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Public knowledge of alternative media in times of algorithmically personalized news

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Abstract

Citizens are likely to encounter various types of alternative media online, especially on algorithmically personalized news channels (APNC) like social network sites or search engines. It is unclear, however, to what degree they are aware of these outlets and familiar with the concept of alternative media. This study investigates the relation between exposure to alternative media and knowledge of them, taking the role of APNC into account. Analyzing representative survey data of German Internet users, we find a gap: While many individuals report to use alternative media, few of them are able to name alternative media titles matching scholarly conceptions. Although the use of APNC increases self-reported exposure to alternative media, it does not improve actual knowledge of them. All in all, many Internet users have little awareness of alternative media and do not clearly distinguish between different types of sources they come across online.

Keywords

Algorithmically personalized news, alternative media, Germany, intermediaries, media literacy, news recommender systems

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Introduction

The distribution and consumption of online news is increasingly shaped by algorithmically personalized news channels (APNC) like social networking sites, search engines, and news aggregators. These platforms automatically recommend content based on their user's profiles and past behavior (Schweiger et al., 2019: 8). The *Reuters Institute Digital News Report 2020*, surveying online news consumers in 36 countries, shows that 58% prefer APNC as gateways to news over services that are based on editorial selection like news media websites or email newsletters (Newman et al., 2020: 24). On APNC, users are likely to be exposed to sources they would not use otherwise (Athey et al., 2017; Flaxman et al., 2016; Fletcher and Nielsen, 2018a, 2018b; Scharkow et al., 2020). One reason for this is that algorithms can promote serendipity to prevent users from getting bored by recommending sources that are new to them (Fletcher and Nielsen, 2018b; Kotkov et al., 2016). Moreover, compared with offline conditions, social network sites allow for cultivating larger networks of weak ties, that is, connections to rather distant acquaintances. As a consequence, online social networks tend to be more heterogeneous, which increases the probability of incidental exposure to unfamiliar news outlets shared by network members (Ahmadi and Wohn, 2018; Lee and Kim, 2017; Schweiger, 2017: 92).

One kind of news source that has received particular public and scholarly attention recently is so-called alternative media that oppose the established mainstream outlets (Holt et al., 2019; Newman et al, 2018). Research has shown that alternative media foster inaccurate beliefs about politics (Garrett et al., 2016), lead to an erosion of trust in mainstream news (Guess et al., 2021; Jamieson and Cappella, 2008), and contribute to partisan polarization (Theorin, 2019; Theorin and Strömbäck, 2020; Tsfati and Nir, 2017). Furthermore, evidence has been found that content from alternative media triggers high engagement on social network sites (Faris et al, 2017; Kalsnes and Larsson, 2021; Larsson, 2019, 2020; Sandberg and Ihlebæk, 2019) and that, in turn, the use of these platforms is closely related to alternative media exposure (Müller and Schulz, 2021). Hence, in times of APNC, users are increasingly likely to encounter alternative media with the potential to influence public opinion.

From a normative point of view, informed citizens should be aware of the nature of the sources they are exposed to. They should thus be familiar with the concept of alternative media and able to recognize them. So far, however, it is unclear to what extent Internet users know what alternative media are and how this is related to alternative media exposure on APNC and beyond. The aim of this study is therefore to investigate the relation between individual exposure to and knowledge of alternative media in Germany, while taking the role of APNC into account. We pursue this objective by analyzing representative survey data of German Internet users.

Alternative media from the left, the right, and beyond

Originally, the notion of alternative media is closely related to the social movements of the 1960s and 1970s, which strived to form counterpublics to the traditional media. Firmly connected to the progressive left of the ideological spectrum, these initiatives sought to establish participatory structures of media production and to raise attention for viewpoints that were perceived as missing from mainstream media coverage (Dagron,

2004; Harcup, 2019; Wimmer, 2015). In line with these roots, academic theorizing of alternative media has been mainly focused on media with a distinct left-wing orientation, viewing them as a chance to overcome hegemonic structures and democratize media systems (see, for example, Atton, 2015; Couldry and Curran, 2003; Coyer et al., 2007).

In recent years, however, new outlets have emerged, especially online, that identify themselves as alternative media. They, too, exhibit an anti-establishment stance, but are informed by far-right positions, challenging the values and institutions of liberal democracy (Holt, 2019). Not least because of this development, scholars have begun to criticize the narrow and idealizing focus on left-wing media in earlier research. They call for more neutral conceptions and an expansion of research in a way that takes all outlets with a counter-hegemonic orientation into account—regardless of their ideological leaning—due to structural, functional, and content-related similarities (Atkinson and Berg, 2012; Downey and Fenton, 2003; Downing, 2001; Haller et al., 2019; Holt, 2018, 2019; Holt et al., 2019; Kaiser et al., 2020; Rauch, 2019).

In this vein, Holt et al. (2019) propose an inclusive definition: "Alternative news media represent a proclaimed and/or (*self*-) *perceived corrective*, opposing the overall tendency of public discourse emanating from what is perceived as the dominant mainstream media in a given system" (p. 862). The authors note, however, that the relation between alternative and mainstream media should be conceived as a continuum rather than a dichotomy. Specific outlets can thus be more or less alternative depending on the presence and absence of typical characteristics on different levels (see Table 1 for an overview).

However, there are also scholars who reject such a broad definition of alternative media and argue that the term should not be granted to outlets from the far-right because it would be inextricably linked to the progressive ideas that shaped its roots. Instead, these scholars argue in favor of new terms, such as *hyperpartisan media* (Rae, 2021) or *countermedia* (Ylä-Anttila et al., 2019), which have no equivalents in other languages like German, though. Moreover, using the alternative media label for far-right outlets has become quite established in academic literature. This applies in particular to the bulk of research studying the content, audiences, reach, and effects of right-wing media in the wake of the so-called 2015 refugee crisis in Europe (Bachl, 2018; Figenschou and Ihlebæk, 2019; Frischlich et al., 2020; Haller and Holt, 2018; Heft et al, 2020; Kalsnes and Larsson, 2021; Larsson, 2020; Müller and Schulz, 2021; Nygaard, 2019; Sandberg and Ihlebæk, 2019; Theorin, 2019; Theorin and Strömbäck, 2020) and following the 2016 elections in the United States (Faris et al, 2017; Grigoryan, 2019; Heft et al, 2020; Kaiser et al., 2020; Rauch, 2019; Starbird, 2017; Starbird et al., 2018; Van den Bulck and Hyzen, 2020; Wasilewski, 2019).

