

The dark side of the media welfare state

How media policy ignored consumption and climate change

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ABSTRACT

This chapter revisits the concept of the media welfare state, a term we coined a decade ago (with fourth author Ole Mjøs). The concept highlighted how welfare state principles influenced media policy in the Nordic countries and how policymakers used regulatory measures to correct negative implications of state and market governance. In this chapter, we consider how policymakers responded to a trend we did not previously discuss: the media's contribution to overconsumption and environmental damage. Based on an empirical discussion of three phases of Norwegian media policy – early television, early broadband, and early data centre policies – we argue that in facing these challenges, politicians have been less willing to use policy measures to reduce harmful consequences. Instead, there is a tendency towards unquestionably labelling media and digital platforms “a green industry”.

KEYWORDS: sustainability, climate change, media history, document analysis, Norway

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Introduction

The media sector – from gaming and social media to audiovisual streaming and journalistic news – is energy- and resource-demanding. What is often seen as a virtual activity is, in fact, a global industry of planned obsolescence, with hardware and production systems exploiting limited natural resources and contributing to carbon emissions (Cubitt, 2017; Maxwell & Miller, 2012; Starosielski & Walker, 2016). Linked to a general “techclash” (Smith, 2018), the environmental critique of media and digital platforms is becoming more prominent. Although environmental issues are hardly new, they have to a limited degree been present in scholarly discussions of Nordic media policy. The reason can probably be found in the fluctuating interest in the environment that has characterised the last half a century: As Hansen (2019: 21) has shown, based on longitudinal studies, media and public interest in environmental problems have varied tremendously from the beginning in the 1960s and 1970s until the resurgence in the 2000s.

While policy is clearly not immune to the zeitgeist, neither is research. Arguably, Hallin and Mancini’s (2004) seminal analysis of media systems appeared in a period of concern about Americanisation and cultural homogenisation. In a similar vein, our work on the media welfare state (Syvertsen et al., 2014) emerged in a context with heightened attention to Nordic politics, culture, and media (Booth, 2014; Economist, 2013; Kinsella, 2015; Kristensen & Riebert, 2017; Ohlsson, 2015; Waade & Hansen, 2017). Aiming to contribute to this body of research, we examined how critical characteristics of Nordic media related to societal features in the region. We characterised the media welfare state as based on four pillars: universal access, liberal press freedom, cultural policies for the media, and pragmatic and consensus-oriented policy development. An essential perspective in our book was that Nordic media historically had represented, and in the 2000s still reflected, a philosophy and ideal of public enlightenment as well as a social democratic project for increased equality. Lately, we have in our research paid more attention to media resistance, disconnection, and intrusive digital media (Moe & Madsen, 2021; Syvertsen, 2017; Syvertsen & Enli, 2019), a perspective which includes criticism of “fast” media and overconsumption.

In this chapter, we revisit the concept of the media welfare state with a perspective more attuned to environmental problems. By emphasising the media’s negative impact on nature and the environment, we shed light on a dark side of our original construction of Nordic media welfare states. By “dark side”, we do not mean to imply evilness or the opposite of “God’s light”, which is held as the original meaning of the expression. More in line with its use in psychology, where the shadow is the dark side of the personality, we literally think of certain sides of the media welfare state as needing direct light, aiming to make visible aspects neglected and obscured in the original description.

In *The Media Welfare State: Nordic Media in the Digital Era* (Syvertsen et al., 2014), we stressed the potential for national policymaking and the power of political decision-making. We demonstrated how Nordic politicians have been willing to compensate for negative tendencies through policymaking and interventions – within the framework of collaboration, pragmatism, and mutual respect between the political and media systems. In the book, we argued that Nordic politicians were willing to use media policy measures to reduce or counter four main societal trends: authoritarianism, marketisation, globalisation, and societal fragmentation. In this chapter, we emphasise a fifth trend, which is also held as problematic: the media’s contribution to a capitalist consumption industry enforcing a high level of energy usage and the production of luxury goods; polluting and producing waste; and destroying habitats and natural resources. Based on an empirical discussion of three phases of Norwegian media policy – early television, early broadband, and early data centre policies – we argue that in facing this fifth challenge, politicians have been less willing to act by using policy measures to reduce the harm caused by the media.

In what follows, we first elaborate on media studies’ interest in environmental perspectives, specifically contributions from political ecology (Benjaminsen & Svarstad, 2019; Devine, 2019) which we build on in our empirical discussion. Next, we briefly describe our research question, design, and methods used in the historical analysis. On that basis, we turn to the three phases before concluding with a discussion of how environmental perspectives have been treated in Norwegian media policy.

