



Institute for Information Law (IViR)

Convergence, information intermediaries
and media pluralism - mapping the legal,
social and economic issues at hand

A quick scan

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1/20/2014

The following report provides a quickscan of the legal, economic and communication sciences literature on the following research question: “What is the potential impact of Internet gatekeepers (and here in particular search engines) on the realization of pluralism/diversity as a public policy goal? “

The objective of the quickscan is to establish a concise overview of the most relevant academic research (legal, (behavioural) economic and communications sciences) that discusses the possible implications of gatekeepers for the realization of media pluralism. The quickscan will take stock of existing work, identify trends and controversies. It will identify the areas where further research is needed. This quickscan will not provide a comparative study.

The research has been conducted in the period between 6-20 of January.

CONTENTS

CURRENT NORMATIVE DEFINITIONS AND APPROACHES TO MEDIA PLURALISM (ONLINE AND OFFLINE) IN EUROPEAN, AND EXAMPLES OF NATIONAL APPROACHES TO MEDIA PLURALISM POLICIES IN GERMANY, UK AND FRANCE

The realization of media pluralism is considered a **central goal of national and European media policies**, and necessary premise for the exercise of people's fundamental right to freedom of expression, which "will be fully satisfied only if each person is given the possibility to form his or her opinion from diverse sources of information" (Council of Europe, 1999). This is also true for a converging media environment, where the supply, distribution and consumption of diverse content is not limited to the traditional media, but where both old and new players explore the potential of new communications channels, such as the internet or mobile applications (European Commission, 2013; European Commission, 2010; High Level Expert Group on Media Freedom and Pluralism, 2013; Council of Europe, 2007; Council of Europe, 2008; Council of Europe, 2012; Ofcom, 2012; Neuberger & Lobgis, 2010; Napoli & Karppinen, Translating diversity to internet governance, 2013; European Commission, 2007).

Despite this centrality to media law and policy making, for the time being, there is **no generally accepted, consistent definition** of media pluralism, neither at the European nor at the national level (Karppinen, 2012) (Helberger, 2012) (Napoli, Deconstructing the Diversity Principle, 1999); (Valcke, 2004); (Neuberger & Lobgis, 2010). The lack of a clear definition has resulted, for example, in conceptual confusions about the notions of **media pluralism** and **media diversity** - both notions are often used interchangeably (Tarlach, 2011). McGonagle, after having evaluate the literature on the two notions, refers to the situation as 'conceptual messiness' and suggests a pragmatic approach in that pluralism refers to issues of media ownership and the choice of the public between different providers of services, whereas diversity refers to the range of programs and services available (Tarlach, 2011). This report will follow McGonagle's distinction.

At the national level, it were primarily the national constitutional courts that conceptualized and filled the notions with meaning (for a comprehensive overview and discussion see (Valcke, 2004). This has resulted in differing approaches across Europe. For example, in the UK, the normative conceptualization of media pluralism, as defined by the British National Supervisory Authority Ofcom is understood narrowly, as

referring mainly to new and current affairs (Ofcom, 2012) (critical about this specification (Craufurd Smith & Tambini, 2012)). At the European level, the Council of Europe, whose conventions and recommendations have shaped to a large extent also national media policies is often used as point of reference (Council of Europe, 2007; Council of Europe, 1999). Based on the policy documents from the Council of Europe, and the European Union, Valcke et. al. have construed a rather comprehensive, useful normative definition of media pluralism as: the diversity of media supply, use and distribution, in relation to 1) ownership and control, 2) media types and genres, 3) political viewpoints, 4) cultural expressions and 5) local and regional interests (ICRI, KU Leuven et.al. , 2009).

The definition does make clear that media pluralism is a **multi-dimensional construct** (Neuberger & Lobgis, 2010) that can refer to different phases in the communication process (distribution, use and supply) as well as different content-dimensions and political objectives (promotion of culture, localism, political discourse). It covers the two dimensions pluralism (different speakers) and diversity (different outputs) in different forms and ideological colors. It also demonstrates that when speaking about pluralism and diversity, different speakers can refer to different aspects. For an economic take on the definition of media pluralism see Chapter 3.

Maybe most importantly, and unlike many normative definitions the definition also considers aspect of **exposure diversity**. The lion share of existing diversity discourses and policy is concentrated on diversity of supply (different speakers, different outputs). CITATION Paa12 \l 1033 An aspect that has been less prominent in traditional diversity policies is the third dimension of media diversity: 'diversity of exposure' (Napoli, Deconstructing the Diversity Principle, 1999) or 'content as received' (McQuail, 1992). In recent years it has become fairly well established that diversity of supply does not automatically result in diversity of reception. Various studies have demonstrated in relation to both offline and online markets that more diverse content can actually lead to a decrease in the diversity of the content consumed (Ferguson & Perse, 1993; Napoli, Deconstructing the Diversity Principle, 1999; Webster & Phalen, 1994; Beisch & Engel, 2007; Stark, 2009; Cooper & Tang, 2009) (see also Chapter 2). The audience, far from expanding its intellectual universe with a steadily increasing number of channels and outlets, seemingly prefers to stick with a limited number of favorites.

Exposure diversity' looks at the audience dimension of media diversity, and the question to what extent the diversity of content and supply actually results in a (more) diverse programme consumption. The aspect

CITATION Paa12 \l 1033 See already the definition of the Council of Europe, according to which "pluralism is about diversity in the media that is made available to the public, which does not always coincide with what is actually consumed" (Council of Europe, 1999).

of exposure diversity is particularly critical for **assessing possible benefits and threats brought about by new information intermediaries**, such as search engines and social networks as their main goal is to channel audience attention and affect access to, and the diverse choices people make. Insofar, the additional differentiations made by Van der Wurff and Eszter Hargittai to the concept of exposure diversity are particularly useful, namely the notions of 'diversity of choice' (ie the 'absolute amount of different program types that viewers can [actually] choose from'), which implies that there are situations in which users do not have a choice (Van der Wurff, 2004). Hargittai's concept of 'realistic accessibility' takes into account that even if supply is in principle diverse there can be concrete obstacles for users when accessing that content (Hargittai E. , 2000; Hargittai E. , 2003). For the time being, however, the problem of exposure diversity as a normative goal, and implications from research into the way users make choices and consume diverse content for existing diversity policies is only beginning to trigger a - much needed - discussion (Helberger, Exposure Diversity as a Policy Goal, 2012; Napoli, Exposure Diversity Reconsidered, 2011; Valcke, Looking for the user in media pluralism: Unraveling the traditional diversity chain and recent trends of user empowerment in European media regulation, 2011; Karppinen, 2012).

Media pluralism as a normative concept and regulatory objective is **not uncontested**. Offering a pluralistic media offer requires the making of choices, choices that can go at the cost of other protection worthy social, democratic or economic (policy) objectives. Neuberger mentions in this context the need to reduce complexity and concentrate on the relevant (Neuberger & Lobgis, 2010; Tambini, 2013) - an aspect that is particularly relevant under conditions of information abundance. Others criticize the vagueness and malleability of pluralism as a normative concept. As Karppinen explains, one problem in extracting the concrete meaning and nature of media diversity as a normative concept is "that pluralism does not itself identify any specific qualities, values or virtues that need to be advanced or protected, except that of differentiation itself" (Karppinen, 2012). And, though speaking primarily for the US, the US scholar Owen concluded: "In my view diversity (and its fellow-traveller, localism) is a meaningless and even harmful policy objective. ... The problem is that diversity is not firmly linked to any fundamental economic or political principle" (Owen, 2009).

The criticism is not entirely justified, as at least in the policy context there is some broader agreement that pluralism is **not a goal in itself but that it serves a function**, namely the realization of a variety of policy objectives that media law and policy are supposed to serve, and here most prominently the realization of freedom of expression, the fair distribution of opinion power (Schulz, Held, & Kops, 2002; Duff, 2012) and the democratic project/public opinion forming. Policy makers, academics and regulatory authorities have invested efforts in concretizing media pluralism as a normative concept and defining the different functions that

media pluralism has for democracy, public opinion forming, culture, society and personal development (Napoli & Karppinen, Translating diversity to internet governance, 2013; Helberger, Exposure Diversity as a Policy Goal, 2012; Ofcom, 2012). Worth mentioning here is in particular Ofcom's conceptualization of **how pluralism contributes to a well-functioning democratic society**, namely through means of "informed citizens - able to access and consume a wide range of viewpoints across a variety of platforms and media owners" and "[p]reventing too much influence over the political process - exercised by any one media author" (Ofcom, 2012). This approach is helpful because it also and explicitly takes into account the audience perspective on media diversity, and also the potential influence of new information intermediaries.

One problem with the lack of a more concrete definition or conceptualization of media pluralism is not only that it is the cause for uncertainty, invites bias and (political) capture, but also and maybe most importantly that the resulting **lack of benchmarks** makes it difficult to identify situations in which media pluralism and diversity (or the lack of it) is a concrete problem, respectively how a plural/diverse outcome would look like. For the time being, there is particularly little clarity when a media environment is '**plural enough**' and when users find, access and consume sufficiently diverse information. This is particularly a problem in today's climate of evidence-based policy making.^{CITATION Paa12 \l 1033} And while in the policy context attempts to at least measure diversity of supply are well established (compare (Craufurd Smith, Tambini, & Morisi, Regulating Media Plurality and Media Power in the 21st Century, 2012; Ofcom, 2012; Kommission zur Ermittlung des Konzentrationsbedarfs - KEK, 2010; Almiron-Roig, 2010), the formulation and monitoring of indicators of when diverse exposure is diverse enough is only in its beginning (ICRI, KU Leuven et.al. , 2009; Helberger, Exposure Diversity as a Policy Goal, 2012; Ofcom, 2012). For example, in the EU-funded Media Monitor project, only a limited number of criteria refer to diversity of exposure (ICRI, KU Leuven et.al. , 2009). More generally, the Media Monitor demonstrates impressively the complexity of the factors that ultimately constitute a plural outcome (and the challenges measuring it) (for a critical analysis (Collins & Cave, 2013). As Ofcom observed there is a clear role for governments in establishing further guidelines and filling the normative void of (exposure) diversity with meaning (Ofcom, 2012). To establish such much needed benchmarks, it is not only necessary to get a clearer idea of the desirable political goals behind exposure diversity, but also how

CITATION Paa12 \l 1033 E.g. in the UK, OFCOM indicated that any "effective framework for measuring media plurality is likely to be based on quantitative evidence and analysis wherever practical", (Ofcom, 2012), p. 1. But also in Europe and other countries, such as Germany, quantitative evidence is gaining an increasing importance in policy making for the media sector.

exactly access to a diverse choice, and obstacles in that process affect diverse consumption and public opinion forming.

