentage in the Nordic countries and the UK. Non-European countries invest less public funding in PSM, as most evident in New Zealand and the USA. TV New Zealand is fully commercial. In the USA, spot advertising is not allowed but PSM depends heavily on sponsorship (called 'underwriting').[3] In 2014, Austria, Canada, and Ireland received a considerable amount of PSM income from advertising and sponsorship.

Revenues from online advertising account only for a small fraction of advertising income where this is allowed. Of the countries that disclosed these figures in 2013, the highest shares (about 5.4 per cent) were at Austria's ORF (11.4M of 208M Euros), and
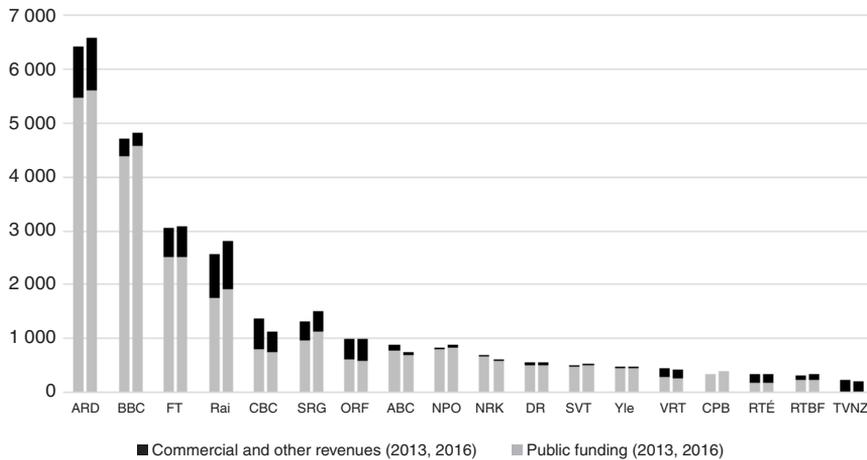
Figure 1.   Revenues of public service media in 2013 and 2016 (millions of EUR)

Source: Annual reports of PSM organisations

by Ireland's RTÉ (5.9M of 105.8M Euros). Typically, regulation of online advertising is aligned with the regulation of offline advertising. However, in France, Germany, and Switzerland, PSM online platforms are restricted from advertising, despite being allowed on their broadcasting channels.

Supply and demand

The public service media organisations in our sample offer, on average, seven radio and five TV channels, as well as online services. Public radio stations normally reach between 50-80 per cent of the domestic population. These radio channels are very popular in the Nordic countries, Austria, and Switzerland, but play more marginal roles in Australia, Canada, France, Italy, New Zealand and the USA. Public TV channels typically have market shares between 20-40 per cent (see Figure 2). Finland's Yle scores highest, while CBC's English-speaking services reach less than 10 per cent. When comparing our data of 2013 with the more recent figures of the European Broadcasting Union[4], we can see both increases and decreases of market shares.

Aside from radio and TV channels, PSM organisations also offer online services. These normally include a website with current affairs, live streaming of broadcasting channels, and on-demand services. Furthermore, PSM often provide 'additional services' like apps and curate social media sites (e.g. on Facebook, or Twitter). Market shares of PSM's online services are increasing generally, but we found it difficult to obtain comparable data and can't comment on an empirical basis at this point.
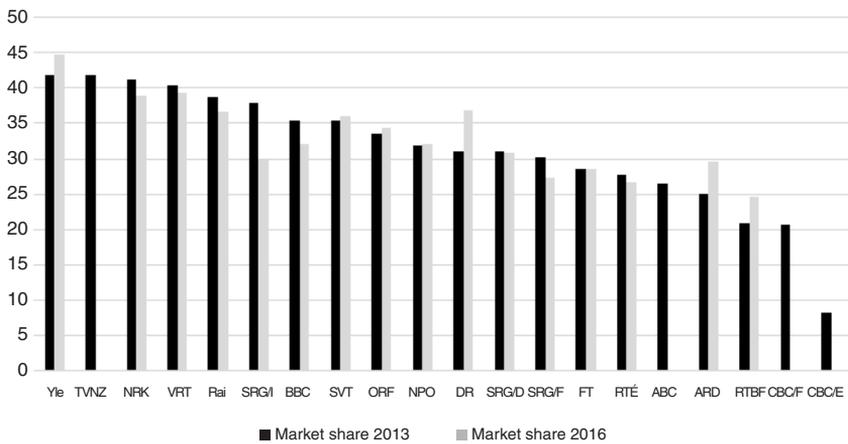
Figure 2. Market share of public service TV in 2013 and 2016 (per cent)

