

To nudge or not to nudge: news recommendation as a tool to achieve online media pluralism

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Abstract: Recent policy documents propose the use of recommender technology to realise online media pluralism goals. Specifically, they may enable *citizens* to access a diversity of viewpoints concerning matters of public interest via digital means ('public service recommender systems'). On the basis of Article 10 ECHR, States are arguably required to guarantee such 'online access diversity'. At the same time, they must, pursuant to that same provision, at all times ensure that *individuals* maintain autonomy and freedom of choice as regards whether or not to consume certain content. In that context, this contribution argues that policymakers may consider 'nudging' people toward reading diversely through recommendation (libertarian-paternalistic approach). Additionally, it points to the possibility of merely offering users the tools to do so, thereby allowing them to make an (informed) choice as regards whether to use them or not (libertarian approach). The first approach presumably best mitigates chances of selective exposure, whilst the second is more 'liberty-preserving'. In either case, States comply with their positive and negative obligations stemming from the freedom to receive information and ideas (without interference by public authority) and the freedom to hold opinions.

Keywords: News recommendation; online access diversity; public service recommender systems; Article 10 ECHR; autonomy; freedom of choice; nudging; required choice.

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1. Introduction

‘Media pluralism’ has long been recognized as an important public policy goal (*Charter of Fundamental Rights of the European Union* 2000, art 11(2); European Commission 2020a). While not easily conceptualised, this term can essentially be defined both in a strict or a broad way (Valcke 2004, 116–18). In a narrow sense, it implies that a diversity of societally-relevant viewpoints get reflected in the media, meaning that they are given access to the means of transmission (Valcke 2004, 116). Taking a more holistic approach, the notion of media pluralism can be explained by reference to what it aims to do, namely ensure the *availability* and *accessibility* of diverse information and ideas, on the basis of which people can form and express their opinions and exchange information and ideas (Committee of Ministers 2018). Media pluralism goes hand in hand with ‘media freedom’, referring to the heightened protection granted to media activities under Article 10 of the European Convention on Human Rights (1950; Mendel, n.d., 13–17; *Charter of Fundamental Rights of the European Union* 2000, art 11(2)). Both contribute to the realisation of a so-called ‘free marketplace of ideas’, being a kind of public sphere where the formation of public and individual opinion can, as a result of the collision of opposing opinions, freely take place, and which is essential for the functioning of democracy as well as the self-development of the individual (Valcke 2004, 117; Helberger, Karppinen, and D’Acunto 2018, 194).

In the past, policy measures primarily envisioned the (offline) making *available* of a diversity of media content (Committee of Ministers 1999; 2007), hereinafter referred to as ‘content diversity’ (Napoli 1999). First and foremost, they sought to do so by enabling ‘source diversity’ (Napoli 1999), in particular by means of the promotion of structural media pluralism through ownership regulation, demands in terms of ownership transparency, the encouragement of workforce diversity as well as support measures (Committee of Ministers 1999; 2007; 2018). Secondly, requirements regarding the actual production of diverse content were put forward, specifically as a condition for the allocation of broadcasting licences (Committee of Ministers 2007) and when describing the mission of public service media (Committee of Ministers 2012). To a lesser extent, policy interventions concerned the provision of (offline) *access* to diverse content, or ‘access diversity’ (Vermeulen, n.d.). Particularly, these introduced must carry/offer rules (Committee of Ministers 2007) and prominence obligations favouring audio-visual media of ‘general interest’ and European works (Council of Europe 2020, 18–22).

In today’s online environment, it seems no longer necessary for media policies to strongly focus on source and content diversity (Helberger 2011, 441; Napoli 2011). Indeed, as numerous online news media (sources) are *available*, online news (content) flows in abundance (Newman et al. 2020). At the same time, automated processes, and in particular recommender systems that automatically (de)select and (de)prioritise news articles (Bernstein et al. 2020), increasingly determine the *accessibility* of digital media content (Committee of Ministers 2018). Since articles can only be read if they are accessible, these technologies have been said to have the potential to either decrease (Pariser 2011; Borgesius et al. 2016) or increase (Helberger, Karppinen, and D’Acunto 2018, 192) ‘exposure diversity’, that is to say diversity in news consumption (Napoli 1999). By consequence, policy makers are considering using them as a tool to realise online media pluralism goals (High level Group on fake news and disinformation 2018; ‘Beheersovereenkomst VRT (2021-2025)’ 2020). However, as noted by Kaye (2018, 7), recommendation technology ‘may undermine an individual’s choice to find certain kinds of content’, specifically when they are deselected or deprioritised.