LEGAL PLURALISM AND DIVERSITY SAFEGUARDS IN GENERAL

In Europe and the member states, pluralism/diversity policies are still primarily aimed at organising the supply side and making sure the media's output is sufficiently plural and diverse. The different instruments that are employed to protect and promote media pluralism can be roughly divided into two main categories (Council of Europe, 2007; Valcke, Looking for the user in media pluralism: Unraveling the traditional diversity chain and recent trends of user empowerment in European media regulation, 2011). Measures to promote structural pluralism target what is often referred to as **plurality of sources** or independent media outlets, and include e.g.

- the rules on media concentration,
- media transparency,
- licensing,
- public service broadcasting and the dualistic model,
- must-carry,
- the more recent rules on the openness of certain 'bottleneck' facilities (such as Conditional Access or Electronic Program Guides (EPGs)) in an increasingly sophisticated and multi-layered technical and market environment.

The overall goal of all these provisions is to guarantee market openness, competitiveness and that a sufficient number of independent outlets for media content are available.

Because source diversity alone does not guarantee diversity of the overall output, another set of measures promotes **content diversity** and focuses on the diversity of the output of individual broadcasters or media outlets more generally (including cable operators and pay-TV platforms). Examples include

- measures to guarantee a diverse composition of the program offering of (public service) media,
- editorial independence,
- specific pluralism safeguards such as program windows and must-carry-like rules,
- due prominence rules and presentational aspects, e.g. of EPGs,
- list of important events
- quota.

Then there are 'softer' tools so to speak, as the national and European initiatives to promote media literacy (of which triggering an appetite of

the audience for diverse media consumption is a part), editorial guidelines and codes of conduct, corporate social responsibility, etc.

Most European member states have adopted a mix of structural and content pluralism/diversity enhancing measures (Valcke, *Digitale Diversiteit - Convergentie van Media-, Telecommunicatie- en Mededingingsrecht*, 2004; Council of Europe, 2008), whereas only few rules exist that would address **diversity of exposure** (one example are arguably the aforementioned due prominence rules and provisions on presentational aspects of EPGs, that serve the dual effect of enhancing program diversity and guiding users' attention to particular diverse programs) (Helberger, *Exposure Diversity as a Policy Goal*, 2012).

The reluctance to address the audience-centered dimension of media diversity can in parts be explained by the constitutional limits on governments to interfere with matters of personal media consumption - or rather a lack of a sufficient understanding of where these constitutional limits are (Helberger, *Exposure Diversity as a Policy Goal*, 2012). For the time being it is simply **unclear to what extent governments can engage with matters of diverse search, personal access and choice** without running into conflicts with constitutional safeguards and users' right to privacy, personal autonomy and freedom of expression. Another reason why matters of exposure diversity have so far hardly figured on the public policy agenda has to do with the fact that, until very recently, matters of exposure diversity were simply less relevant than the question of how to guarantee that a sufficient supply of content from diverse sources was offered to audiences (Napoli, *Exposure Diversity Reconsidered*, 2011). Having said that, with digitization and the arrival of new information intermediaries very new challenges to the realization of media pluralism have emerged that are directly related to matters of exposure diversity.

Finally, a brief remark on **EU competency** is in place. Though the European Commission does not have any explicit competency to regulate in this area, media pluralism or diversity have clearly a prominent place on the European agenda, resulting in a number of, non-legislative initiatives. Most recently, in the Green Paper on Convergence the European Commission explicitly called in the consultation on its Green Paper on Convergence on stakeholders to identify possible concrete actions at EU level (European Commission, 2013). If, and if so to what extent the European Commission has the competency to adopt regulatory measures in this area is still a subject that is being discussed controversially (Centre for Media Pluralism and Media Freedom, 2013; Gounalakis & Zagouras, 2008; Komorek, 2013; Kleist, 2006).

The different concerns regarding the influence of the new information intermediaries on public opinion forming and media pluralism can be roughly distinguished in five categories (Schulz, Dreyer, & Hagemeyer, *Machtverschiebung in der oeffentlichen Kommunikation*, 2011).

Direct-editorial influences: the exercise of editorial-like influence on aggregation and distribution of program offers, combined with the ability and inclination to influence the political agenda. This form of exercising influence is particularly relevant for information intermediaries with the ambition to offer own editorial programming, such as news portals, on demand media, news apps, etc. An important and not yet decided question in this context is to what extent algorithmic, technological-mediated control can be classified as editorial or editor-like control (see chapter 2 of this report). More generally, the emergence of new information intermediaries questions established concepts of editorial control as a central criterion for the application of traditional rules on media regulation, diversity and pluralism. CITATION Paa12 \l 1033

Indirect-editorial influences: no direct influence or involvement in the production, aggregation and distribution of programs, but indirect influence in particular on the diversity of exposure by affecting/influencing/manipulating the findability of contents, the (not neutral) ordering and prioritization of existing contents and the management and direction of user attention as scarce resource, as well as influencing the choices users make. This can be in form of offering basic search functionality, but also algorithmic or collaborative filtering and the issuing of personalized search results and recommendations (Schulz, Dreyer, & Hagemeyer, *Machtverschiebung in der oeffentlichen Kommunikation*, 2011; European Commission, 2013; Council of Europe, 2012; High Level Expert Group on Media Freedom and Pluralism, 2013).

Indirect-structural influences: refers to the ability of hardware producers, network operators, providers of operating systems, content platform, market places, etc. to influence who the underlying (technical) distribution structure, and decide about access to a platform and thereby also access to an audience, respectively access of the audience to a particular content or service. The discussions surrounding network neutrality and ISPs typically fall into this category.

Wider influences on structure and practice of media markets: Information intermediaries can affect also the future economic models for the media, by impacting business models or entering into direct economic competition (Foster, 2012; Hoppner, 2013). On the other hand, they directly support and also affect the practice for the media, for example through the use of search engines for journalistic research which, as

CITATION Paa12 \l 1033 But see also Neuberger & Lobgis, arguing that navigation and moderation are editorial activities, though with a lesser influence on public opinion forming (Neuberger & Lobgis, 2010), p. 155.

Neuberger shows, can directly impact the diversity of news reporting (Neuberger & Lobgis, 2010).

Wider direct or indirect influences on user rights and democratic freedoms: these include wider concerns that are not directly related to the generation, accessibility, findability etc. of diverse and plural content, but about the conditions and how this affects fundamental rights and freedoms. For example, this can refer to the impact of personalization and targeting strategies on user freedom and autonomy (Zarsky, 2003), shared cultures and values (Schoenbach, 2007), democratic participation (Sunstein, 2007) and diversity of media consumption (the filterbubble argument) (Pariser, 2011), but also social sorting and discrimination (Zarsky, 2003).

Common to at least the first four categories are concerns about the alleged **gatekeeper position** of information intermediaries such as search engines, social networks and app stores, and the level of power and influence they can exercise about the different phases in media supply, distribution and consumption (Neuberger & Lobgis, 2010). In an environment of information abundance and reduced costs of entry it is not so much, or not only the traditional media that exercise control over who has access to the audience and the audience's attention (Goldhaber, 1997; Van Hoboken, 2012; Hargittai E. , 2007; Hindman, 2003). In the 'attention' economy new players share in this control, by exercising influence on the accessibility, findability, evaluation, recommendation and functionality of media offers. Helberger points to the important of 'information about information' (Helberger, Controlling Access to Content. Regulating Conditional Access in Digital Television, 2005). And as van Hoboken observes: *"In the networked society, it is simply not enough to publish ones views to effectively participate in online debate. Winners and losers, from the perspective of effective dissemination of information and ideas, are partly determined by successful representation in search engines and related selection intermediary services. In particular the impact of search engines and the algorithm they deploy for the prioritization of the publicity of certain sources of information over others have become and important issue in the debate about the effective dissemination of information and ideas, both from the perspective of information providers as well as end-users"* (Van Hoboken, 2012). For general purpose search engines in particular, their underlying business model may create incentives to present popular rather than diverse and/or qualitative contents (Van Hoboken, 2012; Marres & de Vries, 2002; Roehle, 2010) (see also Chapter 3). In addition, their knowledge about the user, coupled with personalization strategies, is often considered to be a particular source of control and influence over (exposure) diversity and pluralism. To the extent that the ability to control findability and relative accessibility is combined with market power, this often is mentioned as additional reason for concern, though one should be careful to note that market power does not automatically translates into abusive or, here, diversity-reducing behavior (Van Hoboken, 2012; Ofcom, 2012).

