

Threats to Diversity of Opinion and Freedom of Expression via Social Media

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Abstract: The article investigates whether there is a need for legislative action in social networks—which are similar to broadcasting—to ensure that diversity of opinion can be sufficiently expressed to protect freedom of opinion-forming. The investigation focuses on Facebook because it has the largest number of registered users worldwide and is thus the network with the greatest reach. First and foremost, it will be debated whether social networks have a power of opinion comparable to broadcasting. Based on this foundation, it is possible to assess the extent to which diversity of opinion is expressed in social networks and the extent to which freedom to form opinions is actually under threat.

Keywords: *freedom of expression, plausibility, social media*

1. Introduction

In recent years, the actual communication order has shifted significantly. For many years, social networks such as Facebook have not only allowed everyone to exercise their right to self-expression in an extroverted manner by displaying private concerns, but Facebook and other social networks are increasingly characterized by their function as information brokers and multipliers. There is an enormous diversity of opinion in the networked environment of social media. However, this is customized for each individual user using computer programs. According to which criteria this happens

and whether the users are therefore only informed one-sidedly according to their supposed preferences, often remains uncertain. Thus, a question arises whether filter bubbles emerge in social networks. The only thing that seems certain is that the possibilities of algorithmic personalization represent a win-win situation for network operators and advertisers (Yara *et al.*, 2021).

This article addresses the subject of threats to diversity of opinion and freedom of expression via social media. The most important concepts are explained in advance to ensure a better understanding of the topic. Thus, the focus is primarily on the functionality of social networks, using Facebook as an example. In the following we will also try to answer the question, among others, as to whether social networks, due to the way in which they operate, are actually capable of jeopardizing the diversity of opinion and free formation of opinion.

2. Objective and methodology

The main objective of the article is to analyze whether social networks have a power of opinion comparable to that of broadcasting. With this aim in mind, the following research question was formulated: are social networks, because of the way they operate, actually capable of jeopardizing the diversity of opinion and free formation of opinion? The research methods used focus on the objectives and subject of our research. The methodology of logic, research from legal acts, supported by scientific literature and case law were applied in order to clarify the threats to diversity of opinion and freedom of expression via social media.

3. The influence of social networks

The broad impact and power of broadcasting are important premises for the arrangement of measures to ensure diversity in broadcasting. These characteristics give broadcasting the appearance of authenticity and have made it the most important source of information for the population. Broadcasting is thus not only a (neutral) “medium,” but also a “factor” in the constitutionally protected process of opinion formation (Svák & Grünwald, 2019). In some cases, it is true that broadcasting is denied such an intensity of impact that is supposed to set it apart from other (conventional) media,

or that the impact quality of broadcasting is disputed from an empirical standpoint. The Federal Constitutional Court of Germany (BVerfGE, Interstate Broadcasting Financing Treaty) has even made a direct reference to media economics expertise and explained that journalistic and economic competition does not necessarily result in the portrayal of diversity of opinion. Broadcasting has a competitive advantage within the communication system, since new technologies (Funta & Ďuriš, 2022) have led to an increase and differentiation in the range of services and the forms and channels of distribution, and enabled new types of program-related services, which gave the impact of broadcasting even more weight. As a result, it is necessary to investigate whether the effectiveness that triggers a regulatory requirement in broadcasting can also be demonstrated for social networks like Facebook. In the following, the concept of power of opinion is first differentiated from that of “relevance to opinion formation,” before examining the extent to which the criteria of broad impact, topicality and suggestive power apply to social media, using the example of Facebook.

3.1 Distinction between opinion power and opinion-forming relevance

In theory, any communication of information can have some “relevance” for the formation of individual and public opinion. The fact that the need for media regulation presupposes a power of influence or opinion, which in turn depends on a minimal influence on the individual and public opinion-forming processes, does not necessitate a detailed discussion. However, from a regulatory standpoint, there is also the question of a medium’s suitability to influence the formation of opinions of the recipients through the dissemination of opinions and facts by mass media, that is, power of opinion as a real factor in the communication process (Šramel & Horváth, 2021).