In that context, this contribution seeks to establish whether and when the introduction of so-called ‘public service recommender systems’ is indeed desirable. To do so, it will first assess to what extent States are effectively required to take *positive* action so as to ensure online access diversity by analysing relevant case-law of the European Court of Human Rights (‘ECHR’) interpreting Article 10 of the European Convention on Human Rights (‘ECtHR’) (section 2). Thereinafter, it will be explained which role recommender systems play in determining the (in)accessibility of (diverse) content (section 3). Next, this contribution will examine the *negative* obligations that States must respect when curating access to content, particularly by reference to the freedom to receive information and ideas without interference by public authority and the freedom to hold opinions as laid down by Article 10 ECHR (section 4). This will be followed by an assessment of how user autonomy and freedom of choice may be preserved when using recommendation technologies to ensure online access diversity. In this respect, the notion of ‘nudging’ as defined and discussed by Thaler and Sunstein (2008) will be of great importance (section 5). Then, it will shortly be discussed whether online access diversity could also be achieved without recommendation (section 6). Finally, the conclusion will summarise the conditions under which public service recommender systems may be introduced. Doing so, it will highlight the benefits brought by ‘nudges’, control features and designated sections for safeguarding user autonomy rights in this context (section 7).¹

2. Online access diversity as a public policy goal

To establish to what extent policy action should be taken to ensure online access diversity, this section analyses relevant case-law of the European Court of Human Rights (‘ECtHR’) interpreting Article 10 of the European Convention on Human Rights (‘ECHR’), and in particular the ‘freedom to receive information and ideas’.

Article 10 ECHR, in its first paragraph, states that:

‘1. Everyone has the right to freedom of expression. This right shall include freedom to hold opinions and to receive and impart information and ideas without interference by public authority and regardless of frontiers [...]’.

First and foremost, the ECtHR, throughout its judgments, consistently recognises that this provision encompasses the right to be properly informed and to receive information and ideas on matters of public interest (see for example *The Sunday Times v. the United Kingdom* (No.1) 1979, paras 65–66; *Mendel*, n.d.). In the view of the Court, the public interest relates to matters which affect the public to such an extent that it may legitimately take an interest in them, which attract its attention or which concern it to a significant degree, especially in that they affect the well-being of *citizens* or the life of the community (*Couderc and Hachette Filipacchi Associés v. France* [GC] 2015, para. 103). In that context, it considers political and social news to be the most important information protected by Article 10 ECHR (*Khurshid Mustafa and Tarzibachi v. Sweden* 2008, para. 44).

According to settled case-law, States (that are a party to the ECtHR) bear the final responsibility to guarantee that people also receive a diversity of viewpoints in relation to matters that are of interest

¹ Excluded from the scope of this paper are: a discussion on how the introduction of public service recommender systems relates to recent initiatives of the European Commission, such as the European democracy action plan, the proposal for a Digital Services act and the proposal for a Digital Markets act; a discussion regarding EU competences in relation to media pluralism.

to the public. In particular, the Court finds that the undertaking of providing *citizens* with this kind of information ‘cannot be successfully accomplished unless it is grounded in the principle of pluralism, of which the State is the ultimate guarantor’ (Informationsverein Lentia and others v. Austria 1993, para. 38). On this basis, it systematically establishes a positive obligation for States to ‘ensure, through its law and practice, that the public has access through television and radio to a range of opinion and comment, reflecting inter alia the diversity of political outlook within the country’, this in view of the fact that audio-visual media typically have a wide public outreach (Manole and Others v. Moldova 2009, para. 107; Centro Europa 7 S.R.L. and Di Stefano v. Italy 2012, para. 156). In the cases at hand, the Court criticises a potential lack of source diversity, thereby assuming that it leads to insufficient diversity in content as available. In this context, availability implies accessibility, hence the use of the term ‘access’.

Until now, there are no judgments that impose a similar requirement with respect to the online media sector. In a ruling dating back to 2013, the Court states that ‘there is no evidence of a sufficiently serious shift in the respective influences of the new and of the broadcast media’, notwithstanding the significant development of the former in recent years (Animal Defenders International v. the United Kingdom 2013, para. 119). Today, however, it can no longer be denied that the Internet, as a means for the transmission of information (Council of Europe/European Court of Human Rights 2015, 40), and news in particular, is (at least) as influential as television and radio. Indeed, reports polling people’s media usage show that digital channels have become equally important as traditional ones (television, radio, print), if not more so, for accessing news (Newman et al. 2020; Commissariaat voor de Media 2020; Vandendriessche et al. 2021). It may therefore be argued that States should now also be required to take affirmative action so as to ensure online access to a diversity of viewpoints concerning matters of public interest (Vermeulen, n.d.).