It is important to note, however, that this shift in academic attention toward right-wing media does not mean that the alternative media ecosystem today is exclusively right-wing. In Germany, for example, scholars observe a heterogenic spectrum of alternative media, also comprising outlets with left-wing and idiosyncratic ideological profiles (Krüger and Seiffert-Brockmann, 2018; Linden, 2020). A special type of alternative media can further be foreign news outlets opposing domestic mainstream media. In Western countries, most notable examples are the Russian government-controlled outlets RT (formerly *Russia Today*) and Sputnik that offer content in several languages. Lacking

Table 1. Ideal-typical poles of the mainstream versus alternative media continuum.

	Mainstream media	Alternative media
Content level		
Subject matters	Conventional information, interpretations, and issues	Deviant information, interpretations, and issues
Radicalism of views	Low	High
Journalistic ideals	Balance and impartiality, separation of news and opinion	Counter-hegemonic correction
Range of topics	Broad	Narrow
Actor level		
Content creators	Professional journalists	Citizen journalists or activists
Most featured speakers	Establishment elites	Underrepresented and marginalized groups
Division between producers and audiences	High, limited possibilities for audience participation	Low, audiences can easily become active producers
Organization level		
Funding	Advertising and sales revenues, or public service fees	Donations, sponsoring by political actors, or no refinancing
Structure	Hierarchies with divided responsibilities	Loosely organized groups or private individuals
Quality control	Internal editorial processes, checks by independent institutions	Audience feedback only
Strategic goals	Economic	Ideological
Social mediadistribution channels	Major platforms (e.g. Facebook, YouTube)	Major and alternative platforms (e.g. VKontakte, BitChute)
System level		
Relationship with other news outlets	Integrated in mainstream media ecosystem	Disintegrated in mainstream media ecosystem, but integrated in alternative media ecosystem
Public reputation	High	Low
Societal function	Enabling public discourse	Compensating for deficits of the mainstream media

Source: Holt et al. (2019), Hopp and Ferrucci (2020), and Schweiger (2017: 47).

clear ideological profiles, these outlets aim to appeal to various audiences detached from the political mainstream by criticizing the established news media and offering alternative perspectives on current events (Kragh and Åsberg, 2017; Miazhevich, 2018; Pomerantsev, 2015; Yablokov, 2015).

Alternative media on APNC

Despite similarities among the various types of alternative media outlined above, they differ considerably in terms of public visibility. There is no evidence that left-wing media

have attained a similar reach like some of their right-wing or Russian counterparts in recent years, especially on social network sites. Comparing user interactions with mainstream media content to that of right-wing alternative media on Facebook, studies in various European countries have shown that alternative outlets occasionally outperform mainstream media in terms of shares (Fletcher et al., 2018; Kalsnes and Larsson, 2021; Larsson, 2019, 2020; Marchal et al, 2019; Sandberg and Ihlebæk, 2019; Schröder, 2018; Winterbauer, 2016).[1] The studies suggest that alternative media have a small, but active followership strongly committed to spreading their content. Since high share rates resonate with the logic of news algorithms designed to maximize user engagement, they are likely to enhance the prioritization of alternative media in personalized feeds (Papakyriakopoulos et al., 2020). This corresponds to the finding that the use of social network sites is a major predictor of alternative media exposure (Müller and Schulz, 2021; Schulze, 2020).

Although research on the diffusion of alternative news stories on other APNC like news aggregators or search engines is scarce, similar relations can be expected. Mechanisms operating on these platforms are likely to underlie the same basic logic of pushing attention-grabbing messages, favoring polarizing content (Cho et al., 2020; Schweiger et al., 2019). Consistently, many alternative outlets score high on metrics that determine a website's search ranking (Taylor et al., 2020). Thus, as our first hypothesis, we posit:

> *H1*. News exposure via APNC is positively associated with exposure to alternative media.

A critical feature of APNC is that they disassociate single stories from their original media sources and assemble content without taking journalistic quality or the intentions of the authors into account (Schmidt et al., 2017: 20; Schweiger et al., 2019: 12). Thus, in algorithmically personalized newsfeeds, alternative media appear side by side with professional journalistic news outlets, which could make it difficult for users to distinguish between these different kinds of sources (Pearson, 2021; Schweiger, 2017: 79–80). As a second intermediary, amplifier accounts can further contribute to this dynamic by spreading stories from various sources. For instance, populist actors share content from mainstream and alternative media alike on social media (Bachl, 2018; Haller and Holt, 2018; Serrano et al., 2018). This could make it difficult to identify alternative media as such, especially when they resemble mainstream outlets in terms of form and style (Frischlich et al., 2020; Heft et al., 2020; Nygaard, 2019), and when there is a lack of specific knowledge on part of the users.

Public knowledge and perceptions of alternative media

Mirroring the changing use of the term *alternative media* in academia, we can observe a similar shift in journalism. Analyzing how Swedish mainstream media frame alternative media, Andersson (2019) found that until 2010 alternative media were generally associated with progressive issues. Since then, however, the term has become increasingly applied to right-wing sites. Although there is no equivalent analysis for the context of Germany, a similar trend seems to be evident here (see, for example, Heine, 2016).

Despite this shift in academia and journalistic reporting, little is known about what citizens perceive as alternative media and whether they know alternative media at all. Surveys measuring alternative media knowledge mostly ask for the recognition of particular outlets. For instance, in a representative study of German Internet users, between 13% and 36% of the respondents recognized specific alternative media titles (Müller and Schulz, 2021).[2] We do not know, however, whether the respondents perceived these media as alternative. Research suggests that individual associations with the term *alternative media* vary substantially. Rauch (2015) found that self-reported alternative media users in the United States named a wide range of different sources when asked for their favorite alternative outlets. Although left-wing outlets prevailed among respondents, they also mentioned right-wing sources and other types of media, including public broadcasting services and commercial outlets. Similarly, Grigoryan (2019) interviewed focus groups of US students to explore their beliefs about alternative media. She found that only few participants were able to describe alternative media in a way matching scholarly definitions, while others, for instance, viewed social media platforms as alternative media (Grigoryan, 2019: 82). This shows that there can be a gap between what media scholars and what many media users identify as alternative media. To obtain a more differentiated view, it therefore makes sense to distinguish between *self-perceived* and *actual* knowledge of alternative media (see similarly Park, 2000). *Self-perceived* knowledge is given when people believe to know what alternative media are, irrespective of what they perceive as such. In contrast, people have *actual* knowledge when their perceptions match scholarly definitions.

As there are no studies of broader populations or the context of Germany examining the perceptions and knowledge of alternative media, we investigate these phenomena with three open research questions:

RQ1. How many Internet users have self-perceived alternative media knowledge, that is, believe to know what alternative media are?

RQ2. What types of media do Internet users perceive as alternative media?

RQ3. How many Internet users have actual alternative media knowledge, that is, are able to name specific alternative media outlets matching scholarly definitions?