Environmental perspectives in current media research

Currently, there is increasing academic interest in how the media and Internet content and infrastructures damage the environment (Cubitt, 2017; Devine, 2019; Maxwell et al., 2015; Starosielski & Walker, 2016). It is helpful to separate three strands of research.

First, a body of literature focuses on problems related to a capitalist over-consumption economy. The media system stimulates sales of consumer goods, for example, by being dependent on income from advertising, e-shopping, and promoting an appealing lifestyle. Relevant here is the concept of fast capitalism (Agger, 2004), which describes a new stage of social life characterised by the acceleration of production and consumption and the compression of time and space. Fast capitalism implies rapid industrial production and consumption cycles and resonates with trends such as fast food, fast travel, fast fashion, and fast tech – processes that are energy-consuming and waste-producing. The rapid evolution of the Internet and digital communication sustains and facilitates fast capitalism. Against this, various forms of “slow movements” have emerged, inspired by the 1989 Italian slow food move-

ment, focusing on slowing down consumption and utilising repair, reuse, and more sustainable production patterns. The call for a “slow tech” movement in 2014 (Patrignani & Whitehouse, 2014) is one such case, arguing for a more proactive attitude in computer ethics to combat premature obsolescence and waste (see also Widdicks et al., 2018). Similarly, there are calls for a “slow media” movement (Rauch, 2018) to combat the highly accelerated production, transmission, storing, and consumption of media content and digital devices.

A second strand of research focuses on planned obsolescence and e-waste and argues that the media system is a force of overconsumption by constantly upgrading “new generations” of terminals and devices. Smartphone production, for instance, leaves a significant footprint and exploits precious metals and minerals, and when replaced by new devices, they create waste and pollution, which are often difficult to recycle (Junge & van der Velden, 2018; Proske et al., 2016). Similarly, manufacturing one desktop computer exhausts more than 500 pounds (approx. 227 kilograms) of fossil fuels as well as 50 (approx. 23 kilograms) pounds of chemicals and 3,300 pounds (approx. 1,497 kilograms) of water – around the same volume of resources used to make a car (Rauch, 2018).

The third strand of research deals with unsustainable energy consumption, documenting an explosive growth in media volume and data traffic, requiring enormous amounts of energy for production, distribution, and storage, and pinpointing the consequences of the development of land for data centres, and so on, by replacing cultivated land and habitats (Burrington, 2015; Holt & Vonderau, 2015). Several international organisations monitor the energy use of electronic media, or data centres and digital infrastructures. A much-quoted Greenpeace (2017: 4) report claimed, “the energy footprint of the IT sector is already estimated to consume approximately 7% of global electricity”. In 2020, another report singled out China’s data centres as consuming more electricity than all of Malaysia (Greenpeace, 2020).

In some works, these different strands are brought together by the perspective of political ecology. Devine’s (2019) book on the political ecology of music can serve as a helpful illustration. Arguing that we need a musicology without music, he undertakes a historical analysis of the recording industry. His analysis shows how geopolitically and environmentally, the material extraction and processing, manufacturing, consumption, and disposal of recorded music have always strained natural and human resources (Devine, 2019). Whether it was farmers in the Southeast during the era of shellac records, oil from the Middle East during the era of vinyl, or electricity, rare minerals, and Far East labour in the digital era – the music industry has always taken its toll on human as well as natural resources, and focusing on the industry and its technology, rather than the content or texts, helps bring such tolls into focus.

The perspective of political ecology can let us adjust our attention when we study media policy. Rather than emphasising the media as content producers, cultural institutions, or distributors, political ecology invites us to view the media chiefly as technology for consumption or as a business. In this chapter, we do not aim for a fully-fledged analysis of the political ecology of television or online communication. Our primary research questions are as follows:

- RQ1. How have the environmental problems caused by media and digital platforms been addressed in Norwegian policy debates?
- RQ2. To what extent and how have policymakers instigated measures to mitigate these problems?

As part of the analysis, we are interested in how media-technological developments are conceptualised in the debates. To what extent are the debates characterised by technological determinism, a perspective which sees technological developments “as the central causal element in processes of social change” (Croteau et al., 2022: 33)? While technological determinism rarely appears in crude form in scholarly work; it is often prevalent in political and business discourse to indicate material and infrastructural constraints (Gillespie et al., 2014). Furthermore, we are interested in how globalisation and the international competitive situation are used as arguments to support certain developments. As Croteau and colleagues (2022) have pointed out, the borderless nature of the Internet combined with free trade agreements makes it difficult to impose regulation on the national level, while at the same time, there is intense pressure from global media conglomerates to expand their markets.