Source: Authors' analysis (2013), European Broadcasting Union (2016)

Debate and reform

At the time of our study, many PSM organisations were troubled by deteriorating financial conditions. In Australia, Canada, Flanders, the Netherlands and New Zealand, public funding cuts had just taken place. This caused layoffs and the discontinuation of programmes or services. Financial complications were mostly keyed to the economic and financial crisis of 2008 that led to austerity programmes as governments cut budgets, including for PSM organisations that receive funding from general taxes. The financial crisis combined with the structural transformation of media markets keyed to digitalisation and online media growth have also led to decreasing advertising revenues. PSM in Canada and Ireland were heavily affected.

PSM were also under political pressure from political parties in many countries that advocate for a narrower remit and lower financial resources. In Canada, Ireland, and the Netherlands, proposals were brought forward that PSM should only cover genres that are affected by commercial market failure. In the UK, the Tory government took several decisions that tighten the BBC's latitude for action. On the one hand, a discontinuation of license fee exemption for those over 75-years of age was decided. On the other hand, the BBC is now required to fund its World Service from its own budget and to top slice revenues for S4C and local stations.

Private media are also affected by the general economic situation and structural changes, of course, and often complain about 'market distortion' caused by PSM online. Newspaper publishers (especially in Finland and Switzerland) harshly criticise PSM online activities as well as their comparatively stable financial situation because of public funding. In Norway and Sweden, existing public value tests were under scru-

tiny at the time of our study. In Flanders, the quota for investments in independent productions was raised to support the local film industry.

PSM in France and Germany were better off at the time of the study. ARD and ZDF had announced increased financial needs to the body in charge of deciding the fee levels. It seemed possible the additional revenues gained by the change from licence fees to a household levy will be used for this purpose. Furthermore, a new PSM youth programme online was planned. In France, the planned end of advertising on France Télévisions in 2016 was stopped by President Hollande. He also raised taxes on telecommunications providers to support PSM.

In many countries, technological change has fuelled political debate about funding models. Following the introduction of a household fee in Germany and Switzerland, and a broadcasting tax in Finland, the license fee system is now under scrutiny in other countries. In Ireland, a decision was made in favour of a household fee, but the introduction was postponed. In Austria, the government may consider this, but would not debate the issue in the current legislative period. In Denmark, Norway and Sweden, discussions on alternative financing models were underway. In the UK, a household fee was discussed in the current charter renewal process, but is unlikely to be implemented until a later stage – if implemented.

Governance reform is also on the agenda for some of the PSM organisations in our sample. Although outside the scope of our study, country correspondents brought attention to reform debates in Italy, France and the United Kingdom. In Italy, the government planned a comprehensive reform of RAI and its functioning. In France, the appointment of the Director for the PSM organisations was depoliticised. In the UK, a reform of the BBC Trust was expected as part of charter renewal. In Canada and the United States, questions of broadcasting distribution were an important topic for PSM. Some channels of the CBC were losing their 'must-carry-status' in Canadian cable networks. In the USA, a planned reallocation of the frequency spectrum could lead to shortage in supply.

Conclusion: Public service media in the 'network' era

In this chapter, we presented selected findings of a comparative international study of PSM. The research sought to detect commonalities and differences between 17 Western countries and their PSM organisations in four main areas. As many scholars (see Donders 2012), we premised our study on the 'digital age' construct to describe the circumstances for PSM. In the current (re)interpretation of findings, we premised our analysis on the 'network era' construct. In the conclusion, we specifically address the findings from the network perspective.