It seems plausible to assume that individuals who consume alternative media regularly are better able to identify alternative media as such. Analyzing qualitative interviews with alternative media users from Finland, Noppari et al. (2019) conclude that

> the users did not engage with PCM [populist counter-media] content because they could not distinguish it from legacy media journalism or were unaware of its partisan nature [. . .]; rather, they made active, affective and conscious choices to consume and engage with material that contradicted the agendas and views of the dominant public sphere and promoted strong ideological stances expressed via populist address (p. 33).

Against this background, we posit:

H2. Exposure to alternative media positively predicts actual alternative media knowledge.

In this regard, it could make a difference through which gateway users access alternative media. As outlined above, immediate competition between mainstream and alternative media on APNC could blur the lines between these types of news sources. Congruently, Pearson (2021) found that design features of social media can foster "source blindness," that is, reduced attention toward encountered news brands, diminishing the ability to recall their names. In contrast, direct access to websites or apps of news brands is associated with better memory of their names compared with APNC (Kalogeropoulos et al., 2019; Mitchell et al., 2017). Thus, we assume:

H3. Exposure to alternative media via direct access predicts actual alternative media knowledge better than exposure to alternative media via APNC.

Finally, exploring the characteristics of alternative media users may further contribute to identify factors explaining alternative media knowledge. Most importantly, alternative media users tend to have less trust in mainstream news media and more hostile attitudes toward them (Müller and Schulz, 2021; Newman et al., 2018; Prochazka and Schweiger, 2019; Prochazka, 2020; Schindler et al., 2018; Schultz et al., 2017; Schulze, 2020). Regarding demographics, German alternative media users are likely to be young and male (Müller and Schulz, 2021; Newman et al., 2018). Furthermore, frequent exposure to alternative media is associated with higher education (Müller and Schulz, 2021). Results are less consistent regarding the relationship between alternative media exposure and ideological attitude. While Newman et al. (2018) found alternative media audiences to be more ideologically extreme than those of the mainstream media, Müller and Schulz (2021) found no relations between alternative media exposure and political left–right orientation or extremity in Germany. However, their results yield a positive association between frequent alternative media exposure and populist attitudes as well as the probability to vote for the right-wing populist party *Alternative für Deutschland* (AfD). As these studies focused solely on factors associated with exposure to alternative media, it remains unclear to what degree these characteristics also contribute to their knowledge. Thus, we address this issue with our last research question:

RQ4. Which user characteristics predict actual knowledge of alternative media?

Method

We conducted a survey through a German commercial online access panel in spring 2019. Participants were recruited using quota sampling to reflect the population of German Internet users in terms of age, gender, and education (AGOF, 2017). The final dataset consists of 1033 respondents of which 49% are female and 38% have higher education. The age of the participants ranged from 14 to 69 years ($M = 43.10$, $SD = 15.32$).

Measures

Perceptions and knowledge of alternative media. To assess *self-perceived alternative media knowledge*, participants were asked whether they know alternative media outlets, "that

offer a different perspective on current events than the established media." Participants could specify whether they

(a) do not know alternative media at all,
(b) do not know alternative media but have at least an idea what that could be,
(c) know the concept of alternative media but not a specific example, or
(d) know alternative media and are able to name specific examples.

Participants choosing the latter option were asked to name one or more alternative media titles in an open response field. One hundred thirty-five respondents did so, naming 76 different titles. One of the authors manually coded each of these titles into one of ten categories presented below. In line with other studies (Heft et al., 2020; Sandberg and Ihlebæk, 2019), the classification was based on self-descriptions of the outlets, holistic assessments of their websites' front pages, and available secondary literature about them. To ensure reliability, we further engaged in consensual coding (Jensen, 2002: 267; Kuckartz, 2014: 46–47), that is, whenever outlets could not be classified unequivocally, the authors discussed the case until agreement was reached.

We classified outlets as alternative media when they exhibited the characteristics presented in Table 1. For example, this was the case when an outlet claimed to pursue an anti-establishment stance, when media criticism was prominent on its website or when accounts on political issues clearly deviated from the German mainstream, such as when the existence of anthropogenic climate change was challenged. In cases of doubt where outlets showed characteristics of both alternative and non-alternative media, we decided to classify them in favor of alternative media.[3]

Alternative outlets were further classified as *left-* or *right-wing* when this could be inferred from their self-presentation or when typical issues and positions were predominant on their websites. When media did show alternative features, but did not exhibit a conventional ideological profile, they were coded as *non-classifiable alternative media. Foreign international media* like RT and Sputnik were treated as another separate sub-category of alternative media. Responses that did not fall into one of these alternative media categories were classified as *commercial mainstream media* when these outlets covered a broad spectrum of topics, had professional structures and were mainly funded by advertising incomes. Services like social media, search engines, and news aggregators, which do not publish content on their own, were coded as *intermediaries*. Further categories encompassed *public broadcasting services* (funded by licence fees), *satire news* (overt parodies of real news), *special-interest media* (non-political focus), and *other sources* (no category applicable), and *other sources*. The Supplemental online appendix provides a list with the classification of all titles that were named by respondents.

Using this classification, we computed a binary variable indicating *actual alternative media knowledge*. Respondents were treated as knowing alternative media if they had named at least one outlet that we classified as alternative. Respondents were treated as lacking alternative media knowledge if they had named only outlets that we coded into the non-alternative categories or if they had claimed not to know any specific alternative media in the first place.

Media exposure. After participants had answered the questions on perceptions and knowledge of alternative media, we provided them with examples of alternative media titles and asked them how long they had used alternative media on the day before the survey (see similarly, Prochazka, 2019; Schweiger et al., 2020). Seven items measured exposure through different gateways: direct website access, direct app access, personalizable news websites, personalizable news apps, search engines, social networks, and video platforms (each item included specific examples). Respondents could rate their amount of exposure on a 7-point scale with incremental time intervals (1 = *not at all*, 7 = *more than 2 hours)*. For the following analyses, each scale point was equated with its center (e.g. *.5–1 hour* ≙ 45 minutes). The values were then summed up into three index variables: *alternative media exposure via direct access* (direct website access, direct app access; $M = 5.54$ minutes, $SD = 19.82$ minutes), *alternative media exposure via APNC* (personalizable news apps, personalizable news websites, search engines, social networks, and video platforms; $M = 22.35$ minutes, $SD = 52.93$ minutes), and *general alternative media exposure* (all items; $M = 27.89$ minutes, $SD = 66.27$ minutes). The latter index was above zero in 43% of our sample, meaning that almost half of the respondents reported to have been exposed to alternative media on the previous day.