In sum, this can amount to a form of political realism, which we can use as a vernacular term to describe a political sentiment. This is a sentiment that expresses the difficulty individuals, groups of actors, and political bodies in small countries experience in restricting major technological developments due to factors grounded in materiality, globalisation, economy, and culture.

In this edited volume, and over the last decade, the concept of the media welfare state has been discussed, amended, and criticised. Our purpose here is to contribute to this discussion as we have done in the past (see also Enli & Syvertsen, 2020; Enli et al., 2018). Our goal in this chapter is to illustrate how different zeitgeists spur different research questions and illuminate how alternatives not chosen and questions not asked also significantly impact media and social systems (Freedman, 2010). With this in mind, we turn to our empirical cases.

Research design, methods, and empirical data

In *The Media Welfare State*, we drew on historical and contemporary studies and surveys conducted by others and ourselves. We emphasised broadcasting

policy, particularly the regulation of television and digitalisation, examining how different policy and regulatory regimes developed, what perspectives were present in the public and the political debates, and what choices were made in those contexts.

In this contribution, we re-examine some of the original material, searching for moments in media history when decisions were made with crucial environmental impact. Periods are selected when new media technologies were high on the policy agenda – when their positions and roles are unsettled and up for debate (Marvin, 1988). We selected sources from two phases of media history, each representing a debate about new technological phenomena: 1) Early television policy (1960–1972) and 2) early broadband policy (1995–2005). To put these historical cases into perspective and to explore more recent policy debates, we added a third case closer to the present: 3) early data centre policy (2010–2022). The motivation is to enable comparison with the more well-known cases and to bring our argument on par with the ongoing issues of today. The analysis is tentative and limited to Norwegian media history in line with our main objective, which is to introduce a new perspective.

The three cases allow us to start with a debate at the core of cultural policy, with media technology (broadcast television) firmly defined within the realm of professionally produced mass media. In case two (broadband networks), we step into a debate where media production, content, distribution, and reception mix with other forms of digital communication in a phase often described by the buzzword “convergence”. Finally, when turning to our third case (data centres), we expect the debate to cover an even wider territory in terms of societal domains (e.g., banking, national security). The analysis, then, should also consider how this assumed move relates to the issues of environmental impact.

The empirical data are mainly official documents (such as documents of political debates in the parliament, governmental white papers, and proposals), in addition to media coverage and letters to the editor in the local and regional press in Norway. We use these texts as sources, assuming they “somehow reflect the interests or actions of their authors or in some other way represent the facts of the policy process they refer to” (Karppinen & Moe, 2012: 185). By analysing the documents, we aim to bring out political interests or forces and “determinants behind policy developments” (Karppinen & Moe, 2012: 185). As the three cases rely on three datasets, we refer to primary and secondary sources. Given that the two first cases represent revisits of previously studied policy processes, we include references to our previous work where relevant. All quoted material not originally in English has been translated.

Analysis: Consumption and pollution in policy debate in three phases of Norwegian media history

The early phase of television (1960–1972)

The history of broadcasting, and particularly the development of television as a mass medium, has had a crucial importance for what we today might interpret as sustainability and environmental challenges for the media system. Norwegian media history is unique, but also closely related and influenced by international television history (Smith, 1998). What was unique about the Norwegian debate on the introduction of television was that it lasted for a decade, included a variety of political arguments, and involved several debates in the parliament. Accordingly, Norway became among the last countries in Europe, and the Nordics, to launch television.

The international influence included, on the one hand, reports from American television and how it created a culture of passive watching, with politicians generally fearing a decay of social and cultural public life (Enli et al., 2013). On the other hand, the politicians argued that even though they wanted to postpone the launch of television in Norway, they had no other choice unless they wanted to become “technologically backward” compared with other countries (Enli et al., 2013: 215). In addition to the cultural debate, there was also an economic debate, which included both arguments for broadcast television as a new industry with the potential for economic growth and workplaces, and those against television, which described it as an “unnecessary luxury in a time of scarcity” (Enli et al., 2013: 215).