The discussion about the new information intermediaries builds forth on earlier discussions about the information intermediary function of **‘traditional’ platforms** such as pay-TV platforms and EPGs (Helberger, Controlling Access to Content. Regulating Conditional Access in Digital Television, 2005; Marsden & Cowie, 1999). It will be necessary to **identify the differences** before drawing conclusions on possible regulatory parallels (see Chapter 3). One obvious differentiating factor is the lack of exclusivity in e.g. search engines but also social networks: search engines and social networks are not the only means of accessing online media content (something different could apply under circumstances to proprietary app platforms), nor is online media content the only source of information that people consume (in addition, they use tv, newspapers and radio) (see also Chapters 2 and 3). The realization of media pluralism as a policy goal is, as OFOM has pointed out, also “not only about number and range of media, but also at their level of consumption and relative ability to influence and inform public opinion” (Ofcom, 2012). Accordingly, more insights are needed on how media content consumption exactly influences public opinion forming, and what the role of information intermediaries is in this and how they influence access of and to the audience. Unlike for the case of pay-TV, moreover, users are not required to acquire a particular hardware and enter into (often long-lasting) subscription contracts, which is important for the assessment of eventual lock-in situations and the sustainability and potential duration of a potential gatekeeper position. Typically, the new information intermediaries such as general purpose search engines, app platforms and social networks are also not interested in exercising editorial control themselves, or promoting a particular politically or ideologically motivated selective exposure (see Chapter 3).^{CITATION Paa12 \l 1033} Finally, there is a far greater role of the audience in influencing which types of content are visible and available to them, through feeding the system with particular search terms for example.

The question is then what are the conditions and **factors that turn the new information intermediaries into a gatekeeper facility** for a plural and diverse media environment. There seems to be some consensus at least in the academic discussion that in this context it is not only economic power that is relevant but new forms media or opinion power (“Meinungsmacht”) that are not necessarily captured by existing media concentration laws (Craufurd Smith & Tambini, Measuring Media Plurality in the United Kingdom: Policy Choices and Regulatory Challenges, 2012; Schulz, Dreyer, & Hagemeyer, Machtverschiebung in der oeffentlichen Kommunikation, 2011; Laidlaw, 2010) (see also Chapter 3). There is, moreover, also a need to differentiate according to the persistency (“Haltbarkeit”) (Schulz, Dreyer, & Hagemeyer,

^{CITATION Paa12 \l 1033} (Ofcom, 2012), p. 27: pointing out that If search and aggregation services would start to discriminate editorially between alternative sources of news, this would be a significant development for the realization of media pluralism.

Machtverschiebung in der oeffentlichen Kommunikation, 2011) and impact of that power. Laidlaw, for instance, suggests that the influence of information intermediaries on democratic processes depends on a) the democratic significance of the information controlled and b) whether communication occurs in an environment more closely akin to a public sphere (as opposed to the private sphere) (Laidlaw, 2010). Schulz, Dreyer and Hagemeyer take a different approach and distinguish between different reasons for media power: while trust and user expectations respond more flexibly to abuse of power and user dissatisfaction, media power as the result of network effects or technical and contractual lock-ins is more stable a state, and hence also potentially a greater cause of concern for the regulator (Schulz, Dreyer, & Hagemeyer, Machtverschiebung in der oeffentlichen Kommunikation, 2011; Helberger, Exposure Diversity as a Policy Goal, 2012).

It is important to remember, however, that it is also exactly their potential to make information visible and accessible why information intermediaries can have a very **positive effect on diversity and pluralism**. Clearly, by helping users to find and encounter plural sources of information (e.g. in the context of a search request) and providing an easy to use and convenient route to access, but also means to bring order into the unprecedented amount of information and media content available, information intermediaries can help people to find, choose and consume more diverse, as well as to improve the chances for also smaller, less well-known information providers to find an audience (see also Chapters 2 and 3). There is evidence that, for example, that the use of Electronic Program Guides can result in more diverse exposure (Stark, 2009). Specialized information intermediaries could even have a pro-active role in leading users to more diverse information (Helberger, Diversity by design, 2012). Finally, as van Hoboken correctly points out, much of the impact of search engines and other (interactive) information intermediaries also depends to a substantial degree on the end-user, her skills, preferences and behavior (Van Hoboken, 2012). Also these are aspects that need to be considered and weighted.

CONCISE OVERVIEW OF THE MAIN REGULATORY RESPONSES DISCUSSED

The following chapter will introduce some of the main regulatory responses that have been suggested to accommodate the role of information intermediaries for media diversity and pluralism. In so doing, the chapter will concentrate in particular on remedies that are designed to promote media pluralism and diversity, not e.g. measures of consumer protection or competition law. For this purpose, a rough distinction can be made between access-related remedies, including rules on due prominence; the application of the rules on media concentration and cross-media ownership and additional pluralism safeguards.

Access-related remedies, including due prominence rules

In essence, **two different kinds of access obligations can be distinguished**: the obligation to provide access at fair, reasonable, content-neutral and non-discriminatory terms (FRNNDS) and the obligation to positively discriminate, e.g. by giving preferential access (or priority) to certain kinds of contents or services of general public interest. An example of a FRNNDS obligation are the rules on 'net neutrality', e.g. in the Netherlands, that prohibit ISPs from discriminating between content providers and inhibiting or even foreclosing access of users to their services (subject to a number of limitations such as the need to tackle congestions) (for a discussion see (Van Eijk, 2011). Another example of a 'neutral' access obligation is the obligation in telecommunications law according to which providers of public communications service must grant access to their network or services to competitors at 'fair, reasonable and non-discriminatory terms' (FRNDS) (for an extensive discussions of the access obligations in the Access Directive see (Helberger, Controlling Access to Content. Regulating Conditional Access in Digital Television, 2005). Though content-neutrality is not explicitly being mentioned, it is the underlying assumption due to the principle of (regulatory) separation of matters of content and infrastructure that dominate European media and telecommunication law. Telecommunications law is making some exceptions to that rule, though, for example for the case of access to the Electronic Program Guide.

Art. 6(4) of the Access Directive allows member states to impose additional presentational requirements on operators of **EPGs** (for example due prominence of local programming or the programs of the public service media) (for a discussion see (Helberger, Controlling Access to Content. Regulating Conditional Access in Digital Television, 2005). For the time being, only few member states have actually made use of this provision, amongst them Germany and the UK (Van der Sloot, 2012). Therewith, Art. 6(4) of the Access Directive is also an example of a positive discrimination obligations, i.e. the obligation to grant access to third party services or content offers, why distinguishing between different offers and services, and granting some preferential treatment (in the public interest). Another example are the so-called must carry rules. For example, according to German law, cable providers are obliged to provide access to a content platform as well as to guarantee a sufficiently diverse offer when composing a program bundle. CITATION Paa12 \1 1033

Both type of access rules have been suggested for the new information intermediaries. For example, in the UK, Forester suggested that "digital intermediaries found to be affecting plurality could be required to guarantee that no news content will be blocked or refused access, unless for legal or other good reason" (i.e. a neutrality obligation) but also that certain types of news content deemed to be in the public interest would be carried by digital intermediaries, and in a prominent

CITATION Paa12 \1 1033 Art. 52 Interstate Broadcasting Treaty.

position” (a positive discrimination obligation) (Foster, 2012). In Germany, there has been a discussion to what extent the rules about access to platforms could be applied or extended to new information intermediaries. Germany established in its broadcasting law an obligation according to which also providers of content platforms ^{CITATION Paa12 \l 1033} (with significant market power) are obliged to provide access. Providers of digital navigators are moreover required to represent specified programs specifically. ^{CITATION Paa12 \l 1033} The platform obligations in their current form probably do not apply to search engines (as the provision is reserved for broadcasting and broadcasting-related services) (Danckert & Mayer, 2010; Schulz, Dreyer, & Hagemeyer, *Machtverschiebung in der oeffentlichen Kommunikation*, 2011; Paal, 2012), though arguments in favor of an extension of the rules have been made, similarly like in the UK (Danckert & Mayer, 2010). Others claim that general competition law, and here in particular the non-discrimination rule, may suffice (Schulz, Held, & Laudien, *Search Engines as Gatekeepers of Public Communication: Analysis of the German framework applicable to internet search engines including media law and anti trust law*, 2005; Bahr; Kuehling & Gauss, 2007).

Which route to follow, if any, obviously **depends also on the type of information intermediaries involved** (see also Chapter 3). For example in the context of search engines, one may wonder about the potential benefit or even detrimental effect of a neutrality obligation. It is already very questionable if it makes sense at all to speak of technical neutrality in a service whose main task is the making of selections (based on algorithms) (Grimmelmann, 2010). ^{CITATION Paa12 \l 1033} As Van Hoboken points out, it is the essence of a search engine and its role in the information landscape to “prioritize certain information and ideas over others” (Van Hoboken, 2012). And he continues to make rightly the point that obliging search engines to provide access at fair, content-neutral, and non-discriminatory terms could actually go at the cost of search engine quality (Van Hoboken, 2012). Something different could apply e.g. for an app platform where the business model concentrates on the aspect of providing a market place and bringing buyers and suppliers together.

^{CITATION Paa12 \l 1033} The access provisions in the Access Directive are strictly limited to access to the technical platform

^{CITATION Paa12 \l 1033} 53 (2) Rundfunkstaatsvertrag and Satzung über die Zugangsfreiheit zu digitalen Diensten gemäß § 53 Abs. 7 Rundfunkstaatsvertrag Similar provisions have recently been introduced in the Netherlands in 6a.21 and 6a.21a telecommunicatiewet (Telecommunications Law).

^{CITATION Paa12 \l 1033} Paal, p. 20, suggesting to interpret neutrality in the sense of “unpermissible influence” (Paal, 2012).

Finally, at least in the situation of search engines, access will seldom be the real problem, as in particular a general purpose search engine will have an incentive to be open, and will exclude only under exceptional circumstances (see Chapter 3) (Themelis, 2013; Danckert & Mayer, 2010). Rather, the problem will be, what Themelis, calls, the “actual ability to compete”, (Themelis, 2013) in other words the ranking which is, from the regulatory point of view, a matter of positive discrimination, rather than neutral access. In particular under conditions of content abundance, diversity and pluralism is about making well-balanced selection decisions.