The reach of a medium and its ability to influence large parts of the population, even shaping large time units of the daily routine of most citizens, determines its widespread effect. According to this, the potential group of recipients is particularly decisive for the assumption of a broad effect, although the number of recipients actually reached cannot be disregarded. A large user base can also lead to network effects, which strengthen the provider’s position in the user market, make substitution more difficult, and have an impact on downstream markets. Owing to the extensive contact options provided by Facebook, switching to another

network and losing contacts is associated with significant challenges (the so-called lock-in effect). The reach of social media is also favored by the changed consumer behavior with the help of smartphones, which enable access anytime and anywhere, whether via an internet browser or apps. In addition to the measurable reach of social networks, indirect media effects can be considered, which result from the dissemination of specific content via third parties, such as online and print media (cross-media connections), but also in private communication (Fedushko *et al.*, 2020). The second factor relates to timeliness. The electronic distribution channel is responsible for the technical ability of social networks to transmit information about any event at lightning speed. Any Facebook user and page operator can distribute ad hoc content and even report on any event in the live stream, which users can learn about at the same time or without a significant time difference. Overall, it can be stated that social media, as well as online offers, are technically capable of reporting in real time like radio, bolstered by the use of mobile phones (Šindleryová & Garaj, 2022). As social networks are always available via apps, the factor of ubiquity supplements the factor of topicality. The third feature is suggestive power, that is, the cognitively effective intensity of the visual impression and the combination of image and sound, which gives the information conveyed the appearance of high authenticity. The effects of social networks cannot be compared directly with broadcasting, but they have a specific suggestive power, as is also indicated by advertising revenues (Miskolczi-Bodnár, 2010).

3.2 Risks to the free expression of views on social media

Following the discovery of power over opinion, the question arises whether interventions in the flow of information in social networks to ensure diversity are necessary for this reason alone. To that end, the following examines the standard by which a risk situation can be determined in the first place. We will then examine how the objective goal of filtering the vast diversity of information can actually lead to a narrowing of diversity in the form of filter bubbles and echo chambers, before demonstrating that such tendencies are caused by human behavioral patterns that can be reinforced and are the subject of current research. Before deciding whether, and to what degree, the threat to free opinion-forming through curating processes in social networks is sufficiently credible, in the final step, we will try to demonstrate how curating mechanisms can be employed internally and externally. The proportionality principle requires that the media freedom of a social network operator be subject to state intervention only if the

fundamental rights positions of the providers and users actually threaten to collide (Stehlík, Hamulák & Petr, 2017). The precautionary principle does not imply a regulatory obligation. Being aware of the power to influence opinions should not trigger an intervention reflex, but rather calls for increased legislative attention in order to intervene quickly and gently to balance conflicting fundamental rights positions (Smuk, 2014). However, the logic of regulating content providers based on audience shares cannot be directly transposed to social media. On the other hand, this social medium is not (or is only to a very small extent) a content provider capable of exerting an unbalanced influence on the formation of public opinion simply because of its dominance of the user market and broad impact. Rather, it depends on the way in which the social medium uses its suggestive power. The potential dangers for the plurality of opinions and the formation of opinions can be measured by curating of content. The logic of algorithmic curating is essentially determined by the premise that much more content is fed into the social network than an individual user could even come close to acknowledging with uninterrupted reception (Jakab *et al.*, 2021). Viewed objectively, the amount of available and generally accessible information is constantly increasing.

3.3 Filter bubble hypothesis and echo chambers

Online filters, be it on services from Google, Yahoo, or Facebook, create their very own information universe for each user by evaluating preferences based on personality theories, the so-called filter bubbles (Medzini, 2022). A personalized filter bubble distorts the users' perception of the world and leads to information determinism in such a way that every single click determines the information that is transmitted. The phenomenon of filter bubbles can appear where content is (algorithmically) selected and presented according to previous user behavior (Kecskés, Karácsony & Glavanits, 2021). However, this circumstance alone is not a sufficient prerequisite for the emergence of a filter bubble. In addition, the proportion of individually tailored content would have to be relatively high, and the personal network environment would have to exhibit a certain degree of homogeneity. As a user actively gathers information on a broad scale, and if his personal network connections are heterogeneous in nature, he is also less exposed to less opinion-consonant content, which will prevent him from falling into a filter bubble. Even the Federal Constitutional Court of Germany, without further justification, confirmed the existence of filter bubbles, by lamenting the rise of "one-sided representations, filter bubbles, fake news, and deep fakes" in

connection with the digitization of the media environment (BVerfGE, Media Amendment State Treaty). All of this means that distinguishing between fact and opinion, content and advertising is becoming more difficult, and there are new doubts about the credibility of sources and evaluations. Individual users will have to take over the processing and evaluation of mass media (Horváth & Machyniak, 2014), which has traditionally occurred through the filter of professional selection and responsible journalism.