Applying similar items, we measured exposure to mainstream media, which we defined as the established journalistic media in Germany (i.e. the popular broadcasters, newspapers, and news magazines, including their online versions). Likewise, we assessed exposure to original sources, that is, public actors like politicians or organizations, which constitute a third type of information source that users can access directly or via APNC. Summing up responses to the same sets of items as above but for all three types of sources, we built index variables for *total online news exposure via direct access* ($M = 29.28$ minutes, $SD = 49.09$ minutes) and *total online news exposure via APNC* ($M = 79.50$ minutes, $SD = 136.69$ minutes).

Covariates. *Political ideology* was measured on a left–right self-placement scale ranging from 1 = *left* to 9 = *right* ($M = 4.71$, $SD = 1.60$). As radical political attitudes were of particular interest to our study, we additionally re-coded the variable into a 5-point scale for *political extremity* indicating the deviation from the theoretical midpoint of the original scale in either direction ($M = 1.14$, $SD = 1.16$; see similarly Müller and Schulz, 2021). Furthermore, we asked respondents which party they would vote for in an upcoming national election. A dummy variable was created for the *intention to vote for the right-wing populist AfD* (13%), as this had been shown to be associated with alternative media exposure.

We assessed general *political interest* with a single item from the study of Van Deth (2013) on a 5-point scale from 1 = *no interest* to 5 = *a lot of interest* ($M = 3.40$, $SD = 1.25$). Likewise, we measured *internal* and *external political efficacy* with two translated three-item batteries from the work of Gastil and Xenos (2010; e.g. "I have a clear understanding of what the political problems are in our country," "People like me can influence what happens in politics"). For each battery, a mean index was calculated (internal efficacy: $M = 2.94$, $SD = .90$, $\alpha = .70$, and external efficacy: $M = 2.38$, $SD = .91$, $\alpha = .77$).

For the purpose of another study included in the same survey, trust in media was measured in four different ways using a split ballot design. One quarter of the

Table 2. Self-perceived knowledge of alternative media.

"Many Germans use alternative media on the internet. These are news sites that offer a different perspective on current events than the established media. Do you know news sites that you would rank among alternative media?"	%	%
"I don't know any alternative media, . . ."	55.3	
". . . and have no idea what that could be"		36.0
". . . but have an idea what that could be"		19.3
"I know alternative media, . . ."	44.8	
". . . but can't recall any name right now"		31.2
". . . namely . . ."		13.6
Sum	100.0	100.0

$n = 1033$.

respondents were each asked to rate their level of trust in either of the following objects on a scale from 0% to 100%: personally most used media, the news media, established journalistic media, or the most used media in Germany. As the latter three measures did not yield significantly different means, $F(2, 783) = 2.57$, $p = .08$, they were collapsed into a single variable for *mainstream media trust* with the remaining quarter of the sample set as missing ($M = 60.17$, $SD = 25.10$).

As demographic variables, we additionally assessed net household income (55% above 2.000€), and migration background (12%).

Results

H1 predicted a positive association between total news exposure via APNC and general exposure to alternative media. We computed a multiple linear regression with general exposure to alternative media as the outcome and total news exposure via APNC as the explanatory variable, controlling for online news exposure via direct access and all covariates. The results show that total online news exposure via APNC is the strongest predictor of general alternative media exposure ($\beta = .74$, $p < .001$; adj. $R^2 = .85$, $p < .001$). Thus, in line with H1, the more time Internet users report to spend on consuming algorithmically personalized news, the more time they report to be exposed to alternative media content.

RQ1 asked how many Internet users believe to know alternative media. Table 2 presents the frequencies of all possible answers to our survey question addressing this issue. Although 55.3% of German Internet users are unfamiliar with alternative media, a remarkable share of 44.8% report to be aware of their existence. However, only 13.6% felt able to name specific titles, suggesting that the overall number of people with advanced knowledge of alternative media is rather small.

To assess what Internet users perceive as alternative media (RQ2), and how many of them prove to have actual knowledge of alternative media (RQ3), we analyzed the frequencies of the categories used to classify the open responses (see Table 3). The findings show that most respondents who believed to know alternative media named outlets that do not align with academic understandings of the concept. Most of the responses fall into

Table 3. Classifications of outlets that participants perceived as alternative media.

Category	% of all participants ($n = 1033$)	% of participants naming at least one outlet ($n = 135$)
Any kind of alternative media	4.9	37.8
Right-wing (e.g. PI-News, Junge Freiheit)	2.5	19.3
Left-wing (e.g. taz, NachDenkSeiten)	1.0	7.4
Non-classifiable (e.g. NuoViso, KenFM)	0.9	6.8
Foreign international (e.g. RT, Sputnik)	1.0	7.4
Commercial mainstream media (e.g. Bild, Spiegel Online)	5.5	42.2
Public broadcasters (e.g. mdr, rbb24)	0.4	3.0
Special-interest media (e.g. Heise, Motorsport-Total)	0.3	2.2
News satire (e.g. Postillon, heute-show)	0.4	3.0
Intermediaries (e.g. Facebook, Google News)	1.5	11.1
Other sources	0.4	3.0

Multiple answers possible.

the category of commercial mainstream media. For instance, the major German tabloid *Bild* was the most named title of all responses ($n = 10$). Furthermore, a considerable number of participants viewed intermediaries like social media, search engines, or news aggregators as alternative media, underlining the close relationship with APNC. Less frequently, respondents mentioned other non-alternative media like public broadcasters, news satire, or special-interest media. In contrast, about 38% of the respondents who believed to know alternative media named at least one outlet that we classified as alternative media as well. Thus, regarding our whole sample, only a small minority of 5% was able to name specific alternative media outlets matching scholarly conceptions. Of these, most participants named right-wing media.

H2 assumed that alternative media exposure in general predicts actual alternative media knowledge and H3 further specified that alternative media exposure via direct access is a better predictor than exposure via APNC. Moreover, RQ4 asked for user characteristics contributing to actual alternative media knowledge. To investigate these issues, we calculated a binary variable indicating whether actual knowledge of alternative media is present (respondents who named at least one outlet matching our classification) or not (respondents with mismatching or no answers). We used this variable as the outcome of a binary logistic regression with our predictors of interest. The results are displayed in Table 4, which additionally features the means of the two groups to illustrate the findings. We find that self-reported alternative media exposure only improves the likelihood of actual alternative media knowledge when it occurs via direct access. Alternative media exposure via APNC, on the other hand, has no effect. Therefore, H2 is partly and H3 is fully supported.

Table 4. Predictors of alternative media knowledge.