The European Commission in its Green Paper on convergence also seems to be pointing towards a **concept of positive discriminatory access**. After having addressed the potentially problematic effects of information intermediaries for the realization of media freedom and pluralism, the European Commission explicitly refers “must carry” rules and Art. 6 (4) of the Access Directive, ^{CITATION Paa12 \ 1033} regarding the openness of Electronic Program Guides and the possibility for the member states to impose additional obligations concerning the presentational aspects of “electronic program guides and similar listing and navigation facilities”. ^{CITATION Paa12 \ 1033} This reference echoes suggestions to foresee in some kind of access regime for information intermediaries, and search engines in particular, either inspired by the must-carry rules or by the access obligations in the Access Directive. ^{CITATION Paa12 \ 1033}

At first sight, considering Art. 6 of the Access Regulation is an obvious choice, in particular in the search engine context. Both, **EPGs and search engines** are navigational devices with comparable functions (this is particularly true for the more modern converging EPGs that also provide access to online content). Both raise comparable concerns regarding their power to influence user decisions, public opinion forming and media pluralism. Yet undecided is the question of whether Art. 6 actually applies to search engines, e.g. whether they can be qualified as associated facility

^{CITATION Paa12 \ 1033} “Conditions applied in accordance with this Article are without prejudice to the ability of Member States to impose obligations in relation to the presentational aspect of electronic programme guides and similar listing and navigation facilities.”

^{CITATION Paa12 \ 1033} Regarding Art. 6(4) of the Access Directive, see (Helberger, Controlling Access to Content. Regulating Conditional Access in Digital Television, 2005) and its possible role in the search engine/media pluralism context, (Helberger, Exposure Diversity as a Policy Goal, 2012) For a comparative overview of the extent to which the member states have made use of the possibility to regulate presentation aspects, and how, see (Van der Sloot, 2012).

^{CITATION Paa12 \ 1033} For the UK, the suggestion has been advanced by (Foster, 2012). The report has presumably also inspired OFCOM’s investigation into measuring media pluralism: “digital intermediaries found to be affecting plurality .

in the sense of communications law (for a critical discussion see (Helberger, Controlling Access to Content. Regulating Conditional Access in Digital Television, 2005; Van Eijk N. A., 2009).

Not less opaque is the question whether it actually does make sense to entitle member states to regulate the presentational aspects of search engines (or EPGs), for example by mandating due prominence for general interest content, as the European Commission hinted at. There are also **important differences** between search engines and EPGs, including their business model (EPGs are often operated as add-on service by hardware producers or platform operators, and often display only the programs of particular, affiliated providers). The focus of at least the more traditional EPGs is on presenting an overview of the available programming, not on unlocking the digital abundance. Finally, EPGs still largely operate on the basis of programs, whereas users of search engines often search per search term (and not per provider – if a user wishes to see the offers of a particular provider, such as e.g. the BBC, he can always visit the BBC site directly).^{CITATION Paa12 \l 1033} Because of the latter aspect, requiring a search engine to present the contents of the public service broadcaster potentially collides with the primary interest of a search engine, namely to provide relevant search results (see also Chapter 3).

Finally, even in EPG context the viability of access rules as a means to realize diverse exposure questionable stands to questioning: presenting a diverse media choice is **not merely a matter of presentation**. Diverse presentation is not possible without editorial selection. The making of editorial and diverse program choices, so far, has been the task of the traditional media. If one acknowledges that information intermediaries, such as EPGs but also search engines, have a task in presenting a diverse information offer and helping people to choose diverse, one also have to acknowledge that they play an editorial role (for a discussion see also Chapter 3). This may be an acceptable outcome for certain special interest information intermediaries. It can collide fundamentally, however, with the current business model of e.g. general purpose search engines, as well as the way legal responsibility for third party contents is being regulated so far (see Chapter 2). Also, it is impossible to require EPGs or other information intermediaries to present a diverse selection without issuing additional guidance of when a selection is sufficiently diverse (see also below). This again requires a normative conceptualization of exposure diversity.

Media concentration and cross-media ownership rules

^{CITATION Paa12 \l 1033} Accordingly, it would seem that in parts, the initiative of preserving a diverse and plural media offer also online is, among others, with content providers through increasing their visibility. In this context, national policies that limited the possibilities of e.g. public service media to fully exploit the potential of online and mobile platforms are problematic from the point of (exposure) diversity.

National media concentration rules, e.g. in Germany and the UK, are for the time being restricted in their **application to the traditional media** (broadcasting, radio, press) (for the UK: (Ofcom, 2012); for Germany: (Kommission zur Ermittlung der Konzentration im Medienbereich, 2010). One question that has been raised in the literature and in the policy debate is to what extent such rules could be used to control opinion power of new information intermediaries, respectively approach mergers between 'old' and new media in the context of cross-media ownership rules. A major challenge in that context is demonstrating a direct causal link between concentration/market/opinion power and (reduced) media pluralism and diversity (Milyo, 2007). As e.g. van Hoboken points information intermediaries quite necessarily operate in a broader context of other information services (Van Hoboken, 2012). This also means, however, that the level of diversity provided or consumed is the result of a complex interplay between these different actors, posing entirely new challenges for measuring the level of pluralism and diversity in a market and for establishing empirical evidence for pluralism in- or decreasing effects, but also for the definition of the relevant market. CITATION Paa12 \l 1033

In Germany, the **Kommission zur Ermittlung des Konzentrations im Medienbereich** has not excluded a future extension to so called 'related services' (Kommission zur Ermittlung der Konzentration im Medienbereich), but has not done so yet (critical and in favor of the media concentration rules on new information intermediaries e.g. (Schaeferkordt, 2009), against e.g. (Paal, 2012). A study that the KEK has commissioned for this purpose suggested to move away from the traditional Zuschaueranteilsmodell CITATION Paa12 \l 1033 and include criteria such as suggestive power, broad effect and topicality (Neuberger & Lobgis, 2010). In practice this would mean that the control of concentration also in the future would be restricted to services that exercise editor-like influence.

By contrast, in the UK, and in response to the ongoing debate about the need for a new pluralism framework, triggered by **Ofcom's** investigation into the Newscorp/BSkyB merger (Ofcom, 2010), Ofcom suggest to redefine media enterprises or give consideration to a new public interest consideration that includes relevant online organizations, including information intermediaries such as search engines and social networks.

Accordingly, Ofcom will also take information intermediaries into account when measuring the state of media pluralism in the UK (Ofcom, 2012), even if it did not (yet) made any concrete suggestions about the possible legal remedies it would apply. In its analysis, Ofcom made an important

CITATION Paa12 \l 1033 About challenges to arriving at adequate market definitions, (Paal, 2012), p. 24 subsq.

CITATION Paa12 \l 1033 Art. 26 German Interstate Broadcasting Treaty.

point by pointing to the difficulty of identifying analytical levels of influence (p. 38), reflecting the challenges pointed out here earlier (Ofcom, 2012). Ofcom was, to the knowledge of this author, also one of the first regulatory authorities that ventured some more detailed suggestions for more comprehensive benchmarks to measure not only the state of media pluralism, but also whether overall output AND consumption is sufficiently plural:

- A diverse range of independent news media voices across all platforms
- Overall reach and consumption is relatively high among all consumers demographics and across all of the UK's nations and English regions,
- Consumers actively multisource-such that the large majority of individuals consume a range of different news sources
- Sufficiently low barriers to entry and competition between providers spur quality and innovation in the gathering and dissemination of news
- Overall investments and commercial returns are sufficiently high to ensure sustainability, and guarantee high quality coverage, expensive news gathering and investigative journalism,
- No organization or news sources has a share of consumption that is so high as to create a risk that consumers are exposed to a narrow set of viewpoints.

Having said that, these benchmarks are still rudimentary, and what is more, they are not informed by a comprehensive normative conceptualization of exposure diversity. Though a potentially useful starting point, further research is needed to establish the viability and adequacy of these benchmarks.

When so doing, it will be useful to build on Ofcom's point about **sustainability of the information sector**. According to Ofcom, it e.g. could be unprofitable to insist on having a certain number of news providers, which "may already require us to accept a level of plurality which is lower than we would ideally like" (Ofcom, 2012). In other words, it is suggesting a pragmatic approach in which the "design of a future regime needs to take into account the level of plurality that is likely to be sustainable within a particular area, both in the assessment of plurality concerns, and in the design of possible remedies" (Ofcom, 2012).

Another, related aspect concerns calls for initiatives that actively promote a diversity of players (and thus sustainable market structures), rather than simply concentrating on restricting market and/or opinion power. This is why it has been suggested to rethink media concentration measures with a view on lowering entry obstacles and increase supply, rather than to restrict economic or opinion power (Collins & Cave, 2013). In a similar

direction go suggestions for creating incentives or funding competing search engines, so that users can get a 'second opinion' (Schulz, Held, & Laudien, Search Engines as Gatekeepers of Public Communication: Analysis of the German framework applicable to internet search engines including media law and anti trust law, 2005).

Additional pluralism safeguards

At the level of the member states, a variety of national regulatory tools exist with the view on promoting media pluralism and diversity, and again, suggestions have been made to also apply these to the new information intermediaries, for example those concerning the process of **monitoring and supervision**. A closer cooperation between the authorities responsibility for media concentration and general competition law authorities are suggested (Hain, 2006), Tambini and Craufurd even plead in favour of a converged, media-specific competition regulator (Craufurd Smith & Tambini, Measuring Media Plurality in the United Kingdom: Policy Choices and Regulatory Challenges, 2012), while others think more into the direction of mediators and 'public editors' (Meier & Trappel, 2007). In a similar direction, Foster suggests to establish independent access or editorial boards that oversee the decisions of intermediaries (Foster, 2012).