Importantly, in this context, the Court’s conceptualisation of the freedom to receive information and ideas concerns the social integration of *citizens* in society, enabling them to partake in public debate by providing them with information on the basis of which they can form an opinion (Lingens v. Austria 1986, para. 42). In that regard, it may be noted that Article 10 ECHR unites civil and political rights, each representing a different conception of freedom, into what Nowak describes as ‘a harmonious whole’ (Nowak 2005, 438). The former provide the *individual* with freedom ‘from the State’ (‘liberté-autonomie’, see also *infra*), while the latter endow the *citizen* with freedom of access ‘to the State’ (liberté-participation’) (Nowak 2005, 438). At the time of their drafting, it was generally understood that both civil *and* political rights, as human rights of the first generation, placed a duty on the part of the Government to abstain from interferences with the free exercise thereof (van Dijk et al. 2006, 6). However, from a very early stage the ECtHR accepted that besides such purely negative obligations, positive obligations, which would require action rather than doing nothing, may also flow from the Convention (Gerards 2019, 108). These can be vertical or horizontal in nature (Lavrysen 2016, 78). Whereas vertical positive obligations directly govern the relations between the individual and the State, horizontal positive obligations concern relations between private individuals (Lavrysen 2016, 78–79). The cases where the Court has imposed obligations on the State to act as a guarantor of media pluralism pertain to vertical as well as horizontal relations (Lavrysen 2016, 95–96). While the distinction between both types of positive obligations is not always easily made, a requirement to ensure online access diversity arguably qualifies as the latter.

3. Online access diversity through recommendation

Today, many fear the existence of so-called ‘filter bubbles’ (Pariser 2011), referring to the idea that commercial recommendation induces people to only consume information and ideas that confirm their own views (Borgesius et al. 2016; Committee of Ministers 2018). In particular, they point to the fact that online news distributors, in particular online news media (i.e. commercial online news outlets and public broadcaster online news brands), social media, search engines and news aggregators, deploy what can be described as ‘interest-matching’ recommender systems to customise individual news feeds (Kaye 2018, 6–7). As such, online interfaces display articles to users that match their profile characteristics, that is to say their previous reading behaviour as well as other personal data, such as user-registered interests, and demographic and location data (Thurman and Schifferes 2012; Verdegem and Lievens 2016; Kaye 2018, 6–7; Vandendriessche and De Marez 2020, 70–76; Möller, Helberger, and Makhortykh 2019, 11–12; Vermeulen 2020, 190–93). The goal is to provide people with content they are likely to engage with and get them to enjoy the site or application in question (Ricci et al. 2010, 4–6).

Automatically (de)selecting and (de)prioritising news articles (Bernstein et al. 2020), recommender systems thus decide which items are visible to whom and in which order (Thurman and Schifferes 2012, 376 and 378; Vermeulen 2020, 192–93 and 197–98; European Commission 2020b, art 2(o)), thereby curating access to news (Committee of Ministers 2018). In that context, it has been argued that they may also be designed to increase – rather than decrease – the accessibility of diverse content (Helberger, Karppinen, and D’Acunto 2018, 192).

Interestingly, recent policy documents propose the use of recommender systems to realise online access diversity. In its final report (2018, 28), the European Commission’s High Level Expert Group on Fake News and Online Disinformation specifically says that recommendation tools ‘that expose different sources and different viewpoints around trending topics should be made available to users in online platforms’. Another example is the five-year management contract recently concluded between the Flemish Community (Belgium) and the Flemish public broadcasting organization (VRT) (‘Beheersovereenkomst VRT (2021-2025)’ 2020, 14), which states that the latter commits to ‘developing and deploying public broadcasting algorithms that can broaden taste rather than create filter bubbles’.

The development of algorithms that use diversity as a key driver for recommendation has furthermore been the main goal of a number of research projects (‘NewsDNA’ n.d.; ‘DIAMOND’ n.d.; ‘Diverse News Recommendations’ n.d.). Joris, De Grove, Van Damme and Demarez (2021) explain that such technologies aim to achieve diversity within reading behaviour and provide content of which the user has read too little. In that case, online interfaces display articles that do *not* match people’s profile characteristics.

For a private sector example, reference can be made to DPG Media, a Belgian media company that is also active in the Netherlands and Denmark (‘DPG Media’ n.d.). Specifically, they are designing a recommender that can match news articles and users while considering goals such as relevancy, diversity, and recency (Baan 2020). The goal is ‘to optimally inform readers, balancing between providing news that interests readers, news that provides alternate views or opinions, and news that editors believe readers have to know’ (Baan 2020).

In light of the analysis above (see section 2), ‘diversity-enhancing’ recommendation technologies ideally enable users to access diverse viewpoints concerning matters of public interest. These will,

hereinafter, also be referred to as ‘public service recommender systems’ (Verdegem and Lievens 2016; Vermeulen, n.d.), seeing the inherent public service value they would bring.

Provided that such a system can be adequately developed – whether at the initiative of policymakers themselves or, for example, the research community –, the State, as the ultimate guarantor of media pluralism, could consider offering it to the public to meet its positive obligation under Article 10 ECHR (*supra*).