Predictor	Odds ratio	Actual alternative media knowledge	
		No ($n = 667$) M (SD)	Yes ($n = 38$) M (SD)
Sociodemographics			
Age	1.00	43.44 (15.05)	45.45 (13.84)
Gender (1 = female)	0.55	0.48 (0.50)	0.21 (0.41)
Migration background (1 = yes)	0.69	0.11 (0.32)	0.11 (0.31)
Higher education (1 = yes)	1.24	0.62 (0.49)	0.66 (0.48)
Household net income (1 = 2.000€ or more)	1.83	0.37 (0.48)	0.58 (0.50)
Political personality			
Political left–right orientation (1–10)	0.80	4.73 (1.57)	4.05 (1.97)
Political extremity (0–4)	1.43	1.10 (1.15)	1.74 (1.31)
Political interest (1–5)	1.36	3.40 (1.27)	4.37 (0.91)
Internal political efficacy (1–5)	2.66**	2.93 (0.89)	3.76 (0.69)
External political efficacy (1–5)	0.75	2.40 (0.92)	2.39 (0.92)
AfD preference (1 = yes)	0.82	0.13 (0.34)	0.16 (0.37)
Media trust and exposure			
Trust in mainstream media (1–100)	0.98**	61.13 (24.80)	48.08 (27.86)
Alternative media exposure via direct access (minutes/day)	1.02*	4.64 (17.78)	26.45 (44.69)
Alternative media exposure via APNC (minutes/day)	1.00	19.74 (48.91)	36.97 (69.51)
Total online news exposure via direct access (minutes/day)	1.00	28.67 (50.46)	68.36 (64.72)
Total online news exposure via APNC (minutes/day)	1.00	74.69 (130.66)	125.46 (184.45)
Model summary	Nagelkerke's $R^2 = .33$***		

APNC = algorithmically personalized news channels.
Binary logistic regression; $n = 705$; odds ratios above 1 indicate that the predictor increases the likelihood of knowing alternative media, odds ratios below 1 indicate that the predictor decreases it.
*$p < .05$; **$p < .01$; ***$p < .001$.

Regarding RQ4, internal political efficacy reveals to be the strongest predictor of actual alternative media knowledge. Furthermore, trust in mainstream media has a significant negative effect on actual alternative media knowledge. Hence, Internet users are more likely to perceive alternative media in a way that corresponds to scholarly definitions when they feel competent with respect to politics and are skeptical toward established news outlets. Although there are no effects of other variables, inspections of the means suggest that there may be more relationships that are not significant because of the small number of cases with actual alternative media knowledge, which is further reduced in this model because the variable for trust in mainstream media lacks responses from one quarter of the sample. Especially, the higher value of political interest among individuals with actual knowledge of alternative media is in line with positive impact of internal political efficacy. Likewise, the higher value of political extremity resonates with the finding that people who are detached from the mainstream are more aware of alternative media.

Discussion

The aim of this study was to examine the relation between individual news exposure via APNC, exposure to alternative media and knowledge of alternative media. Analyzing survey data representative of German Internet users, we assessed two types of alternative media knowledge. *Self-perceived* knowledge was present when people reported to know alternative media irrespective of what they perceived as such. In contrast, we measured *actual knowledge* by asking respondents to name specific titles and classifying the answers in accordance with scholarly definitions of alternative media. This distinction appears useful to assess whether academia and the public share a common understanding of the concept. Nevertheless, it is not without shortcomings. Just as there is no "true" understanding of alternative media, there clearly is no uniform scientific view on them. Also among scholars, there may be dissent as to whether a particular outlet should be regarded as alternative or not (and if so, which ideological subtype it belongs to). For instance, some authors argue that fake news sites and conspiracist outlets only mimic alternative media practices to gain legitimacy (Ballinger, 2011; Robertson and Mourão, 2020). Furthermore, our binary classification of outlets as either alternative or not could be criticized as simplistic. As we have outlined, it would be more appropriate to view alternativeness as a gradual phenomenon. Employing a broad definition of alternative media instead, we classified each outlet as such when it showed any features of alternative media defined in academic literature without judging whether these were authentic or just an imitation of alternative media practices. With this approach, we avoided underestimating actual alternative media knowledge by measuring it too strictly.

Our main finding seems stable, even if one would apply a somewhat different classification of media outlets: There is a clear gap between those who believe to know and to consume alternative media on one hand and those who actually know what alternative media are on the other. While 43% of our respondents stated to have used alternative media the day before the survey, only 5% could name titles matching scholarly definitions. This suggests that only a small avant-garde of Internet users—showing a high affinity for political content and low trust in mainstream media—is aware of alternative media as such. Many other users, by contrast, also notice that there is something like an alternative to mainstream media, but do not distinguish clearly between these different types or at least base their distinctions on other criteria than scholars might assume. Although we did not assess why people consider an outlet as alternative, the term seems to have a positive connotation for many. Overly high self-reported exposure to alternative media suggests that many people perceive this as desirable. Our finding that news exposure via APNC and exposure to alternative media are highly interrelated therefore remains tentative due to the heterogenic understanding of the concept. Unlike exposure to alternative media via direct access, exposure via APNC does not improve actual alternative media knowledge.

Three explanations seem plausible to account for the finding that users report relatively high exposure to alternative media, but do not know what alternative media are—especially when they report to encounter them on APNC.

First, APNC users may frequently have incidental and cursory encounters with alternative media that hardly enhance their long-term memory of specific titles. Following this argument, users would be able to recognize alternative media as such in the moment they are exposed to them, but would not be able to recall their names due to oblivion or confusion with other titles. This explanation would be in line with previous research

demonstrating that news exposure via APNC hampers brand recall (Kalogeropoulos et al., 2019; Mitchell et al., 2017). Overall, however, this explanation alone does not seem sufficiently conclusive, as self-reported exposure to alternative media in our sample is too high to be simply caused by cursory encounters.

Therefore, a *second* explanation could be that many individuals use alternative media on a regular basis, but do not identify them as such. As outlined above, especially users of APNC are likely to be confronted with a broad variety of information, which might lead to source blindness (Pearson, 2021). This state of reduced attention could hamper the distinguishability between different types of outlets and bears the risk that recipients mistake partisan content for journalistic news. As we assessed knowledge of alternative media first and then asked our respondents for their amount of exposure—providing them with specific examples—this may have led to recognition of these titles, which would otherwise not have been perceived as alternative media. This explanation is also supported by results of other studies finding remarkably high values for recognition of specific alternative media outlets (e.g. Müller and Schulz, 2021), implying that these titles are largely known by the general public.

Our study, however, suggests a *third* explanation: Since a considerable number of respondents regarded commercial mainstream media as alternative media, many people may mistakenly believe to use alternative media, applying a different definition of the concept compared with academic and journalistic discourse. Even though we provided our respondents with examples of alternative media titles when asked for their exposure, we cannot be sure what they had in mind when answering this question. Following this line of reasoning, the use of APNC would only make people *feel* to be exposed to alternative media content simply because they encounter various types of outlets they are not familiar with.