Other suggestions aim at imposing some form of **pluralism and diversity safeguards** on (selected) information intermediaries (other than those of positive discriminatory access discussed above). A wide range of suggestions have been made, covering a variety of issues, including suggestions for an

- objective point system for ranking search results,
- an obligation to always list a pre-defined number of different news sources on the first page of a search result,
- add a search result box on the front page which is designed to find news and views specifically from a range of 'non-mainstream' sources
- require one 'public interest' news source on the front page of any news search
- Internal pluralism safeguards in the form of 'program windows'
- Routinely check for each search query whether the online offers of the press or broadcaster have something meaningful to say, in which case a link should be made to their offers (Danckert & Mayer, 2010; Foster, 2012).

Common to all these and similar 'diversity enhancing' suggestions is the idea of a heightened social responsibility of information intermediaries for public opinion forming and the diversity of the media landscape, and that this responsibility should result in some form of editorially responsibility, respectively imposing editorial obligations. The question, which has already been raised above, is to what extent such a responsibility is compatible at all, e.g. with the business model of a general purpose

search engine, ^{CITATION Paa12 \l 1033} what impact this would have on the overall structure of, and competition within media markets, but also what the other legal implications would be. The applicability of the hosting exemption in the E-Commerce Directive comes into mind. Another question to what extent it is actually desirable to force information intermediaries into a quasi-editorial position. Not only could this conflict with the quality of e.g. search results (Van Hoboken, 2012) (instead of receiving the most relevant search result in relation to a query a user would be presented with possibly less relevant but diverse suggestions). Insofar it would also be important to look into the preferences of the audience. This refers to a point made earlier, namely the fact that media pluralism and diversity is not the only, and also not automatically the dominant value to consider. Ultimately, imposing editorial responsibility on intermediaries may even increase, rather than decrease impact and opinion power of such intermediaries. Seeing the enormous reach that leading social networks and search engines have it could be even rather disconcerting to know that they are legally mandated to actively influence user choices, diverse or not.

CHAPTER 2: MEDIA FREEDOM, PLURALISM AND EXPOSURE: REVIEW OF THE COMMUNICATIONS SCIENCE LITERATURE

The purpose of this chapter is to map out our current empirical knowledge on the main characteristics of the new information intermediaries, as well as on their contribution to both the diversity of supply and the diversity of exposure.

MAIN CHARACTERISTICS OF THE NEW INFORMATION INTERMEDIARIES

In recent years a number of different platforms have emerged as information intermediaries on the internet. In order to discuss their possible impact on media diversity of supply and exposure, it is essential

^{CITATION Paa12 \l 1033} Critical e.g. Paal, p. 55, pointing to the technical impossibility of such a „Algorithmus der Meinungsvielfalt“, also in the light of the sheer number of daily search requests (Paal, 2012).

to understand their main strategies of information selection and how these might differ from those of the classic information gatekeepers, i.e., traditional media outlets.

The central aim of all gatekeepers discussed here is to provide information relevant to their users, ensuring their loyalty. They may differ, however, in their strategies for selecting this information ^{CITATION Paa12 \l 1033}. The selection may be guided by considerations of how **popular** the information is, by the perceived or known **personal preferences** of the user, or by additional **editorial judgments**.

The news selection of traditional news media is based on editorial decisions, which relate in parts to the selection strategies popularity and personalization. The journalists assess the probable popularity based on journalistic news values ([such as negativity, conflict, etc., Galtung & Ruge, 1974](#)) and the perceived interests of the audience. A personalization to the interests of single users is only possible if these provide direct feedback to the media outlet by their own initiative. In addition, editorial judgments based on journalism ethics play an important role, such as a perceived responsibility to inform citizens, to promote media pluralism and diversity (?) as well as to comply with the legislative framework applying to media companies (see also Chapter 1).

Looking at the new information intermediaries, these editorial judgments based on journalism ethics and media regulation remain relevant for news websites. However, the selection strategies popularity and personalization have greatly gained in importance: Most news websites today contain collaborative filtering features, e.g. lists of “most read” or “most recommended” articles. In addition, they offer tools for explicit personalization, such as the opportunity to create interest profiles, subscribe to news feeds and mobile apps, or they conduct implicit personalization through algorithms monitoring past media use (for details on the distinction between explicit and implicit personalization, see [\(Thurman & Schifferes, 2012\)](#)).

Some news aggregators provide original content, for which similar editorial decisions may apply as for online news outlets with regard to journalism ethics. Still, for most major news aggregators, as well as search engines, social networks and digital app stores, editorial judgments are

^{CITATION Paa12 \l 1033} As Laidlaw(2010) as well as Barzilai-Nahon (2008) point out, this “selection” may involve a number of different processes such as “selecting”, “channeling”, “deleting” or “shaping” information.

limited to the criteria on which their popularity and personalization algorithms are based, and whether they block access to offensive or illegal content in order to comply with local legislation. Unfortunately, academic research has so far failed to address the question whether this in itself is sufficient to be considered “editorial control”, triggering the applicability of rules on editorial responsibility (see Chapter 1) CITATION Paa12 \l 1033.

Table X: Selection strategies by information intermediaries

	Selection based on		
Intermediari	Overall popularity	Personalization	Editorial judgments

CITATION Paa12 \l 1033 There is some debate on the neutrality of search engines ([Vogl & Barrett, 2010](#)), but no systematic assessment of editorial policies of the new information intermediaries themselves.

		(explicit/implicit)	
<i>Traditional news media</i>	<i>News values, perceived interests of audience</i>	<i>E: User feedback</i>	<i>Journalism ethics: public interest, objectivity, etc. Media regulation</i>
News websites	Collaborative filtering: recommendations, overall popularity	I: past clicks E: news categories	criteria for algorithms categories offered to users Own content: journalism ethics, media regulation
News aggregators	link structure, click rates, etc.	I: past clicks E: news categories	criteria for algorithms News categories offered to users Block access to illegal material? Own content: journalism ethics, media regulation?
Search engines	link structure, click rates, etc.	I: past searches E: search categories	criteria for algorithms Search categories offered to users Block access to illegal material (on country-to-country basis)
Social networks	Collaborative filtering: recommendations, overall popularity	I: friends, likes etc. E: friends, likes etc.	Presentation of news feed, ranking criteria Promote specific causes Remove libelous, defamatory, pornographic content, complaints, comply with local laws
App stores	Popularity, sales, recommendations	I: past searches/buy	Recommendation criteria

IMPLICATIONS FOR DIVERSITY OF SUPPLY AND PUBLIC OPINION FORMATION

Given their different strategies of selection, information intermediaries also contribute in different ways to the diversity of supply and to public opinion formation.

In order to generate more loyalty in online audiences, online news sites have increasingly employed strategies of explicit and implicit

personalization using both adaptive interactivity and collaborative filtering ([Thurman & Schifferes, 2012](#)). Despite the much discussed “filter bubble” ([Pariser, 2011](#)), this currently does not appear to result in a drastic reduction in the diversity of supply: News sites continue to provide a lot of “opportunities for serendipitous discovery” and some forms of passive personalization such as “contextual recommendations” may even result in a greater diversity of sources ([Thurman & Schifferes, 2012, p. 787](#); [Westlund, 2012](#)). Furthermore, most online newssites enhance the diversity of supply by offering discussions forums, allowing user comments, and even encouraging users to submit their own articles ([Singer et al., 2011](#)).

Both search engines and news aggregators provide their users with long lists of sources they would have had difficulties to find on their own. The overall variety on these lists is great, often including smaller, less-known sources, from all corners of the globe, which may lead to a diversification of the news supply: For example Thurman ([2007](#)) can show that today Americans make up a third of the audience of British news websites due to their visibility on international news aggregators such as Google News. While this represents a diversification of news supply for the individual (American) user, it may also contribute to an overall reduction of supply diversity from a global perspective, increasing transnational competition between media outlets. In addition, this phenomenon is limited to popular topics and websites. More specialized media outlets, or those originating in smaller (online-)markets, are less likely to achieve good rankings in the lists of search engines and news aggregators and thus less likely to profit from new transnational reader flows. In general the ranking algorithms of both search engines and news aggregators strongly favor very popular sites (see also Chapter 3), thus leading to a high degree of concentration on a small number of sites in the first rows ([Hindman, 2007](#); [Watanabe, 2013](#)) (see also Chapter 3).

Social media may also greatly increase the diversity of supply, as they allow not only news organizations, but all their members to publish news. The collaborative filtering on social media platforms can then assist these voices to gain in popularity and visibility. They are therefore sometimes credited with being able to create an alternative news agenda, for example during the Arab spring ([Newman, 2011](#); [Papacharissi & de Fatima Oliveira, 2012](#)). Despite these unlimited possibilities, a great share of “news” on social media in fact link to the content of major news outlets, with Facebook emerging as the second to third important driver of traffic to US news sites ([Olmstead, Mitchell, & Rosenstiel, 2011](#)). Journalists also successfully promote their work on Twitter and generate traffic to their news website ([Ju, Jeong, & Chyi, 2013](#)), with 75 percent of shared news on Twitter in the UK linking to traditional news outlets ([Newman, 2009](#)). This increased diversity is thus mostly limited to the contributions of journalists who are very active and skilled in social marketing themselves and have succeeded in creating strong communities of followers.

As far as public opinion formation is concerned, in particular search engines, news aggregators, social networks or app stores operated by major commercial companies show little inclination to assume an active editorial role in the gathering of news or opinion formation (see also economic chapter). Why they mostly assume some editorial responsibilities regarding content in conflict with existing legislation ^{CITATION Paa12 \l 1033}, so far there has been little indication of either a commitment to journalism ethics such as a sense of informing citizens for public interest or an interest in setting an identifiable political agenda. The companies behind these new gatekeepers provide little to no information on these matters, making a systematic academic assessment difficult.

Though Google News introduced the service “editors’ picks” in 2011, this did not represent an attempt by Google to assume a more editorial role or even influence public opinion. Instead this feature only allows editors of prominent traditional news companies greater control over how their articles perform in the rankings. Still, smaller news aggregators offering more specialized services for certain topics or sub-cultures may attempt to assume a more traditional gatekeeper role for their audiences. For example, the local news aggregator Dichtbij.nl provides news service for 400 Dutch communities and to this purpose employs journalist who select, sometimes “enrich” items from other sources and write original articles, mainly from a human interest or commercial point of view ([Bakker, 2012](#)).