Closely related to the filter bubble thesis, but still distinguishable, is another communicative phenomenon that has been known for a long time, not just since the advent of social networks: the formation of so-called echo chambers. These are distinct and homogeneous information and debate domains. Within an echo chamber, the world view of individual users can narrow by consciously or unconsciously surrounding themselves and by exchanging information with like-minded people. Therefore, only information that corresponds to the group consensus would be heard, and this would result in many small, heterogeneous sub-publics. After all, the notion of the echo chamber describes a fragmentation of public attention and a resulting polarization of attitudes into sub-publics. The filter bubble and echo chamber hypotheses correspond to previously studied patterns of human communication behavior. The alleged tendency of many users to receive information that is as consistent as possible with their beliefs and, preferably, to deal with individuals who share their beliefs corresponds to the human need to minimize uncertainty and psychological discomfort. Dissonance would increase efforts to seek out individuals with similar cognition for social support, resulting in new communication and influence processes. This assumption would also speak to the basic tendency of many individuals to seek out echo chambers in order to boost their own self-confidence, which could even be expressed through the communication structure of social networks (Plavčan & Funta, 2021). This is also known as the tendency to associate with individuals who share similar characteristics, which influences the network's content selection. These cognitive biases can lead to confirmation bias, which simply means that individuals are more likely to believe information that confirms their existing beliefs. In any case, the cognitive-psychological tendency to selectively expose oneself to communication content may result in one-sidedly distorted information spaces (echo chambers) or filter bubbles, particularly in social networks due to personalized curating. The algorithmic individualization of media offerings essentially promotes users' cognitive consonance, reinforcing the existing tendencies (Barańska, 2021). In this light, it is necessary to

determine whether the hypothetical risk situation can be at least plausibly substantiated by empirical studies. This is accomplished by the use of various studies from the communication sciences. Some studies support the filter bubble and echo chamber hypotheses. A simulation model for personalization algorithms, for example, has shown that filter bubble effects occur as soon as users rate content as relevant to them, because the algorithms evaluate the feedback in relation to both the content and the author of the content (Šmejkal, 2021). A study of the web browser histories of approximately 50,000 regular online news consumers in the United States analyzed which channels they use to access and consume news. The study showed that accessing news via social media led to greater segregation, that is, according to the filter bubble hypothesis, more content from a specific political and ideological spectrum was consumed. The resulting concerns (also regarding the echo chambers) were put into perspective by the fact that two thirds of all messages were not received with the help of social media or search engines, but through direct browsing (Flaxman, Goel & Rao, 2016). On the one hand, better-networked users are more susceptible to filter bubble effects, but they are also particularly influential as nodes in social networks, so their personal tendencies can also affect their social environment. Automated personalization and adaptation technology based on users' political attitudes reduces psychological avoidance effort and strengthens selective perception since it increases the clicks and dwell time of users on attitude-confirming content. Consideration of the use of algorithmically personalized news channels, using the refugee debate as an example, partially supported concerns about filter bubbles and echo chambers. Certain population groups are more likely to be exposed to the risk of not receiving an overview of the news, as in a filter bubble, as well as being subject to a distorted perception of reality or the climate of opinion. Algorithmic personalizations did not result in a one-sided and widespread polarization. In addition, connections between a right-wing political orientation and a stronger inclination to selective exposure, as well as less skepticism about the personalization of content may appear. The Facebook papers disclosed by the former Facebook manager Frances Haugen (*The Washington Post*, 2021) showed, for example, that in the news feed, emoji reactions to posts expressing anger, sneering laughter, or astonishment, were weighted five times as much as simple "likes."