The establishment of television in Norway in fact represented a cultural change and played a central role in the growth of consumer goods after World War II. The expansion of television supported the sales of a variety of new products, which required energy and resulted in pollution and waste problems. Research on waste management has documented the enormous pollution caused by the consumption of television around the world. Getting rid of all the television sets every time a new generation replaces the old is a tremendous waste problem, not least because many of them were carelessly dumped, and because the sets include polluting minerals which are difficult to recycle (Singh et al., 2016).

The expansion of television also resulted in the production of a huge amount of secondary and associated consumer goods. For one thing, the television sets came in protective packaging with products such as Styrofoam, rapidly producing a waste problem (Stokes et al., 2013). Second, the new medium’s popularity, with its prominent place in the living room, also represented a new market for related add-on products (Spiegel, 1992). Illustrating the entangled role of media in this kind of development, the press promoted television-related consumerism by giving expert advice on how to place the television set in the living room, the ideal distance to the sofa for watching,

as well as suggesting that viewers should invest in equipment such as wooden legs and shutter doors because “a dark screen outside broadcast hours is not a pretty sight” (as cited in Enli, 2001: 243).

Private businesses also used the popularity of television to develop new television-related products, which were heavily advertised in the newspapers. Typical new products included “TV-outfits for the housewife, TV-slippers, and the TV-jug” (as cited in Enli, 2001: 248). This shows that, in addition to the television sets, which were also heavily advertised, related industries also saw business opportunities in the TV age (Enli, 2001).

Accordingly, revisiting the political debate about launching television in Norway, we find no explicit discussions about overconsumption or waste problems, rather the contrary: It was regarded as positive to use the television for expansion and growth by showcasing important national industries such as agriculture or fisheries, as well as to guide consumers through the new reality of the consumer society, with an increasing abundance of products (Norwegian Parliament, 1957).

Moving on to the 1970s and the debate about colour television, it seems like the zeitgeist had already started to shift, as we notice more critical perspectives related to overconsumption. The international, as well as the national political agenda becomes increasingly attuned to environmentalist challenges. For example, *The European Conservation Year 1970* was a campaign initiated by the Council of Europe to alert Europe to the importance and necessity of protecting the environment and its natural resources. Such international political trends influenced the Norwegian political scene, and just a few years later, in 1972, the Norwegian Ministry for Environmental Affairs was established, followed by the Climate and Pollution Agency in 1974.

The debate about and resistance against colour television is often interpreted as moralistic and even an example of Norwegian backwardness (Norwegian Parliament, 1957). A closer inspection, however, shows that the resistance was mainly based on critical perspectives surrounding consumption. The political debates, as well as much media coverage, emphasised the capitalist economy of consumption which colour television represented. Examples include debates and news stories about the cost of colour sets, and how poor people and low-income families could not afford such investment. These debates took place against a backdrop of a constant push from electronic industries to increase sales. An illustrative example is a page in the paper *Arbeidets Rett*, which both includes advertisements for new colour television sets by the well-known brands Tandberg and Phillips, and an interview with four male respondents, presented with photos and quotes, all arguing that colour television is too expensive for ordinary people (Enli, 2001). The price was around 700 euro (Enli, 2001), which equals about 6,000 euro today.

The criticism also pinpointed how the capitalist system depletes the environment and contributes to increased pressure to consume more goods in rich

countries, while poor countries get hurt by pollution, resulting in a damaged environment. The politicians who wanted to slow down the colour television transition aimed to limit the growth in private luxurious consumption. The centrist liberal party, Venstre, stood out with a strong engagement for the conservation of nature and a programme explicitly opposing colour television, while warning that we are heading towards a “catastrophe” and urging policy to “shield ourselves and future generations against the destructions of the waste from modern society concerning plant and animal life, air, water and soil” (Venstre, 1969).

A similar framing can be found in a newspaper debate (Enli, 2001), with colour television being held as emblematic of human conduct that will deplete the Earth’s resources and make it uninhabitable for coming generations.

However, the environmentalist perspective was not limited to the critics, as the supporters of colour television also used such arguments to defend the new technology. A central politician representing the Labour Party, Einar Førde, who later became a minister and director general of the Norwegian public service media organisation NRK, argued that an expansive television development would *benefit* the environment, urging “parliament to encourage production which does not gobble up energy and pollute” (Norwegian Parliament, 1971–1972: 1697).