It appears that the contribution of these information intermediaries to classic news gathering and public opinion formation is mostly limited to their use by journalists of classic news media. Studies of journalists’ work habits in Germany have shown that they heavily rely on search engines for a number of purposes, including the search for counter-arguments. In the perception of the journalists, search engines greatly facilitate their work ([Neuberger, Nuernbergk, & Rischke, 2009](#)). However, most of them use on one search engine exclusively (google) and also do not display a more sophisticated use of search engines than the average user, rarely going beyond the first entries on the search list. They therefore do not take full advantage of the diversity of supply by these intermediaries. In a similar manner, journalists only employ a very small range of news aggregators (mainly Google News) ([Springer & Wolling, 2008](#)).

Social networks, in particular Twitter, are also increasingly employed by journalists as news sources themselves or gateways to news sources ([Broersma & Graham, 2013](#)). A comparative analysis of the use of Twitter in coverage of British and Dutch elections indicates that the impact on diversity of supply strongly dependent on the national twittersphere and its political discourse culture: While in the Netherlands politicians could

CITATION Paa12 \l 1033 For a case-by-case overview of Google’s (and other information intermediaries’) content retractions and blockages for legal reasons, see ([Kohl, 2013](#))

increase their chances of being quoted in the media, British media used Twitter more strongly to give voice to ordinary voters ([Broersma & Graham, 2013](#)).

From the perspective of the diversity of supply, apps stores represent an important bottleneck, as news suppliers are required to agree to the terms of services of the commercial app store providers which usually stipulate not only a high share of the revenue, but also access to customer data. As a result of this, some major news providers (e.g. the Financial Times) have created their own apps, while in particular smaller news outlets have chosen not to provide an app. On the other hand, news apps represent one of the few successful online revenue-models available to news providers today, and may therefore help to ensure the future commercial existence of news organizations.

IMPLICATIONS FOR DIVERSITY OF EXPOSURE

Though search engines and news aggregators are part of the everyday news repertoires of many people, traditional news outlets such as television, online newssites of traditional outlets and print newspaper remain by far the dominant sources of information (see Chapter 3 for details). This should not be surprising, given recent experimental research into selective exposure: People tend to prefer individual news stories offered by the traditional news outlet they are most familiar with ([Iyengar & Hahn, 2009](#)), and this connection appears to be grounded more in habits of media use than partisan preferences ([Mutz & Young, 2011](#)) ([Stroud, 2008](#)).

For those citizens using search engines, it has been shown that the majority of them limit their search to the first few entries on the list ([Keane, O'Brien, & Smyth, 2008](#)). Therefore, the increased diversity of supply provided by search engines probably does not translate into a greater diversity of exposure. However, there is also no evidence that (personalized) search engines and news aggregators increase the passive selective exposure to attitude-consistent news among their users ([Mutz & Young, 2011](#)). In fact, a main finding of the research on selective exposure remains that though users may prefer to consume attitude-consistent content, they invest little effort in avoiding attitude-discrepant news. On the contrary, when confronted with attitude-discrepant news, they tend to invest more time reading and processing the information ([Garrett, Carnahan, & Lynch, 2013](#)).

Therefore even though traditional media outlets offer more opportunities for users to “accidentally” encounter opinion challenging information (which they could choose not to read/watch, but they would still notice its existence), there is no evidence that the new information intermediaries strongly inhibit contact to attitude-discrepant news. They may curtail these opportunities somewhat and increase the effort required to access this content (another link to click), which in turn could facilitate the avoidance of attitude-discrepant news. However, despite the existence

and substantial use of search engines and news aggregators, most empirical studies report continuing significant audience overlaps in particular for moderate news outlets ([Webster & Ksiazek, 2012](#)) ([Garrett et al., 2013](#)).

As far as the different tools of explicit personalization used of by news aggregators, newssites and social media are concerned, a number of studies have shown the reluctance of readers to put any form of effort into a personalization of their news supply ([Gauch, Speretta, Chandramouli, & Micarelli, 2007](#); [Thurman, 2011](#); [Thurman & Schifferes, 2012](#)), despite the fact that personalization has been shown to improve users' attitude and loyalty to websites ([Kalyanaraman & Sundar, 2006](#)) This may in part be due the discrepancies between users' declared interests and actual news interests ([Lavie, Sela, Oppenheim, Inbar, & Meyer, 2010](#)). In other words, The feared reduction in the diversity of supply through explicit personalization thus only applies to a small number of users. In addition, no news information site (whether news aggregator or specific news site) currently offers an option to specify partisan or ideological leanings ([Mutz & Young, 2011](#)), ([Gentzkow & Shapiro, 2011](#)).

In order to assess whether the feared "filter bubble" ([Pariser, 2011](#)) actually exists, researchers would have to analyze on the one hand the personalized news experiences provided by implicit personalization features of newssites and apps and on the other the personalized outputs of the collaborative filtering mechanisms used by all new intermediaries, as for example the "recommendations by other users" may differ for each user. Currently, this remains an important research gap due to the great difficulties in gathering this kind of data. Nevertheless, it should be considered problematic that users have no knowledge of the selection criteria on which the processes of implicit personalization are based and that they are not provided with any tools to change them or turn them "off". Thus they are unable to assess how limited their news selection is. Again research on selective exposure has shown that individuals perceive a greater need for orientation in specific situations (for example during election campaigns) and are then more willing to engage with attitude-discrepant news ([Garrett, 2009](#)). Without any specific knowledge and control of the implicit personalization processes, they would be unable to reverse it in case of need.

In social networks users have been shown to follow, mention and reply in particular to other users with similar views ([Himmelboim, McCreery, & Smith, 2013](#)). At the same time, commentators on partisan Facebook pages also mostly provide ideology-consistent links ([Robertson, Vatrappu, & Medina, 2009](#)). Though this does imply limitations of exposure diversity in these networks, there is also empirical evidence of cross-cutting exposure and conversation: Though partisan users disproportionately talk with likeminded others on Twitter, they do not ignore those with differing opinions ([Borah, Edgerly, Vraga, & Shah, 2013](#); [Himmelboim, Smith, & Shneiderman, 2013](#)).

And finally from a user perspective, app stores facilitate access to news, in particular from mobile devices and can thus encourage users to follow one or several news sources regularly.

OVERALL IMPLICATIONS FOR INDIVIDUAL CITIZENS AND THE POLITICAL COMMUNITY AS A WHOLE

Seen from the perspective of individual users, search engines, news aggregators and social media may represent an increase in media diversity in comparison to single traditional media outlets (or the small set of traditional media outlets regularly accessed by most individuals). Due to their habits of media use and simplification strategies, individuals are more likely to select links connecting to the most popular or most familiar media outlets, thus restricting the diversity of exposure. But they will have had a greater diversity of supply to choose from.

For the personalization of news websites, this is probably less the case: Though contextual recommendations might encourage users to explore new topics, the overall lack of transparency and control regarding the selection criteria can entail a strong decrease in diversity of supply that the individual cannot easily notice or revise.

By contrast from the perspective of the political community as a whole, the new information intermediaries are likely to contribute to an overall reduction in the number of news suppliers, and hence the overall diversity of supply. As news organization today strongly depend on online revenue, “the winner takes it all”-rationale of most search engines and news aggregators will encourage further concentration in this sector (see also Chapter 3). However, individual news suppliers can resist this trend by employing the new gatekeepers to their advantage (via social media marketing or search engine optimization) or by cultivating niche audiences.

Table X: Impact of different information intermediaries on diversity of supply and exposure

	Diversity of supply	Diversity of exposure
news websites	- personalized content = opportunities for discovery + contextual recommendations	+ no (explicit) ideological selection possible - no control of criteria/switch off
News aggregators	+ range of news sites - focus on popular items/news sites	+ no evidence of increased passive selective exposure -/+ generate traffic to mainstream news websites (=most familiar)
Search engines	+ range of result list - ranking based on link structure/popularity + journalists’ use to identify sources for contra arguments	- users focus on first items -/+ generate traffic to mainstream news websites (=most familiar)

Social media	+ access to unfamiliar news channels - participation through like-minded networks + access to sources for journalists	+ cross-cutting exposure and dialogue occurs - preference for like-minded users
App stores	- news providers have to agree to app stores' terms of service □ limited news offer	+ facilitates access to news on mobile

CHAPTER 3: NEW INTERMEDIARIES AND NEWS PLURALISM - ECONOMIC ISSUES

This chapter considers economic issues in the interplay between intermediaries, pluralism and diversity. The incentives to differentiate media products have deserved considerable attention in the economic literature. Intermediaries such as search engines have also been studied, with respect to the quality of (organic) search results, competition and market structure. This chapter of the quickscan will review three themes from the literature and conclude with a synthesis:

- Economics of media pluralism: concentration and differentiation;
- Intermediaries and search engines' quality;
- Competition in the market for news: is the intermediary a gatekeeper?
- Synthesis: intermediaries' incentives to affect pluralism

ECONOMICS OF MEDIA PLURALISM: CONCENTRATION AND DIFFERENTIATION

Seabright and von Hagen (2007, p. 150) introduce the core of pluralism as *"the fair, balanced and unbiased representation of a wide range of political opinions and views - a fundamental component in the working of modern democracies"*. Before going into definitions, the authors note that digitisation and the Internet have resulted in a better realisation of pluralism today than two decades ago *"with an incomparably larger number of media available for the diffusion of ideas"*. CITATION Paa12 \l 1033

Nevertheless, there are high levels of concentration in traditional media markets in European countries. In terms of readers, the combined market share of the three largest providers of national press is in France,

CITATION Paa12 \l 1033 Ibid., p. 150.