On the other hand, there are also clear voices that cast doubt on the existence of filter bubbles and echo chambers, or the danger of them forming. While in some cases concerns about filter bubbles are negated from the outset

because the technology is allegedly not yet sufficiently mature, it is largely conceded that increased selectivity and a reduction in the knowledge gained according to one's own attitude can be proven through (automatically) personalized information systems. At the same time, however, it is denied that increasingly selective perception qua personalization is capable of disintegrating the public. In addition, it must be taken into account that social networks also harbor a potential that is conducive to the formation of opinions: the coincidence factor, also known as serendipity, i.e., the confrontation with unexpected and unplanned information that is not necessarily consonant with opinions. However, this in no way contradicts the idea of personalization, since self-learning machine processes can find out in this way whether a user has other interests and inclinations that have not yet been expressed. After all, users are more likely to come into contact with diverse and new types of content through individuals with whom there is only a weak connection, since the variety of offers can go hand in hand with the heterogeneity of the individual network. Thus, we are of the opinion that these are not so strong that users cannot escape a possible filter bubble, since they still encounter content outside of their areas of interest. In addition to the serendipity within one's own social network, it must be considered above all that studies that only focus on the internal effects of algorithmic curating are necessarily too limited to show whether individuals have wrapped themselves in an information cocoon. Ultimately, this would only be the case if the users only received a limited amount of information from sources other than the network (Daňko & Mesarčík, 2015).

One could therefore conclude that there are no clear findings that regulation appears necessary. Nevertheless, the all-clear should not be given too hastily: there is a broad consensus that increasingly individualized media use, enabled by providers such as Facebook, is at odds with the ideal of a (political) public sphere, since—unlike linear television, for example—it reflects one's own perception of the world in a consonantly narrowed way (Erdősová, 2020). Even if social networks do not pose any risks for the entire breadth of society, there are nevertheless segments of the population, estimated at around three to ten percent, in which the narrowing effects on the breadth of information are noticeable. On the other hand, there are sufficient indications that social networks such as Facebook facilitate information isolation among some users who already adhere to a political ideology, make them more susceptible to opinion-congruent misinformation, and promote discursive polarization (Bastian, Makhortykh & Dobber, 2019). Particularly on Facebook, the algorithm has

up to now favored the impact of extreme views from a “loud minority” over the perhaps more accurate majority viewpoint, which also distorts the perception of the general atmosphere of opinion (Funta, 2019b). The reason for this is the independence of the digital attention economy (Štrkolec & Hrabčák, 2022; Funta & Buttler, 2023), which is focused on reach and clicks. As a result, while not all citizens are affected, those who (almost) exclusively obtain information through social networks are more vulnerable to the effects of filter bubbles and echo chambers.

4. Internal and external exploitation of algorithmic curation

In connection with possible risks arising from the type of algorithmic curation, such as filter bubbles and echo chambers, it is also important to consider (a) to what extent users are even aware of these mechanisms; (b) whether operators of social networks misuse them for agenda setting; and (c) whether they can be exploited by users for their own purposes.

Aside from the potential narrowing of the range of opinions that can be perceived, only a small number of users are aware of algorithmic personalization. In general, social network providers make no secret of the fact that they curate the flow of information based on anticipated user interest and how they do that; however, they treat the underlying, constantly adapted algorithms as trade secrets (Funta, 2019a). As a result, filter bubbles appear to be invisible. Because of the casual nature of information selection, many users are unaware of algorithmic curation or do not know that they can actively influence the specific design of their news feed. In line with the finding that less educated segments of the population suffer from a lack of diversity in curating, it is precisely these groups that develop little awareness of curating. The so-called “digital divide” emerges here, whereby privileged and media-savvy users can even benefit from personalization technologies, while structurally disadvantaged groups tend to be guided by algorithmic curation without thinking (Funta & Horváth, 2022). The widespread skepticism about algorithmic decision-making processes will almost certainly not prevent their increased use. The more this so-called governance by algorithms is addressed in the public debate, the more awareness of the problem among users of curated online platforms can be expected (Stankovičová & Nováčková, 2019), even if this alone does

not necessarily lead to a considered approach or even to resilience, as long as the concrete effects on the individual user cannot be understood.