In that regard, it needs to be noted that requiring private sector online news distributors to run a ‘diversity-enhancing’ algorithm, and in particular a specific one, would arguably go too far in light of their freedom to impart information and ideas as laid down in Article 10(1) ECHR. Article 10(2) ECHR sets forth that restrictions on this liberty can be justified provided that they are prescribed by law and necessary in a democratic society for one of the legitimate purposes it enlists, including the protection of the rights of others. However, since research shows that concerns about ‘filter bubbles’ may be overstated (Haim, Graefe, and Brosius 2018; Möller, Helberger, and Makhortykh 2019; Bruns 2019), it remains uncertain whether such a measure could indeed be considered needed to guarantee the freedom to receive information and ideas of Internet users.

Moreover, even if that were to be the case, there seem to be less restrictive means to do so. More in particular, one can think of the use of public service recommender systems by public broadcaster online news brands (Helberger 2011, 447; ‘Beheersovereenkomst VRT (2021-2025)’ 2020) or a newly established distribution channel, and in particular a news aggregator, which recommends items that it pulls from a variety of sources (Vermeulen, n.d.).

Regardless of whether they would prevent the possible creation of filter bubbles, these initiatives, and recommender systems more generally, may also help users navigate through a potential online information overload (Gauch et al. 2007, 54). Indeed, more and more digital content becomes available, yet people have only limited time and cognitive capabilities (Valcke 2004, 197). Accordingly, they continuously have to make choices about what to read and what to ignore (Aljukhadar, Senecal, and Daoust 2012; Schmitt, Debbelt, and Schneider 2018). In practice, this may lead to a situation in which one only consumes content that matches their own viewpoints rather than diverse ones, a phenomenon often referred to as ‘selective exposure’ (D’Alessio and Allen 2002; Garrett 2009a; 2009b; Hart et al. 2009; Garrett, Carnahan, and Lynch 2013; Zamith and Lewis 2014). Sunstein (2006) as well as others (see e.g. Möller et al. 2018, 960; Stark et al. 2020, 14–15) contend that these processes can result in people inhabiting so-called ‘information cocoons’ or ‘echo chambers’, locking themselves up in a self-confirmatory informational environment.

The use of recommender systems, in any case, implies the personalisation of access to information, thus varying from user to user (Kaye 2018, 6). Conversely, without recommendation content remains accessible to everyone in a uniform manner, and for example, according to public interest value or chronologically. In case human editors elevate particular items to the top of the feed, news display can be said to be based on the value, as assessed by the editorial staff, of articles in terms of their contribution to a debate of public interest (Kaye 2018, 11). If ‘time of publishing’ constitutes the main parameter for prominence, news articles are arranged in a chronological way (‘About Your Twitter Timeline’ n.d.; Garun 2020). In either of these cases, users, upon visiting the distribution channel in question, all find the same news overview.

4. Autonomy rights and freedom of choice under Article 10 ECHR

Yet, the eventual introduction of public service recommender systems raises an important legal question, and namely, whether it is reconcilable with any *negative* human rights *obligations* that States may assume in this context vis-à-vis citizens.

In their negative dimension, the substantive provisions of the ECHR and its protocols require States to refrain from violating the rights they set forth (Schabas 2017, 91). As put forward by Lavrysen, the ECtHR, in fact, considers the Convention to be ‘primarily’ and ‘essentially’ concerned with negative obligations, and positive obligations as something ‘additional’ that ‘may’ flow from a particular right it contains (Lavrysen 2016, 215). Human rights, in a negative sense, enable *individuals* to ward off unjustified interferences by the State (Nowak 2005, 439). They provide them with freedom ‘from the State’, thus limiting what it may do (Mendel, n.d., 7), and are as such construed as ‘liberté-autonomie’ (Nowak 2005, 438). Taking such an ‘autonomy rights’ perspective, the use of recommender systems to ensure access diversity, paradoxically, requires an assessment of these technologies in light of Article 10 ECHR, and in particular, the rights to ‘freedom to receive information and ideas *without interference by public authority*’ (emphasis added) and ‘freedom to hold opinions’ (para. 1) (*supra*).

Freedom to receive information without interference by public authority

In the case of *Leander v. Sweden* (Leander v. Sweden 1987), in which the applicant complained about the non-disclosure of certain information held by the Swedish authorities which had led to his dismissal (para. 45), the ECtHR, finding that Article 10 ECHR did not, in the circumstances of the case, confer on the individual a right to access such information, nor embodied an obligation for the Government to impart it, observed that:

‘[T]he right to freedom to receive information basically prohibits a Government from restricting a person from receiving information that others wish or may be willing to impart to him’ (para. 74).

Importantly, the Court restated this finding in *Khurshid Mustafa and Tarzibachi v. Sweden*, in which it found a violation of Article 10 ‘based on the refusal of a landlord, *upheld by the Swedish Courts*, to allow a tenant to install a satellite dish outside of their apartment, [...] on the basis that this obstructed their right to receive information’ (emphasis added) (Mendel, n.d., 8; Khurshid Mustafa and Tarzibachi v. Sweden 2008, paras 3, 29 and 41).