Even though these arguments were met with scepticism (see Norwegian Parliament, 1971–1972: 1699), and others did not pick up the idea, two opposite perspectives on what best benefits the environment were established. On the one hand, the media and electronics industry was portrayed as “clean and green”, while on the other, the media system was regarded as a driver towards overconsumption and a luxury lifestyle that drains the Earth’s natural resources. This focus on technological development driven by market imperatives was voiced by opposing politicians, for example, Versto (Labour) in comparing the politicians as “continuing to dance around the golden calf without really getting control on the development”, and warning that such lack of political control led to “a pure private-capitalist view always winning” (Norwegian Parliament, 1971–1972: 1700).

Yet, these arguments were primarily dismissed as moralism. In a much-quoted speech from the parliamentary debate, Førde (Labour) diagnosed much opposition against colour television as “psychological”. He claimed that critics saw the new apparatuses as “unnecessary toys”, with colour television unwarrantedly having come to represent “the evilness and irrationality in our economic system”. He claimed the opposition had “strong elements of puritanism”, and scornfully caricatured the opponents as thinking that “we have to accept that sin has come to Earth, but we don’t want it in colour” (Norwegian Parliament, 1971–1972: 1696).

Key elements in the debate were technological determinism and realism. Central players supported colour television because the industry was moving

in that direction, and it seemed like the natural next step. If it resisted the tide of change, the Norwegian public service broadcaster could be excluded from international broadcasting collaboration, and much content was already produced in colour. The realist position was broadly accepted, also in press coverage and among the retailers of television sets (Enli, 2001). The realism is also evident in that both sides in parliament agreed that “it makes little sense” to discuss *whether* Norway will introduce colour television, but *when* this should happen (Norwegian Parliament, 1971–1972).

In contrast to the dominant realism, politicians in the minority refused to accept the technologically deterministic position. They criticised the majority for being irresponsible and avoiding the obligation to mitigate international and technological pressures at a crucial historical moment.

To summarise, during the early years of television in Norway, the environmentalist challenges were debated concerning the consumption economy, planned obsolescence, and waste. However, against this, a new argument, even though only budding, was on the rise: “green industry”. This argument compares the media sector to other industries and claims it is polluting less. Supported by this new argument, the dominant view takes growth for granted, and technological determinism and realism win: We have no choice.

The early phase of broadband (1995–2005)

Moving into the period around the turn of the millennium, we encounter a different zeitgeist. The politics of digitalisation became an international megatrend, with the Nordic countries among the key players, and with limited discussion about the environmental consequences of digitalisation. This might be explained by climate and environmental engagement being erratic and decreasing during the 1990s. In his timeline for public interest in the environment, Hansen (2019: 22) pointed out how interest receded throughout the 1990s and did not experience a resurgence until the first decade of the 2000s. While the United Nations Millennium Development Goals were launched in 2000, it was not until the Sustainability Development Goals in 2015 that the climate perspective gained serious agenda-setting status. Climate engagement had then been boosted by events such as Al Gore’s 2006 documentary film *An Inconvenient Truth*, and the 2009 United Nations Climate Change Conference in Copenhagen, often regarded as a starting point for the widely engaging mobilising climate movement. It was not until the middle of the first decade of the 2000s that systematic research documented the severe climate footprint of digitalisation (Berkhout & Hertin, 2004; Zurkirch & Reichart, 2000).

With this as a backdrop, we focus on the debate about the development of broadband distribution networks for television and digital media and limit the period, starting around 1995 when the digital distribution technology

started to take off in the Nordics up until about 2005 when the focus in the media sector moved on to web 2.0 (popularised from 2004, see Mjøs et al., 2014). We study this phase because digitalisation was heavily debated and processes were launched to increase digital transformation. The Norwegian debate was related to structural change in the media sector, including a liberalised broadcasting sector, with new commercial players and a forceful and optimistic digitalisation discourse, as well as a focus on possibilities of convergence between broadcasting, telecom, and Internet and communication technologies, both for the industry and the authorities (Moe, 2003; Storsul & Stuedahl, 2007; Syvertsen et al., 2014).

Yet, the debate was also driven by a fear of being left behind and an ambition to be included in the international digital expansion. In this ambition, the state and the private companies had overlapping interests and wanted speedy processes. Thus, implicit technological determinism is more evident than in earlier periods, and the debate becomes more concrete and directed towards broadband.