Not only for citizens, but also for scholars, an increasing convergence between mainstream and alternative media makes the distinction between and theorizing about these categories more difficult (Kenix, 2011; Rauch, 2016). Mainstream media may become more partisan while more and more alternative media begin to develop professional structures. Nevertheless, its recent resurgence suggests that the notion of alternative media has conceptual value for scholars. Since many societies face similar disruptions of the public sphere by novel media outlets with an anti-mainstream stance, common terms are necessary to study this phenomenon. The notion of alternative media exists in several countries, making it well suited for international comparative research. However, our research suggests that scholars should not take for granted that the public is familiar with the academic concept of alternative media. Many citizens do not know the term and those who do know it differ considerably in how they understand it. From a methodological perspective, it is therefore advisable to avoid using the term *alternative media* in surveys altogether and to refrain from self-reported measures of generalized exposure to them. Otherwise, it would remain unclear which media respondents think of and, consequently, what is actually measured. Instead, researchers should ask for exposure to specific outlets they are interested in and have identified as alternative media in advance. Moreover, future studies should use other means of assessing exposure to alternative media, for example, tracking data (see Stier et al., 2020) or experience sampling methods.

Furthermore, it is important to bear in mind that there are substantial differences between national media systems, political conditions and public spheres that make it difficult to transfer empirical findings like the limited knowledge of alternative media from

one country to another. Yet, it is plausible that the theoretical mechanisms we have outlined also apply in other countries. Future research should investigate them in more detail to improve our understanding of how individuals perceive their media environments and how they identify different types of media therein. Ultimately, perceptions of alternative media can only be fully understood if researchers take into account what they are distinguished from. Therefore, it is important not only to focus on alternative media in isolation, but also to investigate common notions of established, legacy, or mainstream media, and how citizens make use of them.

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Supplemental material

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Notes

1. The picture looks somewhat different in the United States, however, where *Breitbart* is one of the most popular news media on social network sites overall (Benkler et al., 2018).
2. Employing a similar design, however, the *Reuters Institute Digital News Reports* (Hölig and Hasebrink, 2020: 28; Newman et al., 2018: 20) have repeatedly obtained lower recognition rates for some of the same outlets as included by Müller and Schulz (2021).
3. An example of such a borderline case is the German daily *taz*. Once emerging from the left-progressive scene of the 1970s as a typical alternative medium, the newspaper has since moved closer to the mainstream, but still exhibits certain alternative characteristics (Blöbaum, 2006).

References

AGOF (2017) Digital facts 2017-03. Available at: https://www.agof.de/download/Downloads_digital_facts/Downloads_Digital_Facts_2017/Downloads_Digital_Facts_2017-03/03-2017_df_Grafiken_digital%20facts%202017-03.pdf?x87612

Ahmadi M and Wohn DY (2018) The antecedents of incidental news exposure on social media. *Social Media + Society* 4(2): 1–8.

Andersson L (2019) Mainstream coverage of alternative media. In: Atkinson JD and Kenix LJ (eds) *Alternative Media Meets Mainstream Politics: Activist Nation Rising*. Lanham, MD: Lexington, pp. 143–158.

Athey S, Mobius M and Pal J (2017) The impact of aggregators on internet news consumption. Available at: https://ssrn.com/abstract=2897960

Atkinson J and Berg SV (2012) Right wing activism: the next challenge for alternative media scholarship. In: Sützl W and Hug T (eds) *Activist Media and Biopolitics: Critical Media Interventions in the Age of Biopower*. Innsbruck: Innsbruck University Press, pp. 117–133.

Atton C (ed.) (2015) *The Routledge Companion to Alternative and Community Media*. London: Routledge.

Bachl M (2018) (Alternative) media sources in AfD-centered Facebook discussions. *Studies in Communication and Media* 7(2): 256–270.

Ballinger D (2011) *Conspiratoria: the internet and the logic of conspiracy theory*. PhD Thesis, University of Waikato, Hamilton, New Zealand. Available at: https://researchcommons.waikato.ac.nz/bitstream/handle/10289/5786/thesis.pdf

Benkler Y, Faris R and Roberts H (2018) *Network Propaganda: Manipulation, Disinformation, and Radicalization in American Politics*. Oxford: Oxford University Press.

Blöbaum B (2006) Wandel alternativer Öffentlichkeit: Eine Fallstudie zur tageszeitung (taz) [Change of alternative public: a case study of the tageszeitung (taz)]. In: Imhof K, Blum R, Bonfadelli H, et al. (eds) *Demokratie in der Mediengesellschaft*. Wiesbaden: VS Verlag für Sozialwissenschaften. pp. 182–192.

Cho J, Ahmed S, Hilbert M, et al. (2020) Do search algorithms endanger democracy? An experimental investigation of algorithm effects on political polarization. *Journal of Broadcasting and Electronic Media* 64: 150–172.

Couldry N and Curran J (eds) (2003) *Contesting Media Power: Alternative Media in a Networked World*. Lanham, MD: Rowman & Littlefield.

Coyer K, Dowmunt T and Fountain A (eds) (2007) *The Alternative Media Handbook*. New York: Routledge.

Dagron AG (2004) The long and winding road of alternative media. In: Downing JDH, McQuail D, Schlesinger P, et al. (eds) *The SAGE Handbook of Media Studies*. Thousand Oaks, CA: SAGE, pp. 41–64.

Downey J and Fenton N (2003) New media, counter publicity and the public sphere. *New Media & Society* 5(2): 185–202.

Downing JD (2001) *Radical Media: Rebellious Communication and Social Movements*. Thousand Oaks, CA: SAGE.

Faris RM, Roberts H, Etling B, et al. (2017) Partisanship, propaganda, and disinformation: online media and the 2016 U.S. presidential election. Available at: https://dash.harvard.edu/handle/1/33759251

Figenschou TU and Ihlebæk KA (2019) Challenging journalistic authority: media criticism in far-right alternative media. *Journalism Studies* 20(9): 1221–1237.

Flaxman S, Goel S and Rao JM (2016) Filter bubbles, echo chambers, and online news consumption. *Public Opinion Quarterly* 80(Suppl. 1): 298–320.

Fletcher R and Nielsen RK (2018a) Are people incidentally exposed to news on social media? A comparative analysis. *New Media & Society* 20(7): 2450–2468.

Fletcher R and Nielsen RK (2018b) Automated serendipity. *Digital Journalism* 6(8): 976–989.