Valcke explains that the State’s negative obligation to respect the right to receive information entails that it can only adopt a so-called stimulating policy with a view to achieve consumption diversity (Valcke 2004, 200). Specifically, efforts cannot go beyond the striving for the widest possible news offer that is accessible (Valcke 2004, 200). Fulfilling their positive obligations in this context, States should at all times ensure that individuals maintain freedom of choice as regards whether or not to consume certain content (Valcke 2004, 200). Indeed, any policy action aimed at influencing *citizens* towards consuming diversely carries with it a very strong connotation of interfering with *individual* autonomy (Napoli 2011, 250). As Napoli puts it, ‘one can legitimately ask if it is within policymakers’ regulatory authority to even concern themselves with how media users navigate the content offerings available to them’ (Napoli 2011, 250).

As explained, recommender systems considerably impact the ways in which people have access to and thus consume news, thereby also exercising influence over the diversity of what can and is being read (Helberger 2011, 442; Bernstein et al. 2020, 5). Accordingly, governmental initiatives involving the

deployment of such technologies are inherently controversial (Council of Europe 2020, 10). As they select and prioritise certain items at the expense of others, their use could even be said to amount to a form of (soft) censorship, including when it would increase access diversity and thereby diversity in consumption (Council of Europe 2020, 10 and 29).

Freedom to hold opinions

Algorithmic content (de)selection and (de)prioritisation furthermore potentially interferes with the freedom to hold opinions as laid down by Article 10 ECHR. This liberty concerns the realm of the mind (*forum internum*) and includes, apart from freedom to have an opinion, freedom to freely and autonomously form one (Nowak 2005, 411–12; 441; Velaers 1991, 1:42). It protects all opinions, whether they are political, scientific, historic, moral or religious in nature (UN Human Rights Committee (HRC) 2011, point 9; Velaers 1991, 1:43–44). Importantly, opinions are generally based on information and ideas imparted by others and do not, as put by Velaers, exist ‘à l’état pur’ (Velaers 1991, 1:45–48). A person must, in other words, have access to information before they can form an opinion (Schabas 2013, 22).

In that context, the question arises as to what extent individuals can still autonomously form opinions in case *available* content is not freely *accessible*. Indeed, if access defines the limits of consumption, it also impacts the formation of opinions (Council of Europe Committee of Ministers 2012; Schiltz 2021). Recommender systems may, as they determine the (in)accessibility of information, encroach upon the freedom to form an opinion, whether or not they aim to enable users to consume diversely.

A crucial question to be answered when considering the introduction of public service recommender systems, constituting to some extent a choice-constraining technological architecture (Council of Europe 2020, 30), is therefore whether and, if so, how *individuals* can maintain autonomy in terms of selecting content to consume.

5. Autonomy and choice in recommendation

As explained, public service recommender systems ideally allow *citizens* to access a diversity of viewpoints concerning matters of public interest via a single online distribution channel. To preserve user-autonomy in this context, is to ensure that *individuals* maintain freedom of choice in terms of selecting news items for consumption.

In that regard, it may be noted that recommendation can affect the entire homepage, or, conversely, pertain only to a specific part of the website or application in question, thus complementing non-personalised segments thereof (Thurman 2011; Kunert and Thurman 2019, 13). In addition, users themselves may or may not have a say in relation to recommendation, and specifically, its applicability or outcomes. As will be explained in more detail below, these factors play an important role when assessing the desirability of the use of recommender systems as a tool to stimulate diversity in consumption.

Specifically, policymakers may take either a libertarian-paternalistic or a libertarian approach as to how recommendation should influence the accessibility of content. Both approaches guarantee autonomy and freedom of choice for the user as regards what to consume, and are as such compatible with the aforementioned negative obligations States assume under Article 10 ECHR, and in particular the rights

to ‘freedom to receive information and ideas without interference by public authority’ and ‘freedom to hold opinions’.

Libertarian-paternalistic approach (nudging)

In their eponymous book, Thaler and Sunstein define the term ‘nudge’ as ‘any aspect of the choice architecture that alters people’s behaviour in a predictable way without forbidding any options or significantly changing their economic incentives’ (Thaler and Sunstein 2008, 6). Being in favour of nudges, they consider themselves to be ‘libertarian paternalists’ (Thaler and Sunstein 2008, 4–6). The term ‘libertarian’ means liberty-preserving and refers to the idea that people should be ‘free to choose’ (Thaler and Sunstein 2008, 5). The paternalistic aspect of their strategies then lies in the claim that it is, nonetheless, legitimate for institutions in the private sector and governments to engage in self-conscious efforts to steer people’s choices in directions that will improve their lives (Thaler and Sunstein 2008, 5).