On the other hand, a less obvious concern seems to be that social network users may unknowingly expose themselves to the agenda setting of operators within the framework of curating. The insinuation of a possible political or ideological agenda seems implausible, insofar as the economically motivated operators of social networks would thereby thwart their own business model. On the one hand, it is diametrically opposed to the model to force content on users that may be contrary to their interests and attitudes, as they will presumably use the services less. Operators, on the other hand, would face significant reputational damage and loss of credibility if an undisclosed agenda was revealed. However, it has already been established that algorithmic curating cannot function as a purely technical process. The curation, which is guided by algorithms and machine-based self-learning systems, always follows human values and personality constructs. Assumptions about other areas of user interest, no matter how analytical, are based on designer biases that manifest themselves in their algorithms. Self-learning algorithms can reproduce any underlying biases and thus strengthen selection effects, if necessary. The accusation that algorithms are tendentious is therefore based on the erroneous premise that content can be sorted according to personalized relevance without bias. Even in individual cases, network operators may favor content that promotes their own economic interests. However, since objectivity is only an idealized construct, the human factor in algorithmic curating should not be understood per se as a risk for free opinion-forming processes, as long as it is not associated with any targeted influence, or objectively unjustifiable, actual or intended discrimination (Zakharchenko *et al.*, 2021).

But even assuming that the central curating criterion of individual or individualized relevance as such is not objectionable, the curating of the content is by no means free of manipulation. Even if the business models of social network operators do not encourage certain opinion tendencies, the content providers and opinion leaders active within the networks are able to exploit the mechanisms according to which relevance is weighted and to have a more intensive impact on the opinion-forming process through the form of opinion expression (Tóth, 2019). Many content providers take advantage of the way curating works and legitimately present their commercial or political messages, expecting maximizing reach in a way that many interactions are made possible, possibly also through exaggeration. However, posts in social networks not only reach naturally grown ranges due to sensational

content but can also generate additional artificial attention through the reception behavior and evoke disproportionately high interest. For example, some accounts that merely simulate human behavioral patterns, that is, pretend false identities, so-called social bots, take part in the discourse on social networks (Roszewska, 2021). However, it is not only fake accounts that produce interactions and artificially stimulate coverage in this way, the so-called trolls are also involved—that is, natural persons who target their communicative activities at certain posts in order to provoke and emotionalize other participants in the conversation, possibly including the spreading disinformation. Social bots, click bots and trolls can misinterpret the signals that Facebook and other network operators use to measure the relevance of posts, distort reach and interaction rates, and thus misperceive the climate of opinion. The curating algorithms reinforce these effects, causing the digital public's perception to diverge from the reality and to give some viewpoints unnaturally high priority (Saliu, 2022). Without many users being aware of their manipulative effect, trolls, social bots, and click bots provide strong manipulation possibilities. It is challenging to grasp the accountability links between influential individuals and those involved in receipt and engagement.

5. Plausibility check of a threat to freedom of opinion

Do the findings to date offer the necessary knowledge that is required to justify state regulatory measures, bearing in mind the legislator's prerogative of assessment? In any case, the Federal Constitutional Court of Germany has already internalized the filter bubble and echo chamber hypotheses, as it concludes that the algorithmic tailoring of content in social networks to user interests results in a “reinforcement of parallel opinions” and that such offers “are not determined by diversity of opinion but are determined by one-sided interests or the economic rationality of a business model” (BVerfGE, Broadcasting fee). Due to personalization, the variety of topics, offers, sources, and groups that are fundamentally present in social networks does not translate into a variety of reception. What the phenomena of the filter bubble and the echo chamber have in common is the risk that users will narrow their view afterwards, will no longer be confronted with a sufficiently broad, balanced, and socially relevant variety of opinions when obtaining information and, as a result, the process of opinion-forming will stagnate due to a lack of new impulses. However, curating the flow of information

does not lead to narrowing tendencies and a reduction in the variety of offers and reception for all users, but such effects are caused by other influences such as media competence, private environment, and personality structure. Furthermore, threats to freedom of opinion-forming that can be specified and individualized are difficult to understand anyway. If one wants to determine a state's need for action solely from an individual perspective, it must be acknowledged that there are users who are directly affected by the effects of filter bubble or echo chamber as a result of the combination of various factors, but who are unable to identify or address them.