From 2000, the Labour government organised work on digitalisation across societal sectors as “eNorway” white papers, inspired by the European Union’s eEurope initiative, headed by the Norwegian Ministry of Trade and Industry (2000b). The overarching aim for policymaking was to facilitate and stimulate competition, but also secure fairness: “The development proceeds at a tremendous pace. If Norway is going to remain at the forefront, we need to stimulate quick construction and good access to broadband networks and services. We have no time to lose. The future is now!” exclaimed the Minister of Trade, for the occasion re-titled as “eMinister”, in an action plan for broadband communication in 2000 (Norwegian Ministry of Trade and Industry (2000a).

An environmental perspective can be found in these plans, on the level of slogans and headings: The overarching aim for the government was to create “a green knowledge economy and an information society for all” (Norwegian Ministry of Trade and Industry, 2000b: 1). In a later plan from 2001, this is formulated as “a holistic policy for a sustainable knowledge society, based on environmental information, increased use of telecommunications as substitute for transport, a green product policy and green public procurements” (Government of Norway, 2001).

Beyond such headings, neither overconsumption nor environmental issues are prevalent in the discussion. Rather, the basis for the debate is the need to strengthen the media and communication industries. In parliamentary debates (in May 2000 and May 2001), the focus lies on trade in general and opportunities for rural areas to profit, as well as the role of policy to facilitate commercial growth. A conservative representative, for instance, drew on then-current success stories in neighbouring countries:

If Norway is going to have any chance of succeeding and develop an IT industry where both small IT companies and industrial engines like Nokia and Ericsson have the opportunity to succeed, Norway has to appear as an attractive country for investments and development of new ideas and enterprises. (Gabrielsen, 2001: 2972)

Although environmental problems were not at the forefront of the discussions, two critical aspects do relate to the impact of media digitalisation. First, there was a debate about how to deal with waste. The debate did not, however, address how to decrease consumption, only how to compensate for its consequences. Information provided to the public about the environmental challenges was seen as essential and came hand in hand with the reassurance that in Norway, regulations and contracts (pointing to future regulation of e-waste deposits) were in place to allow for the secure handling of discarded equipment (Government of Norway, 2001).

The second critical aspect is voiced by the Socialist Left party, touching on the environmental consequences for land and habitats in its support for more state intervention, namely that a lack of regulation could lead to several overlapping, competing networks being built, also entailing more waste and unnecessary claims of more land. This perspective does not get traction in the debate, and we do not find substantial traces of strong oppositional voices in the media debate or coverage of this phase of the digitalisation of media in Norway (Moe, 2003).

To summarise, two problematic aspects are mentioned in the debates: the problem of electronic waste and the perspective that the media system exhausts land and natural resources. Beyond these aspects, which are put forth by the minority opposition, the perspective is deterministic across the political spectrum, based on the understanding that new media technology is vital to competing internationally for trade and industry investments. The potential that commercial media growth will further stimulate overconsumption with negative consequences for pollution and climate change is not mentioned.

Early data centre policy (2010–2022)

The processes surrounding Norwegian data centre policy are evolving in a context of predominant ideas and expectations of a “green transition”. The term itself has become frequently used in policy debates, embraced by both politicians and industrial leaders. In 2015, green transition was coined as the “new word of the year” by the Norwegian Language Council. The same year, the so-called Paris Agreement marked a shift as the first-ever universal, legally binding global framework to limit global warming.

In Norway, global zero-emission ambitions became linked to the ambitions for the green transition, but as seen elsewhere (e.g., Söderholm, 2020), the debate focused on how economic growth and technological development

can facilitate the transition, and continued growth was taken as a given. The policy debate about data centres is particularly striking because it is dominated by one perspective: An interpretation of data centres as a *green industry* yielding *green jobs*. This is striking given the growing public interest in the environmental impact of data centres (Brevini, 2020; Burrington, 2015; Cubitt et al., 2017; Maxwell & Miller, 2020) due to their energy consuming operation. In fact, they are characterised as “one of the fastest growing consumers of energy and are expanding rapidly” (Holt & Vonderau, 2015: 82).

The contrast between the idea of a green industry and its environmental impact is obvious, but “green” remains the dominant perspective supported across the political spectrum, as well as by principal lobbyist organisations for private enterprises (NHO, n.d), who urge for “a technological development and deployment of climate solutions on a big scale which both cut emissions and create jobs, activity, growth and welfare” (see Ortar et al., 2023, on the comparable case of Iceland). The only contrary argument has come, unsurprisingly, from environmentalist organisations, which call for policy measures, such as a transition from Norway’s massive production of fossil fuel (UN, 2020; Fisher, 2022).