As such, *banning or reducing choices* by means of firm mandates does not accord with nudging or libertarian paternalism (Thaler and Sunstein 2008, 6, 47, 76 and 253). However, the same holds true for *having to choose*, or ‘required’ or ‘mandated choice’ (Thaler and Sunstein 2008, 86–87). Libertarians, as opposed to libertarian paternalists, prefer such ‘required choosing’ over a nudge (Thaler and Sunstein 2008, 242–43). Indeed, ‘[a]t most, they would like to provide people with the information necessary to make an informed choice, and then tell people to choose for themselves: no nudges!’ (Thaler and Sunstein 2008, 243). While Thaler and Sunstein agree that required choice is sometimes the best way to go, they argue that people may however need a good nudge ‘for choices that have delayed effects; those that are difficult, infrequent, and offer poor feedback; and those for which the relation between choice and experience is ambiguous’ (Thaler and Sunstein 2008, 76–77).

Nudging acts as a kind of middle way between rigid interventions and dogmatic laissez-faire (Thaler and Sunstein 2008, 253). Hence, it involves ‘[the steering of] people in directions that will make their lives go better while also insisting that the ultimate choice is for individuals’, not for any private sector actor or the state (Thaler and Sunstein 2008, 252–53). It then falls to so-called ‘choice architects’, being the ones responsible for organizing the context in which people make decisions, to make this possible (Thaler and Sunstein 2008, 1–4, 252). In that regard, Thaler and Sunstein propose six principles of good ‘choice architecture’: incentives, understand mappings, defaults, give feedback, expect error and structure complex choices (Thaler and Sunstein 2008, 81–100). Additionally, they put forward what they call ‘the golden rule of libertarian paternalism: offer nudges that are most likely to help and least likely to inflict harm’ (Thaler and Sunstein 2008, 72). While all nudges should, in principle, respect freedom of choice, some may thus be considered more or less restrictive than others.

In the context of public service recommender systems, nudges may in particular take the form of default settings or work through the provision of feedback.

Full homepage recommendation by default

A first way in which access diversity can be ensured is through full homepage recommendation (Bernstein et al. 2020, 5). In that case, users select news articles for consumption from a list of items that are pre-selected by the algorithm (Borgesius et al. 2016, 3). Thus favouring the display of viewpoints concerning matters of public interest that *citizens*, having regard to their profile characteristics, appear to be less or unfamiliar with, the system diminishes chances of selective

exposure. The other side of the coin, however, is that it simultaneously bans or reduces individual choice, since deselected content indeed cannot be consumed (via the channel in question) (Kaye 2018, 7). By introducing a public service recommender system of this kind, States accordingly risk to violate *individuals'* Article 10 ECHR rights.

Arguably, should users be allowed to manage, by means of an easily accessible functionality on the interface, the (main) parameters that inform the (algorithmic) (de)selection and (de)prioritisation process (European Commission 2020b, art 29), thereby empowering them to determine the criteria on the basis of which content is displayed or not, no issue with respect to freedom of choice would arise (Helberger et al. 2021). As such, individuals could, for example, be enabled to switch between a diversity-enhancing and a chronological feed that takes 'time of publishing' as its main parameter ('About Your Twitter Timeline' n.d.; Garun 2020). Where users are, at the time they first visit the distribution channel in question, asked to choose one or the other option without any being pre-checked in advance, there is 'required choice'. Conversely, if any of the options, and in this case the one corresponding to the diversity algorithm, is set by default, the choice architecture includes a nudge – at least provided that the individual can still opt out and choose differently. Thaler and Sunstein argue that if, for a given choice, there is a default option, that is to say 'an option that will obtain if the chooser does nothing', a large number of people will end up with it, regardless of whether that is good for them or not (Thaler and Sunstein 2008, 83; noyb 2021). Accordingly, States may consider nudging users towards 'choosing' the diversity option so as to avoid that too many would opt for (one of) the alternative(s), thus compromising the benefits brought by public service recommender systems.

Accordingly, full homepage recommendation does not in itself qualify as nudging, since it limits user choices in terms of what can be selected for consumption. In this context, there is accordingly no so-called 'algorithmic nudging', or nudging by means of algorithms (*infra*). Rather, the nudge lies in the default option, and specifically the pre-checking of the diversity-enhancing system for content display.

Taste-broadening messaging

A second way to ensure access diversity is through taste-broadening messaging (Bernstein et al. 2020, 5). In this scenario, users select news articles for consumption from a non-personalised list of items, displayed for example in order of public interest value or chronologically (*supra*). Upon visiting the homepage, each and every one views the same arrangement of content. However, when an article, after having been clicked, is being read, the interface will automatically show a message recommending another article that puts forward a different perspective on the same event. As such, individuals are encouraged, yet not mandated, to consume more diversely, by receiving instant feedback in relation to their reading behaviour. Since the system knows which articles have been read by whom, and thus only recommends to the user those which they did not yet click on, the recommendations can be considered personalised. At the same time, personalisation does not go as far as in the case of full homepage recommendation.

According to Thaler and Sunstein, providing feedback is the best way to help people improve their performance (Thaler and Sunstein 2008, 90). It qualifies as nudging, which is illustrated by the example of taste-broadening messaging: it allows users to choose whether or not to select the recommended articles for consumption, merely informing them that there exist viewpoints concerning matters of public interest about which they did not yet read (Thaler and Sunstein 2008, 6, 90–91). Given that the

provision of such messages relies on the operation of an algorithm, it, as opposed to full homepage recommendation, effectively constitutes ‘algorithmic nudging’.