Fletcher R, Cornia A, Graves L, et al. (2018) Measuring the reach of "fake news" and online disinformation in Europe. Available at: https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2018-02/Measuring%20the%20reach%20of%20fake%20news%20and%20online%20distribution%20in%20Europe%20CORRECT%20FLAG.pdf

Frischlich L, Klapproth J and Brinkschulte F (2020) Between mainstream and alternative: co-orientation in right-wing populist alternative news media. In: Grimme C, Preuss M, Takes FW, et al. (eds) *Disinformation in Open Online Media*. Cham: Springer, pp. 150–167.

Garrett RK, Weeks BE and Neo RL (2016) Driving a wedge between evidence and beliefs: how online ideological news exposure promotes political misperceptions. *Journal of Computer-Mediated Communication* 21(5): 331–348.

Gastil J and Xenos M (2010) Of attitudes and engagement: clarifying the reciprocal relationship between civic attitudes and political participation. *Journal of Communication* 60(2): 318–343.

Grigoryan N (2019) *Mediated political participation: comparative analysis of right wing and left wing alternative media*. PhD Thesis, Ohio University, Athens, OH. Available at: http://rave.ohiolink.edu/etdc/view?acc_num=ohiou1560681444996954

Guess AM, Barberá P, Munzert S, et al. (2021) The consequences of online partisan media. *Proceedings of the National Academy of Sciences of the United States of America* 118(4): e2013464118.

Haller A and Holt K (2018) Paradoxical populism: how PEGIDA relates to mainstream and alternative media. *Information, Communication & Society* 22(12): 1665–1680.

Haller A, Holt K and De La Brosse R (2019) The "other" alternatives: political right-wing alternative media. *Journal of Alternative and Community Media* 4(1): 1–6.

Harcup T (2019) Alternative journalism. In: Nussbaum JF (ed.) *Oxford Research Encyclopedia of Communication*. Oxford: Oxford University Press. DOI: 10.1093/acrefore/9780190228613.013.780.

Heft A, Mayerhöffer E, Reinhardt S, et al. (2020) Beyond Breitbart: comparing right-wing digital news infrastructures in six western democracies. *Policy and Internet* 12(1): 20–45.

Heine M (2016) Lechts und rinks kann man leicht verwechseln [Reft and light can easily be confused]. *Welt*, 26 April. Available at: https://www.welt.de/print/welt_kompakt/kultur/article154744276/Lechts-und-rinks-kann-man-leicht-verwechseln.html

Hölig S and Hasebrink U (2020) Reuters Institute digital news report 2020: Ergebnisse für Deutschland (Results for Germany). Available at: https://www.hans-bredow-institut.de/uploads/media/default/cms/media/66q2yde_AP50_RIDNR20_Deutschland.pdf

Holt K (2018) Alternative media and the notion of anti-systemness: towards an analytical framework. *Media and Communication* 6(4): 49–57.

Holt K (2019) *Right-Wing Alternative Media*. London: Routledge.

Holt K, Figenschou TU and Frischlich L (2019) Key dimensions of alternative news media. *Digital Journalism* 7(7): 860–869.

Hopp T and Ferrucci P (2020) A spherical rendering of deviant information resilience. *Journalism & Mass Communication Quarterly* 97(2): 492–508.

Jamieson KH and Cappella JN (2008) *Echo Chamber: Rush Limbaugh and the Conservative Media Establishment*. Oxford: Oxford University Press.

Jensen KB (2002) The complementarity of qualitative and quantitative methodologies in media and communication research. In: Jensen KB (ed.) *A Handbook of Media and Communication Research: Qualitative and Quantitative Methodologies*. London: Routledge, pp. 254–272.

Kaiser J, Rauchfleisch A and Bourassa N (2020) Connecting the (far-)right dots: a topic modeling and hyperlink analysis of (far-)right media coverage during the us elections 2016. *Digital Journalism* 8(3): 422–441.

Kalogeropoulos A, Fletcher R and Nielsen RK (2019) News brand attribution in distributed environments: do people know where they get their news? *News Media & Society* 21(3): 583–601.

Kalsnes B and Larsson AO (2021) Facebook news use during the 2017 Norwegian elections: assessing the influence of hyperpartisan news. *Journalism Practice* 15: 209–225.

Kenix LJ (2011) *Alternative and Mainstream Media: The Converging Spectrum*. New York: Bloomsbury.

Kotkov D, Wang S and Veijalainen J (2016) A survey of serendipity in recommender systems. *Knowledge-Based Systems* 111: 180–192.

Kragh M and Åsberg S (2017) Russia's strategy for influence through public diplomacy and active measures: the Swedish case. *Journal of Strategic Studies* 40(6): 773–816.

Krüger U and Seiffert-Brockmann J (2018) "Lügenpresse"—eine Verschwörungstheorie? Hintergründe, Ursachen, Auswege ["Lying press"—a conspiracy theory? Backgrounds, causes, resorts]. In: Haarkötter H and Nieland JU (eds) *Nachrichten und Aufklärung. Medien- und Journalismuskritik heute: 20 Jahre Initiative Nachrichtenaufklärung*. Wiesbaden: Springer, pp. 67–88.

Kuckartz U (2014) *Qualitative Text Analysis: A Guide to Methods, Practice & Using Software*. Los Angeles, CA: SAGE.

Larsson AO (2019) News use as amplification: Norwegian national, regional, and hyperpartisan media on Facebook. *Journalism & Mass Communication Quarterly* 96(3): 721–741.

Larsson AO (2020) Right-wingers on the rise online: insights from the 2018 Swedish elections. *New Media & Society* 22: 2108–2127.

Lee JK and Kim E (2017) Incidental exposure to news: predictors in the social media setting and effects on information gain online. *Computers in Human Behavior* 75: 1008–1015.

Linden M (2020) Zwischen alternativer Sicht und Verschwörungstheorie—Entwicklungstendenzen und Argumentationsmuster digitaler "Alternativmedien" in Deutschland [Between alternative view and conspiracy theory—development trends and argumentation patterns of digital "alternative media" in Germany]. In: Stumpf S and Römer D (eds) *Verschwörungstheorien im Diskurs*. Weinheim: Beltz, pp. 303–330.

Marchal N, Kollanyi B, Neudert L-M, et al. (2019) Junk news during the EU parliamentary elections: lessons from a seven-language study of Twitter and Facebook. Available at: https://comprop.oii.ox.ac.uk/wp-content/uploads/sites/93/2019/05/EU-Data-Memo.pdf

Miazhevich G (2018) Nation branding in the post-broadcast era: the case of RT. *European Journal of Cultural Studies* 21(5): 575–593.

Mitchell A, Gottfried J, Shearer E, et al. (2017) How Americans encounter, recall and act upon digital news. Available at: https://www.journalism.org/wp-content/uploads/sites/8/2017/02/PJ_2017.02.09_Experiential_FINAL.pdf

Müller P and Schulz A (2021) Alternative media for a populist audience? Exploring political and media use predictors of exposure to Breitbart, Sputnik, and Co. *Information, Communication & Society* 24: 277–293.