Data centre policy debate in Norway is influenced by the shared interests of politicians at the national and local level, and it was local initiatives that started the process and encouraged national policy. In 2016, opposition politicians, speaking for their constituencies in rural areas, spurred the government to produce an action plan for data centres to seize the potential for growth in competition with other countries (Norwegian Parliament, 2016). On one level, political agency is emphasised because political measures are needed to develop a green industry. On another level, however, the view is deterministic in that digitalisation is imagined as necessary for a “green transition” and the premise that digitalisation demands data centres. Digitalisation is only considered a part of the solution to the climate crisis, not a part of the problem. In this frame, the critical argument for attracting data centres to Norway is that it will help lower global emissions since Norway offers a cool climate, renewable energy, and available building sites (Norwegian Parliament, 2016).

The process that led to the establishment of one of the first data centres in Norway, later known under the brand Green Mountain, a name which gives associations to green rhetoric of corporate social responsibility, started with a local initiative from the municipality of Rennesøy and a local real-estate developer. When they requested to rent derelict NATO facilities deep inside a mountain for a planned data centre, the project was received with enthusiasm, goodwill, and future optimism in the local press and by local politicians. The vision was labelled a “green super data centre” since

the environmentally friendly [aspect] of establishing data storage inside “mountain halls” is that there is plenty of space [...] a stable climate which reduces the need for cooling [...] cold fjord water for cooling [the

servers] close by, and easy access to clean energy [from hydroelectric power plants]. (Berentsen, 2010a: 6)

However, “free cooling” locations are business calculations, as lower temperatures outside provide significant cost savings inside, as at least half of a data centre’s energy footprint has historically come from the energy required to keep the servers cool (Brevini, 2020; Holt & Vonderau, 2015).

Typically located in rural areas, data centres like Green Mountain’s industrial expansion means claiming land previously defined for agriculture, wildlife, or nature. Rather than a fundamental question about long-term priorities and holistic consequential planning, the need to expropriate areas for buildings and infrastructure was handled in regular procedures to grant permission like any industrial development in the past (Berentsen, 2011a). Only later, in 2018, did critical voices against re-regulation of the agricultural land surface (Berentsen, 2018a, 2018b). Beyond this issue, local opposition is limited to isolated citizens who blame the local politicians for “only pleasing the capital” when allowing for an expansion of the road to facilitate infrastructural requirements but failing a promise to build a pavement (Berentsen, 2013). Nevertheless, such voices appear weak, far between, and unheard (cf. Ortar et al., 2023: 150ff).

The national policy documents refer extensively to Green Mountain Data Centre as a successful frontrunner. The government strategy document *Norwegian data centres – sustainable, digital power-centres* (Government of Norway, 2021) includes material from Green Mountain, texts describing how the company contributes to local industry, and images portraying the beautiful nature. As argued in Holt and Vonderau’s analysis of Google’s representational strategy (2015: 76): “The main foci of the images are the expanse of sky and land surrounding the buildings. In effect, the data centers are visible but rendered practically inconsequential by the surrounding spectacle of natural vistas and wide-open spaces.”

The strategy for Norwegian data centres is presented as green and sustainable, referring, for example, to how the industry is willing to adjust to the United Nations Sustainable Development Goals and highlighting an aim to become a “sustainable and circular economy”. Bolstering the argument, the government strategy claims data centres will contribute to a “circular economy” by citing Green Mountain as a source for ad-hoc plans to re-use waste heat in raspberry cultivation and on-land lobster farming (Government of Norway, 2021).

A key message in the policy documents is that Norway aims to be attractive for international data centres, and three strategies are suggested: First, the government wants to intensify the promotion of Norway as a data centre nation, for example, with the ad, “Could Norway be your next data centre location?” (Government of Norway, 2021: 48)

Second, the documents suggest that taxation is reduced and regulations simplified to make it attractive to choose Norway as a location (Government of Norway, 2021). These policy measures align with the message from local politicians in Rennesøy already in 2010, who argued that the taxation on electricity consumption threatens growth. Around 2010, momentum was built across political divides to reduce the taxation to attract the new kind of industry, resulting in a removal of the tax (Berentsen, 2011b, Øvregaard & Nådland, 2010b for support from the social left party).

A third strategy is a rhetoric of “greenwashing”, which ignores negative aspects of growth in the communication sector while claiming that investments in data centres in Norway are, per definition, climate-friendly (e.g., Ihlen, 2009).