As discussed, a network perspective can indicate a methodological, theoretical or practical point of view. Based on our review of the literature applying the network paradigm to PSM, we suggested three ways of using the term: 1) to discuss how PSM

embraces the internet, 2) to describe a more profound process of change that affects PSM, and 3) to locate PSM in national or international (stakeholder)-networks. In what follows, we interpret our findings in the light of these three perspectives, and compare the 'digital age' and the 'network era' constructs. We close by considering steps for further research.

Our study provides an overview of the ways in which PSM organisations are embracing the internet. All studied countries have online and non-linear services as part of their remits, and some have changed their funding models to account for digital distribution. For all the PSM organisations, online and non-linear services are increasingly popular. But there are limits to these efforts. Many European countries have introduced ex ante tests to assess the public value and market impact of potential new services. German-speaking countries have set stricter rules than elsewhere for non-linear services. Intellectual property rights are a key aspect in establishing boundaries. We can therefore conclude that PSM is networked in the sense that they are embracing the internet as a network of networks, but there are regulatory limits that can become barriers to further future development.

Our findings offer insights on the ways PSM is affected by the general change in media and society. As described by Castells (2011), technology and globalisation cause a shift in power relations. A complicating factor is the financial crisis of 2008 that has affected PSM in many countries. Both phenomena indicate that PSM is already grappling with the global network society he describes. PSM linear programming is losing market shares in some countries, and advertising revenues are increasing for businesses that rely on ICT. Despite challenges, PSM remains popular and important in many countries. The popularity of PSM's websites indicate they have successfully applied 'network journalism', especially. This contradicts Benkler's (2006) claim that legacy media will become obsolete in the network economy, although the funding for PSM is certainly more complicated and uncertain. We can conclude that although we (might) live in a global network society, this does not necessarily mean the end of PSM or the full-blown reality of a 'post-network era'.

Finally, our study illustrates that PSM organisations are embedded in national and global networks. Based on Jarren et al. (2001), we can say that PSM has always been 'networked' entities because their regulatory status and mandates prescribe various ties to diverse parts of society: via quotas for certain content and languages, via decision-making processes, and via public and commercial revenue streams. Low market shares and ongoing political debates about PSM show, however, that these networks include competitors and adversaries. Following Clark and Aslama Horowitz (2014), PSM should invest in stakeholder management, *especially* with the public. We can therefore conclude that PSM needs to understand their 'embeddedness' and carefully curate ties – not only content.

This chapter reveals the network paradigm as a very broad perspective, as especially evident in the two terms that are most used to describe the current situation of PSM – 'digital age' and 'network era'. The two overlap, particularly on one point:

PSM's need to technically and socially adapt to ICTs. The network paradigm per se invites one to think more deeply about the ties between entities and how those links affect the public enterprise in media – with or without ICT involvement. While the 'digital age' might consider such relations implicitly, the network paradigm addresses them explicitly. It is therefore no surprise that our study that was premised on the 'digital age' provides compelling findings on the aspect of embracing ICTs, and only an unsystematic illustration of PSM's social relations. The latter is extremely important because it is about the public dimension and the service orientation.

Using a network perspective to (re)interpret our data was fruitful. It not only encouraged consideration of how relational thinking is already an ingredient of many studies, but offered useful starting points for further examination. One is the practices of network journalism in PSM. Another is the network of PSM and its various stakeholders. Such research could investigate the impact of public hearings on ex ante tests, or the impact of parliaments in decision-making about PSM funding. To investigate these ties more systematically, beyond the case study level, one could also use mathematical-technical tools for network analysis.

Notes

1. Puppis, Manuel & Schweizer, Corinne (2015). *Service public im internationalen Vergleich. Schlussbericht zuhanden des Bundesamtes für Kommunikation (BAKOM)* [Service public in an international comparison. Final Report to the Federal Office of Communications (OFCOM)]. This study was funded by the OFCOM.
2. The countries included were: Austria, Australia, Canada, the Flemish and French part of Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, New Zealand, Norway, Sweden, Switzerland, UK, and US. Normally the PSM organisation(s) that is/are denoted as PSM in the regulatory framework of the country is/are included in the analysis.
3. Gathering the data from sponsoring in the US was outside of this projects' scope.
4. We are grateful to the European Broadcasting Union for providing market shares of PSM 2016. Our methodology of data collection might differ from the EBU's in single cases.

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