Whereas it remains to be seen to what extent taste-broadening messaging indeed mitigates selective exposure, research suggests that nudging by means of (algorithmically generated) feedback messages indeed works. Van Royen, Poels, Vandebosch and Adam, for example, conducted an experimental study to examine whether harassment among adolescents on social networking sites could be reduced by means of showing them reflective messages, encouraging them to reconsider and eventually self-censor before posting (Van Royen et al. 2017, 345). They found a significant reduction in the intention to harass after the exposure to such a message (Van Royen et al. 2017, 349). Just recently, Twitter announced that it has started sending ‘prompts’ that give users the option to revise a reply before it is published if it uses language that could be harmful (Twitter Support 2021). Having tested and improved this feature, the social network says to have learned that it can help encourage more meaningful conversations (Twitter Support 2021). Matias, on the other hand, tested if showing (reddit) users a persistent message asking them to fact-check articles by providing links to possible evidence to that end in the comment section causes recommendation algorithms to interpret an increase in comments as popularity and promote inaccurate content as a result (Matias 2020, 1 and 4). Doing so, he observed that the encouragement of human fact-checking indeed positively influenced commenters’ activity, amongst others (Matias 2020, 5).

Libertarian approach (control and designated sections)

Ensuring access diversity by means of public service recommender systems, States may also consider taking a more libertarian approach. As such, users would simply be provided with the opportunity to consume diverse viewpoints concerning matters of public interest, without being nudged to do so. Whether or not they finally decide to engage in selective exposure is thereby of secondary importance.

A first way to realise this would be to enable *individuals* to control the operation of the system, particularly by allowing them to make (informed) choices about whether or how to use it (Thaler and Sunstein 2008, 243). Secondly, there may be a solution in integrating designated sections for recommendation in the online interface.

Full homepage recommendation by opt-in

As explained above, access diversity may be ensured through full homepage recommendation. From a libertarian point of view, however, it should only be applied insofar as individuals actively choose to receive information on the basis of a diversity-enhancing algorithm, not by nudging them in that direction. Accordingly, upon their first visit to the distribution channel in question, users must be pointed to the existence of several options as regards the ways in which the system may (de)select and (de)prioritise content as well as to how these differ from one another (General Data Protection Regulation, art 13, 2, (f) and 14, 2, (g)). Thereinafter, to secure required choosing, and hence control, they should be asked to opt in to one or the other option, making sure none is pre-checked in advance.

Sliders

Another possibility to allow (yet not nudge) individuals to consume diversely, is to empower them to manually control the importance of diversity as a parameter for algorithmic news (de)selection and (de)prioritisation (Parra, Brusilovsky, and Trattner 2014). By means of a so-called ‘slider’, making it possible to move from ‘my viewpoint’ over ‘more viewpoints’ to ‘lots of viewpoints’, users could indeed

be enabled to decide themselves on how diverse the content featured in their feed should be (Harambam, Helberger, and van Hoboken 2018, 11). In that regard, it may be noted that avoiding any nudging towards the consumption of a diversity in viewpoints entails a requirement for sliders to not be set to 'lots of viewpoints' by default. However, as Thaler and Sunstein point out, 'there is no such thing as 'neutral design'' (Thaler and Sunstein 2008, 3). Thus, taking any other value as the default option also qualifies as the provision of a nudge, and this, as the case may be, possibly in the wrong direction. Arguably, libertarians would opt for 'more perspectives'.

Designated sections

Finally, diversity in consumption may be facilitated by integrating a designated section for recommendation within the interface of the distribution channel in question, in addition to one that displays news in a non-personalised, possibly chronological, manner. In this case, the homepage does not merely contain a list of items pre-selected by an algorithm. Rather, it is subdivided into two sections, clearly indicating the one that contains recommendations. Alternatively, the channel comprises a separate webpage or 'tab' exclusively displaying algorithmically selected and prioritised content, being some kind of 'Daily Me' (Negroponte 1996). In the case of designated sections, recommended articles put forward viewpoints concerning matters of public interest that *citizens*, having regard to their profile characteristics, appear to be less or unfamiliar with.

It may be noted that several Flemish online news media recently introduced a related type of feature, specifically allowing users to access their favourite topics, events or columns via a 'My News'-function, taking the form of a separate webpage or tab (De Standaard 2019; Verstraete 2021; Thurman and Schifferes 2012, 376). Thus doing the exact opposite of what a diversity-enhancing algorithm aims to do, such a functionality can further selective exposure (Kristof 2009). Be that as it may, designated sections for recommendation permit individuals to choose whether or not to consume algorithmically selected and prioritised news, merely providing them with a possibility in that regard.