To sum up, the debates locally and on the national policy level surrounding data centres show a willingness to use political measures, but not to reduce energy use or tackle the consequences of rapid growth in the media and communication sector. Rather, measures should increase economic growth and trigger new investment. The perspective on developments threatening agricultural land is present, but only as a minor opposition. However, the problem with the enormous need for energy to feed the data use is not present – neither is the very premise and opportunity for new industrial growth.

Conclusion

This chapter has addressed aspects of the media industries that have previously not received much attention within media policy and media systems research, namely the media’s contribution to overconsumption and environmental problems. Our main aim has been to introduce this perspective, inspired by recent work on the political ecology of the media. We approached the issue with our previous work on the Nordic media systems as a basis, with three debates on new media technologies in Norway as empirical cases. Based on the studies of early phases of television, broadband, and data centre policy debates, we asked to what degree critical perspectives on the media and communication system as an environmental problem could be found in Norwegian policy debates, and whether policymakers instigated measures to mitigate these problems.

The discussion demonstrates a historical development from the introduction of television to the recent debates about data centres. The material indicates an absence of environmental and climate perspectives in the first debates about launching broadcast television in Norway, mainly because the dominant perspective embraced the new consumer culture and television’s role in informing sensible consumers. However, as the debate later turned to colour television, a critique of overconsumption and perspectives on environmental global justice was prevalent in some political quarters. The critique was

dismissed as moralist and reactionary, though, losing ground to a dominant perspective that framed media and electronics as a promising future industry.

Rather than gradually becoming more prominent, the perspective on over-consumption and environmental effects of media expansion retreated again in the debate about broadband, which we describe as uncritical towards the digitalisation-boosted consumer explosion. Still, some compensatory measures were instigated, especially a scheme for reducing e-waste. In our most recent case, the environmentalist perspective returned to the agenda during the debate about data centres, but not as a critique of the environmental harm of digital services. Instead, the dominant framing was that data centres were valuable investments and necessary to realise ambitions for green industries. Hence, the construction of data centres became a political poster case for “the green transition” and was not seriously discussed in terms of its effects on consumption, waste, and emissions. Although adverse consequences for farming, habitats, and high energy use were acknowledged, these aspects are limited and weakly represented.

The discussion reflects how political debates relevant to the environment have been characterised by technological determinism and the view that a small nation-state like Norway can do little to counter technological and global market forces. We found that in the first debate about introducing television, policy measures were used to reduce the negative consequences for culture, but not for nature and the environment, as there was no room for such perspectives in an optimistic reception of new technology and growth in consumer products. In the debate about colour television, policy measures were seriously debated, and a group of politicians (in the minority) wanted to delay the transition to colour to avoid increased consumer pressure. The debate on broadband demonstrated a more prominent political willingness to deal with the negative consequences, first and foremost, by discussing how to handle the waste problem. In the debate on data centres, the dominant perspective is that Norway should do its utmost to be a winner in the global race. Rather than reluctance to establish data centres, the political decisions are geared towards providing opportunities for a new industry, which is unquestionably termed “green”.

Overall, we have argued that politicians have been less willing to act by using policy measures to reduce the environmental harm caused by the media – compared with the historical examples central to the development of the media welfare state (Syvertsen et al., 2014). To make sense of this finding, we first need to remember that the policy debate about data centres is ongoing, and that policy responses might appear clearer in hindsight. That said, the policy issues we have analysed take us from within the core of cultural policy to general technology and economic policy, as digitalisation brings media content providers into the realm of general communication infrastructures. This entails a change in policy aims, stakeholders, as well as valid arguments

in the debates. In *The Media Welfare State*, we argued that policy measures were responses to forces of authoritarianism, marketisation, globalisation, and societal fragmentation. In a sense, countering these forces through media policy aligned with the welfare state project and measures to build and maintain such a societal system. With the force of media contributing to (over) consumption and environmental crises, the picture is not as clear-cut: Curbing developments might seem to put core components of the welfare state at risk if it entails less economic growth, fewer jobs in rural areas, lack of renewal of the Norwegian technology industries, and so on. This entails a potential change for our future conception of the media welfare state, and it also points to a challenge for future work.

The Nordics are often heralded for healthy relations between the media and the political system, with a strong legacy press, editorial independence, and substantial media policy interventions at an arm's length distance, including through trusted and strong public service broadcasters. The merit of a perspective inspired by political ecology, as applied to this context, is the ability to see the Nordic media from a different angle, to highlight other aspects of their role in society and the world, both in historical analyses and moving forward.

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