Germany and the UK 70% or higher (in 2002-2003). CITATION Paa12 \l 1033

Arguably, pluralism is more a political than an economic objective, yet it's realisation depends largely on market forces. To analyze incentives, a twofold definition of pluralism is provided. External pluralism characterises the total range of content in a given media market, across providers. CITATION Paa12 \l 1033 Internal pluralism, on the other hand, characterises the range of content supplied by an individual media provider.

A further distinction can be made that is related to the concept of 'exposure diversity' mentioned in chapter 2: pluralism can be assessed either by looking at the mere supply or by focusing on the consumers' actual choices from the available supply. From the economic point of view (?), this puts the issue of preferences on the forefront, as Michele Polo observes in the context of broadcasting: *"If we think that the general public is in the position to make informed and independent choices on the media or programme/article to patronise, availability of different views should be all that matters; if we presume that the public always chooses its preferred political contents, the ex post observation of actual choices should simply reflect the distribution of preferences, over which we should be neutral."* (Polo, 2007, p. 153). If, on the other hand, consumers' choices are distorted by lock-in or other frictions such as bundling of content, their choices may not reflect their preferences and regulatory action may be warranted even when the available supply is considered to be sufficiently diverse.

Polo (2007) analyzes the incentives for both external and internal pluralism, drawing on the existing literature. The main insights from this theoretical literature are as follows. First, the principle of 'Maximum Differentiation' holds that media companies facing a public of viewers characterised by heterogeneous taste for content and a disutility from advertising will choose maximally differentiated content vis-à-vis each other (Gabszewicz et al. 1999). It is important to note that the

CITATION Paa12 \l 1033 This C3 concentration ratio measures the share of the three largest players as a percentage of the total market for national press and thus ignores the question whether the relevant market should be defined wider.

CITATION Paa12 \l 1033 News is produced by journalists and other editorial staff who are guided by a editorial mission statement (Baarsma et al., 2013) and another useful criterion is therefore the diversity in independent editorial offices. Thus, external media pluralism can translate to diversity in independent editorial offices or diversity in independently controlled news suppliers. The more journalists work for independent managers or editors, the higher the diversity in the news supply.

differentiation of content will occur for the dimensions that the public cares about. Thus, if the public is heterogeneous in terms of e.g. entertainment and not in terms of their interest in politics, Maximum Differentiation entails that media companies differentiate themselves in entertainment but converge to a median or central political positioning. Thus when there are multiple dimensions of content, firms will maximally differentiate on the dimensions that are more important for consumers, while converging to minimum differentiation on the dimensions that are less important to consumers (Irmen and Thisse 1998). Second, when investment in quality is taken into account the prediction is different. Improving quality results in fixed costs. For the case that the distribution of tastes is very concentrated on a limited number of varieties, there is little scope for differentiation, due to the fact that firms need to compete intensively on the quality they provide for the singular preferred variety (Motta and Polo, 2001). Thus, the authors conclude, the concentration of firms caused by the fixed costs spent on quality, combined with the public's relatively undifferentiated tastes, weakens the provision of external pluralism by the market.

Does the market provide for internal pluralism? This concerns the supply by an individual firm and is therefore directly relevant for the main topic of this quick scan. The answer largely depends on, again, consumer preferences, media companies' (partisan or lobbying) motivations and the different dimensions of content. To illustrate the latter: *"While some sports fans like to watch football and basketball matches, and motorbike and Formula 1 races, there are few politics fans who derive the same satisfaction when listening to both left-wing and right-wing politicians."* (Polo, 2007, p. 168). In the context of broadcasting and other traditional media, Polo (2007) concludes that the incentives for providing internal and external pluralism are rather weak. Basically, differentiation can be expected to follow consumer preferences. However, competition for the more popular varieties limits the number of players in equilibrium, leading to a concentrated market structure. An individual firm has incentives to offer diversity in the content it offers, but this may be less the case for political views and opinions due to the ideological demand characterising the audience. The extent to which these theoretical predictions hold also currently in a landscape where online is an avenue for further research, including (i) the empirical question of what the consumer preferences are and (ii) the political question on what dimensions of content pluralism and diversity is desired. We next turn to the role of intermediaries.

INTERMEDIARIES AND SEARCH ENGINES' QUALITY

How does a search engine transform the available sources of news that are 'beyond the gate' to search results that a consumer finds on his or her screen? In terms of the discussion above: what are the incentives for an intermediary to provide internal pluralism? Market intermediaries may play four major roles (Belleflamme and Peitz, 2010): 1) dealer: the intermediary buys goods or services from suppliers and resells them to sellers; 2) platform operator: the intermediary provides a platform where buyers and sellers (or simply various groups of agents/consumers) are able to interact; 3) informational intermediary: the intermediary acts as an information processor, allowing consumers to access and process more efficiently information about resources, goods, services, prices and other characteristics; 4) trusted third-party: the intermediary acts as a certification agent by revealing information about a product's reliability or quality.

A search engine is an example of an informational intermediary; a social networking site is an example of a platform operator; whereas an appstore is a combination of a dealer and a platform. Importantly, network effects play a role in the latter two: a consumer prefers to use the social network where many *other* consumers are. An app user wants to use the platform that features many app sellers, and vice versa: the app seller prefers the platform used by as many users as possible. Hence, the social network and the appstore are so-called *two-sided markets*. It is well-known in the literature that an equilibrium can sustain only a small number of such intermediaries and a concentrated market structure is thus expected (Belleflamme and Peitz, 2010). The analysis is different for the search engine. Consumers care about the results they get, but arguably not about the types and number of other users using the search engine. Website owners care about being included in search results but typically all websites are included in the algorithms of all search engines in the market (put differently, website owners *multi-home*).

The business model of a search engine is to attract users in order to gain income from advertisements (Taylor, 2013). According to Frijters and Velamuri (2010) this continues to be dominant model also for news markets, despite digitisation and the rise of the internet. The product a search engine delivers, the search results, must be attractive for consumers. Therefore, search engines invest in improving the quality of the organic search results (Varian 2008, Taylor 2013). According to some findings in the literature and Google's statements, they also *compete* on quality: 'competition is a click away' (Gandal, 2001). Hence, search engines have an incentive to invest in quality in order to maintain and improve attractiveness for users. The open question is however whether

quality implies pluralism. Presumably, search algorithms rank websites on the basis of popularity (one of the algorithms used by Google is *PageRank* and this algorithm favours websites that receive a higher number of referrals). There could thus be a tension between quality and pluralism: consumers prefer a ranking based on popularity which implies convergence of search results to a limited subset of frequently used websites. The same can be said about social network sites where the urge to follow others may reduce pluralism.

Recently there has been considerable attention for the possibility that internet search engines could manipulate the search results that they offer to users. This has also led to high-profile investigations into Google's search results production by regulators in both the European Union and the United States. Taylor (2013) discusses the quality provided by search engines and whether competition will ensure that search engines will improve quality. Search results are typically provided to users for free but search engines provide two types of results: organic results (so called O-links) and paid-for results (advertisements or A-links). The two types of search results may compete with each other: improving the O-links may divert users away from the A-links and thus reduce income from advertisers. Thus, searchers could be satisfied with the O-links and not click the A-link. The paper theoretically shows that this interplay may lead to equilibria in which search engines deliberately degrade their (organic) results quality - even when faced with competition. This problem is worsened when consumers are loyal to or locked-in with their search engine. This cannibalization process between organic and sponsored results provides also the insights that consumers may benefit from an improvement in the quality of sponsored links. Quality degradation is likely to occur when sponsored link quality is highest. The article shows that improvements in sponsored link quality can result in a downward distortion of organic link quality that leaves consumers worse-off overall. Likewise, a reduction in switching costs might be expected to foster competition between search engines. However, because search engines have little incentive to compete for the attention of consumers who will switch before clicking on an advertisement, the paper concludes that high switching costs may be pro-competitive. Even accounting for the fact that switching costs impose a direct burden upon consumers, the article demonstrates that overall consumer utility can fall if such costs are reduced. See also White (2014) on results for a monopolist search engine that offers both organic and sponsored results. These findings show that the quality of search may be suboptimal and this is likely to affect pluralism. The link between quality and pluralism is however an open question.

De Corniere and Taylor (2013) analyse the issue of search engine bias when the search engine is vertically integrated with a content producer. In their model, a monopoly search engine directs too much traffic toward those web sites that do not provide much competition in the ad market. Allowing the search engine to integrate with a content site need not increase the prevailing level of bias and may, in fact, cause equilibrium bias to fall. The issue of bias directly translates to a reduction in pluralism as defined above and the outcome is therefore highly relevant. However, the article is one of the first to study this issue and it remains to be seen whether the conclusions hold in other settings. Lastly, there is some literature on the practice of search-engine optimization in which website owners try to distort search results in their favour (Berman and Katona, forthcoming). See also Pollock (2010) for theoretical models of the on-line search industry.

COMPETITION IN THE MARKET FOR NEWS: IS THE INTERMEDIARY A GATEKEEPER?

There are a number of articles that consider the 'health status' of news markets after the emergence of Internet and online news. Frijters and Velamuri (2010) analyse the market for high-quality news and, largely based on US data, derive three stylised facts: "i) quality news markets are dominated by merely a few providers, ii) demand for quality news appears stable, but provision of news has become specialized; mainstream news is decoupled from quality news, and iii) the dominant business model of internet news mirrors that of radio, television, and newspapers in that costs of news production are recouped via advertising" (Frijters and Velamuri, 2010, p. 2). In this light, it should be noted that, to safeguard pluralism, European regulators impose various constraints, on ownership, on market shares and on licences, on the traditional media companies (see Seabright and Von Hagen, 2007).