6. Online access diversity through structure

Lastly, one may wonder whether online access diversity could not also be achieved without recommendation. As explained, recommender systems may assist audiences in navigating a so-called online 'information overload' (Gauch et al. 2007, 54), since they, to a certain extent, make choices for them (Helberger 2011, 441–42). However, Thaler and Sunstein suggest that the problem of selection that arises when options are numerous may also be addressed by providing structure, as it simplifies choice (Thaler and Sunstein 2008, 94–97). In that regard, a type of news aggregator that pulls together news items from multiple sources and organises them by event while also indicating the viewpoints they present can be proposed. As such, users could easily find diverging opinions concerning a same issue all in one place. At the same time, it stands to reason that such an approach would probably only stimulate people who have a high tendency to engage in effortful cognitive activities to effectively consume more diversely (cf. need for cognition, Cacioppo & Petty, 1982). By consequence, others may prefer not to use the system at all. In addition, there is a chance that certain users would only make use of it to find their own viewpoints more easily, thus engaging in selective exposure.

7. Conclusion

Conclusively, it can be said that States may introduce recommender systems as a tool to achieve online media pluralism, provided that they do not go beyond the ‘nudging’ of users toward consuming diverse viewpoints concerning matters of public interest.

In reaching this finding, this contribution, first of all, argued that States, being the ultimate guarantor of media pluralism, should be required to take *positive action* so as to ensure that *citizens* have *access* to such content through digital means (‘online access diversity’), if this is not the case already. Doing so, it drew a parallel between television and radio on the one hand and the Internet on the other, in terms of their respective influences as means for the transmission of information. Highlighting the importance of the former in that respect, the European Court of Human Rights long established a positive obligation for States to ensure the accessibility of diverse news via audio-visual media under Article 10 ECHR, and more specifically the ‘freedom to receive information and ideas’. As of yet, it did not impose a similar requirement in respect of internet media. However, seeing their ever-growing use, policy makers should be expected to intervene in case issues arise regarding online access diversity.

In that context, this research pointed to the potential creation of ‘filter bubbles’ by commercial recommender systems as well as the risk of selective exposure following a possible online information overload, leading to the consumption of information within ‘information cocoons’ or ‘echo chambers’. In view thereof, the value of ‘public service recommender systems’ was underlined, explaining that they could enable access by *citizens* to diverse viewpoints concerning matters of public interest.

Thereinafter, this contribution addressed the pressing legal question of whether the proposed introduction of these tools is reconcilable with any *negative* human rights *obligations* that States may assume vis-à-vis citizens. It found in that regard that *individuals* must remain free in selecting news for *consumption*. With that, it put forward the notions of ‘autonomy’ and ‘freedom of choice’, conceptualising them by reference to Article 10 ECHR, and in particular the ‘freedom to receive information and ideas without interference by public authority’ and the ‘freedom to hold opinions’.

Drawing on research by Thaler and Sunstein concerning the use of ‘nudges’ to realise public policy goals, it was found that States may take either a libertarian-paternalistic or a libertarian approach in maintaining user autonomy rights when introducing public service recommender systems. Seeking to mitigate chances of selective exposure, the better option would be to act as libertarian-paternalists. As such, States could ensure online access diversity through ‘full homepage recommendation by default’ or ‘taste-broadening messaging’, whereby the former should be considered more effective yet less ‘liberty-preserving’ than the latter. Where States value autonomy and freedom of choice more than efficiency in terms of avoiding the prevalence of ‘information cocoons’ or ‘echo chambers’, they would be seen as libertarian. If so, the online accessibility of diverse viewpoints concerning matters of public interest could be guaranteed by enabling individuals to control the operation of the system in question, providing ‘full recommendation by opt-in’ or ‘sliders’ by means of which the importance diversity as a parameter for (de)selection and (de)prioritisation of content may be manually adjusted. In a similar vein, the integration in the online interface of designated sections for recommendation was put forward a solution.

To put these ideas more into perspective, this research finally made an evaluation of whether online access diversity could also be achieved without recommendation, proposing a news aggregator that pulls together news items from multiple sources and organises them by event while also indicating the viewpoints they present. Merely helping citizens to find diverse content, such a tool would be as

liberty-preserving as possible. For this same reason, however, it could also run the risk of only being used (with the desired outcome) by committed individuals.

In addition, it may be noted that full homepage recommendation does not in itself qualify as ‘algorithmic nudging’, since it limits user choices in terms of what can be selected for consumption. In that sense, it makes no difference that individuals ultimately decide whether to consume recommended content or not (Council of Europe 2020, 29). The same goes for the fact that deselected and deprioritised information often remains accessible through other distribution channels, as this presupposes that the user knows of its existence and the fact that it is not being displayed.

Focusing on agency, the issue of transparency was deliberately excluded from the scope of this contribution. However, seeing the importance of this principle in the context of the GDPR and the recent proposal for a Digital Services Act (European Commission 2020b), the proposed use of public service recommender systems triggers further questions in that regard, thus requiring additional research.

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