This is because the formation of an individual opinion is a sometimes complex process which, unlike the expression of opinion, takes place in an "internal forum." Since this inner activity of the free spirit cannot be perceived externally, the freedom to form an opinion cannot be protected directly in individual cases in the absence of a tangible risk. A regulation that only wanted to focus on individually affected users would therefore hardly be operationalizable. Likewise, a regulation that takes the form of general laws and shapes the flow of information, regardless of individual impact, would be incompatible with the principle of proportionality—at least if the legislator took the protection of individual fundamental rights as the sole reason for regulation (Kováčik, 2012). It is true that every individual is worthy of protection as a participant in the process of free opinion-forming. However, when compared to the entire population, the fact that citizens are impacted to a single-digit proportion does not seem to be a major issue. So far, direct proof of possible causalities between the new factors influencing opinion formation and their importance for the functional conditions of democratic opinion formation may not have been provided (Sawicka, 2019). The information shared on social networks seems much more dangerous and in need of regulation, given the potential severity of the risk.

Suppression of different information via algorithmically customized informational route dependence or self-reinforcing preference might result in cyber cascades of similar information, contributing to an anti-democratic discourse (Tóth, 2021). While the democratic ideal pushes for a public sphere to promote collective opinion formation, openness, and control of governmental operations, the idea of keeping the communication process open and counteracting social imbalances in information becomes increasingly important. If, for example, algorithm-based influencing can potentially increase biases, lead to a de facto erosion of individual user autonomy, and thus indirectly affect society as a whole, the process of free opinion-forming is inherently jeopardized unless the use of power by social

networks is integrated into constitutional and democratically legitimized procedures (Bakkar & Ögcem, 2019).

6. Conclusion

An obligation of the state to intervene in the flow of information curated by them in order to ensure diversity cannot be directly derived from the finding of the power of opinion of social networks. However, on the basis of the precautionary principle of communication, valid concerns about the representation of diversity of view in social networks, and therefore hazards to the free evolution of individual and public opinion-forming, are adequately credible. Information fed into the personal network is increasingly concentrated on the anticipated particular interests of the users and narrows the perceptible range of opinions. While vertical diversity on specific issues may actually be increasing, perceived horizontal diversity is steadily decreasing. Due to its pre-programming, the newsfeed tends to show fewer or hardly any topics that are supposedly outside the user's area of interest and deprives him—unless he is actively looking—of the opportunity to broaden his horizons. The business models of social media are therefore not actually geared towards diversity of opinion. Social networks do not play out the same content to an undefined mass of people in order to steer them in a certain direction, but each user is addressed in a personalized way. Opinions in the same direction are reinforced, at best, in the sense of individual confirmation bias, under the impression of an almost unmanageable flood of information. This runs the risk of isolation in diverging, segmented sub-publics. While broadcasting, in particular, is seen to have a socially integrating role, social networks might have the opposite impact. Algorithmic curation methods can occasionally act against the notion of a democratic public sphere, exposing a systemic market failure that appears to require rectification. Creating awareness among users of the problems regarding the functioning of algorithmic curating alone does not offer effective protection against distortions in the opinion-forming process. Even if the effects of filter bubble and echo chamber only affect a fraction of the user base, they pose a significant threat to the principle of democracy. Providers of social networks certainly do not act towards an erosion of opinion-forming processes through their curating logic, but they carry some responsibility for these social hazards in the sense of amplifying or promoting causality. In conclusion, social media platforms such as Facebook have a

power of opinion comparable to broadcasting because they combine the characteristics of broad impact, topicality, and suggestive power in a unique way. This finding should not be used to justify intervention. Personalizing curating mechanisms, on the other hand, have the potential to narrow the diversity of opinions and exacerbate the environment of opinion. This can jeopardize individual freedom of opinion formation, at least for individual users (via filter bubbles and echo chambers), and thus the democratic decision-making process as a whole. The clash of opinions can be restorative, not for the impassioned enthusiast, but for the neutral spectator of the clash of opinions. The more harsh social media communication becomes, the more crucial it is to keep an eye on neutral individuals who are still prepared to make an opinion in their inner freedom, to sustain societal cohesion.

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