Frijters and Velamuri (2010) analyse the following predictions. Firstly, economies of scale in the production of news lead to monopolies on particular markets. Whether these monopolies provide sufficient diversity is an open question. Secondly, easy access to information on the internet makes it cheaper to provide high-quality news and to disseminate it via the web, which increases the production of such news. However, as shown above, this depends on how journalists actually use the internet. Thirdly, the existence of bloggers and news aggregators who recycle the stories of news-providers reduces the effective property rights of high-quality news producers, thus forcing the business model of the internet to be advertisement funded. Cagé (2013) considers media bias and media slant

in relation to newspapers. Under certain conditions, an increase in competition leads to (i) a lower provision of total news and, within these news offerings, (ii) a lower share of information and a higher share of entertainment. In that case, newspaper competition leads to lower political participation than monopoly.

Is the intermediary a gatekeeper? Survey results in several countries indicate that consumers' use of news outlets is varied, choosing from many outlets. Trilling (2013) gathered survey data in the Netherlands that shows that Google News is used by 14% of the population for the consumption of news. Considering all possible news outlets, there are 23 outlets that are used more often than Google News. If we consider only websites, Google News ranks fifth. In Germany, a fifth of the population turns to search engines for opinion forming on political topics, while a quarter relies on access portals of mail providers (news aggregators), ([Hasebrink & Schmidt, 2013](#)). A comparative study in eight Western countries reports comparable figures for social media which are considered to be an important news source for about a fifth (Japan, France, Germany, UK) to a quarter (Italy, Spain, US, Denmark) of the population ([Nielsen & Schrøder, 2014](#)). Still, traditional news outlets such as television, online news sites of traditional outlets and print newspaper remain by far the dominant sources of information. The picture that emerges is therefore that intermediaries are not gatekeepers: consumers can do without them to obtain news and information.

SYNTHESIS: INTERMEDIARIES' INCENTIVES TO AFFECT PLURALISM

The quick scan on economic literature yields the following insights. Firstly, considering the market of media suppliers, it was shown that the incentives to deliver media pluralism may be insufficient. An important issue is consumer preferences. The market does not always function well but even if it does – and consumers get what they want – the objective of pluralism may not be fulfilled. This is partly a policy question because the concept of pluralism is not fully concretised. Secondly, modelling intermediaries' incentives with respect to pluralism is a relatively new and small field in economics. A number of articles argue that search engines compete on quality but the incentives to improve search may be distorted, e.g. when improving organic search results cannibalizes on income from advertising. Improving quality basically means serving consumers better but this may diverge from offering plural search results on page 1. In fact, for the context of internet search the definition and desirability of pluralism need to be clarified. An intermediary does not produce news itself but merely assists the user with finding and accessing

it. Search results are dependent on the search query and thus the user also plays a role in the information that he or she will be exposed to. Nevertheless, more (empirical) research is needed into the formation of search results, particularly with respect to search neutrality and search bias. Thirdly, intermediaries face competition from other intermediaries and other outlets that provide information and news. The effect of this competition depends on the search query of the user and the user's habits. Arguably, the more specified the search query or need for information, the easier it is to find a competing outlet and to avoid bias in the search results.

CHAPTER 4: CONCLUSIONS AND OUTLOOK

SOME CONCLUDING OBSERVATIONS

When investigating into the role for, and effects of the activities of information intermediaries for the realization of media diversity and pluralism as important public policy objectives, it is important to not only consider their impact on the diversity of supply (i.e. access of media providers to the 'market place'/the audience), but also their impact on the diversity of exposure, realistic access of the audience to media content, and the implications of information intermediaries for the diversity of choices people make.

The latter aspect, diversity of exposure, is still widely neglected in the regulatory debate. The existing regulations and procedures to safeguard pluralism and diversity in the media concentrate mainly on the aspect of diversity of supply. Effective pluralism regulation will also need to take into account the other, audience-dimension of media pluralism and diversity and might need to find ways to create the conditions for realistic accessibility and diverse exposure to media content, depending on the actual conceptualization of (exposure) diversity and pluralism.

This quickscan gave a first indication that information intermediaries can have both, positive and negative aspects on diversity of supply as well as diversity of exposure. The assessment of whether the positive or the negative effects overweight is rendered more difficult by the lack of concrete benchmarks of a) what diverse supply means in relation information intermediaries such as search engines (e.g. when can the outcome of a search query be said to be sufficiently diverse) and b) what diverse exposure means in relation to information intermediaries (e.g.

under which conditions are the choices of the audience using search engines etc. sufficiently diverse).

The lack of concrete benchmarks makes it, for the time being, impossible to clearly identify threats or opportunities to media pluralism and diversity in relation to information intermediaries. This is an important point because in today's climate of evidence-based lawmaking, the ability to measure and provide empirical evidence is politically an increasingly important condition for regulatory action.

To establish such - much needed - benchmarks, it is not only necessary to get a clearer idea of the desirable political goals behind exposure diversity, but also how exactly access to a diverse choice, and obstacles in that process affect diverse consumption and public opinion forming. The normative evaluation of the diversity of exposure is a lot more complex than for diversity of supply. While with the latter, legislators can focus on a simple "the more [sources, views etc.] the better", the picture is far more nuanced and complex when taking into account media habits of exposure and strategies of individuals to cope with an (over-)abundance of information.

The few existing initiatives that seek to determine or identify factors for the sufficiency of diverse exposure argue from the point of departure of a normative framework, and the values and objectives it incorporates. The other question is which level of diversity users themselves want, a question not unimportant in an age of digital abundance. Framed differently, the question is whether for diversity of exposure the same level of 'paternalistic' government involvement is desirable and constitutional, also and in particular with view to the special role that information intermediaries play in news markets (in contrast to the traditional media). And, in the event that e.g. the use of information intermediaries and/or personalization strategies indeed leads to more diverse exposure, should users still have the right to control (and reverse) e.g. the degree of personalization of content, even if beneficial from a public policy point of view?

When ascertaining the potential effect of information intermediaries on the realization and exercise of media diversity and pluralism, it is necessary to look at the broader context of the information chain. Information intermediaries such as search engines are, for example, also an important tool for journalists in their work, or for users to determine what kinds of information they actually want to look for.

Another question is whether media pluralism and diversity always trump other values, such as search engine quality. In the operation of information intermediaries, such as search engines, different, competing values and objectives may be at stake (search engine quality vs diversity, the need to reduce complexity and make choices vs openness and equality). When deciding on whether information intermediaries pose harm or benefit, or rather: where to strike the right balance, the different values need to be carefully weighted. Media pluralism is neither a goal in itself, nor always the one and dominating value at stake.

From the legal and policy point of view, the emergence of new information intermediaries questions established concepts of editorial control as a central criterion for the application of traditional rules on editorial responsibility, diversity and pluralism. Information intermediaries also question the traditional notion of 'gatekeeper.' Both the literature as well as the policy discourse often refer to the alleged gatekeeper role of information intermediaries, echoing earlier concerns about the gatekeeper role of e.g. network providers, pay-TV platforms or Electronic Program Guides. In practice, this quickscan has identified the need to carefully examine whether and in which respect new information intermediaries indeed have a gatekeeper role, or simply are a preferred route for consumers to access information in a way that is quicker, more convenient or more social.

In the same vein, established and tested regulatory solutions applied to information gatekeepers 'old style' are not necessarily the adequate solution for controlling power and influence of the new 'gate keepers'. On a more fundamental level, for the time being it is unclear to what extent governments can engage with matters of diverse search, personal access and choice without running into conflicts with constitutional safeguards and users' right to privacy, personal autonomy and freedom of expression.

OPEN QUESTIONS FOR FURTHER RESEARCH

Conceptualizing exposure diversity as policy goal, and formulation of concrete benchmarks to assess threats to media diversity from information intermediaries

What is a (sufficiently) diverse choice and how can the impact of information intermediaries on exposure diversity be measured? Should the concept of pluralism and diversity be narrowed down to political views and opinions, also taking into account the way people

form their opinions? And what are the limits to diversity as a policy goal from a users' perspective? Are consumer preferences aligned with the policy objective for pluralism? CITATION Paa12 \l 1033 How much diversity are users looking for, which price (personalization, data collections, time and attention, etc.) are they willing to pay for, and when would they rather choose to de-personalize?

Aspired and factual levels of editorial activities of information intermediaries such as search engines, social networks and app-stores

Seeing the centrality of the notion of editorial control and responsibility in the legal & policy context, it is crucial to gain more insights on the editorial activities and aspirations of information intermediaries, and their incentives to influence the diversity of supply and exposure. Are intermediaries' incentives aligned with (i) consumer preferences and (ii) policy objectives for pluralism? For the time being, there is no systematic (empirical) research exploring whether the different types of information intermediaries (search engines, social networks, news aggregators and app stores) have other goals beyond maximizing audiences and revenues.

The economic, technical, social and legal conditions and factors that turn the new information intermediaries into a gatekeeper facility for a plural and diverse media environment (with the result that regulatory action may be required)?

Answering this question requires, inter alia, further (empirical) research into the output provided by the intermediary. How does the intermediary transform the input of information to output? To what extent does the incentive to attract advertising income conflict with search engine neutrality and other aspects of diversity? To what extent are intermediaries contractually or formally integrated with content suppliers, and if so, what challenges does that pose for access of a diverse choice of suppliers to the market/audience? In this context, it is also important to consider the entire value

CITATION Paa12 \l 1033 A useful approach to investigate this particular question could be to first concretize the policy objectives and then consider the overlap with users' values and behavior.

production chain and, for example, the effect of information intermediaries on news producers (e.g journalists but also the media) and their incentives to produce diverse output.

Adequate regulatory responses

To what extent are existing regulatory solutions to manage gatekeeper situations as well as dominant opinion power applicable, helpful and desirable when dealing with new information intermediaries? If the answer is no, what are viable alternative routes of regulatory action once problems for media diversity and pluralism have been identified? But also: what are the political, legal and constitutional limits within which a) the European Commission and b) member states operate when undertaking action to regulation information intermediaries with the view of promoting diversity of supply and of exposure?

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