Newman N, Fletcher R, Kalogeropoulos A, et al. (2018) Reuters Institute digital news report 2018. Available at: http://media.digitalnewsreport.org/wp-content/uploads/2018/06/digital-news-report-2018.pdf

Newman N, Fletcher R, Schulz A, et al. (2020) Reuters Institute digital news report 2020. Available at: https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2020-06/DNR_2020_FINAL.pdf

Noppari E, Hiltunen I and Ahva L (2019) User profiles for populist counter-media websites in Finland. *Journal of Alternative and Community Media* 4(1): 23–37.

Nygaard S (2019) The appearance of objectivity: how immigration-critical alternative media report the news. *Journalism Practice* 13(10): 1147–1163.

Papakyriakopoulos O, Serrano JCM and Hegelich S (2020) Political communication on social media: a tale of hyperactive users and bias in recommender systems. *Online Social Networks and Media* 15: 10058.

Park C-Y (2000) News media exposure and self-perceived knowledge: the illusion of knowing. *International Journal of Public Opinion Research* 13(4): 419–425.

Pearson G (2021) Sources on social media: information context collapse and volume of content as predictors of source blindness. *News Media & Society* 23: 1181–1199.

Pomerantsev P (2015) The Kremlin's information war. *Journal of Democracy* 26(4): 40–50.

Prochazka F (2020) Vertrauen in Journalismus unter Online-Bedingungen: Zum Einfluss von Personenmerkmalen, Qualitätswahrnehmungen und Nachrichtennutzung [Trust in journalism under online conditions: on the influence of personal characteristics, quality perceptions, and news exposure]. Wiesbaden: Springer.

Prochazka F and Schweiger W (2019) How to measure generalized trust in news media? An adaption and test of scales. *Communication Methods and Measures* 13(1): 26–42.

Rae M (2021) Hyperpartisan news: rethinking the media for populist politics. *New Media & Society* 23: 1117–1132. doi:10.1177/1461444820910416

Rauch J (2015) Exploring the alternative–mainstream dialectic: what "alternative media" means to a hybrid audience. *Communication, Culture & Critique* 8(1): 124–143.

Rauch J (2016) Are there still alternatives? Relationships between alternative media and mainstream media in a converged environment. *Sociology Compass* 10(9): 756–767.

Rauch J (2019) Comparing progressive and conservative audiences for alternative media and their attitudes towards journalism. In: Atkinson JD and Kenix LJ (eds) *Alternative Media Meets Mainstream Politics: Activist Nation Rising*. Lanham, MD: Lexington, pp. 19–38.

Robertson CT and Mourão RR (2020) Faking alternative journalism? An analysis of self- presentations of "fake news" sites. *Digital Journalism* 8: 1011–1029.

Sandberg LA and Ihlebæk KA (2019) Start sharing the news: exploring the link between right-wing alternative media and social media during the Swedish 2018 election. *Statsvetenskaplig tidskrift* 121(3): 421–440.

Scharkow M, Mangold F, Stier S, et al. (2020) How social network sites and other online intermediaries increase exposure to news. *Proceedings of the National Academy of Sciences of the United States of America* 117(6): 2761–2763.

Schindler J, Fortkord C, Posthumus L, et al. (2018) Woher kommt und wozu führt Medienfeindlichkeit? Zum Zusammenhang von populistischen Einstellungen, Medienfeindlichkeit, negativen Emotionen und Partizipation [Where does media hostility come from and what does it lead to? The connection between populist attitudes, media hostility, negative emotions and participation]. *Medien & Kommunikationswissenschaft* 66(3): 283–301.

Schmidt JH, Merten L, Hasebrink U, et al. (2017) Zur Relevanz von Online-Intermediären für die Meinungsbildung [On the relevance of online intermediaries for opinion formation]. Available at: https://www.hans-bredow-institut.de/uploads/media/default/cms/media/67256764e92e34539343a8c77a0215bd96b35823.pdf

Schröder J (2018) Facebook-medien-report, Teil 4: "Alternativmedien" leiden nicht unter Facebooks Algorithmus-Änderungen [Facebook media report, part 4: "alternative media" do not suffer from Facebook's algorithm changes]. *Meedia*, 6 December. Available at: https://meedia.de/2018/12/06/facebook-medien-report-teil-4-alternativ-und-verschwoerungsmedien-leiden-nicht-unter-facebooks-algorithmus-aenderungen/

Schultz T, Jackob N, Ziegele M, et al. (2017) Erosion des Vertrauens zwischen Medien und Publikum? [Erosion of trust between media and audience?]. *Media Perspektiven* 5: 246–259.

Schulze H (2020) Who uses right-wing alternative online media? An exploration of audience characteristics. *Politics and Governance* 8(3): 6–18.

Schweiger W (2017) Der (des)informierte Bürger im Netz: Wie soziale Medien die Meinungsbildung verändern [The (dis)informed citizen on the net: how social media change opinion formation]. Wiesbaden: Springer.

Schweiger W, Weber P, Prochazka F and Brückner L (2019) Algorithmisch personalisierte Nachrichtenkanäle: Begriffe, Nutzung, Wirkung [Algorithmically personalized news channels: terms, use, impact]. Wiesbaden: Springer.

Serrano JCM, Simon H, Morteza S, et al. (2018) *Social Media Report: The 2017 German Federal Elections*. Munich: TUM.University Press.

Starbird K (2017) Examining the alternative media ecosystem through the production of alternative narratives of mass shooting events on Twitter. In: *Proceedings of the eleventh international AAAI conference on web and social media (ICWSM 2017)*, Montréal, QC, Canada, 15–18 May. Available at: https://ojs.aaai.org/index.php/ICWSM/article/view/14878

Starbird K, Arif A, Wilson T, et al. (2018) Ecosystem or echo-system? Exploring content sharing across alternative media domains. In: *Twelfth international AAAI conference on web and social media*, Palo Alto, CA, 25–28 June. Available at: https://www.aaai.org/ocs/index.php/ICWSM/ICWSM18/paper/view/17836

Stier S, Kirkizh N, Froio C, et al. (2020) Populist attitudes and selective exposure to online news: a cross-country analysis combining web tracking and surveys. *The International Journal of Press/Politics* 25: 426–446.

Taylor E, Neudert L-M, Hoffmann S, et al. (2020) Follow the money: how the online advertising ecosystem funds COVID-19 junk news and disinformation. Available at: https://comprop.oii.ox.ac.uk/wp-content/uploads/sites/93/2020/08/Follow-the-Money-3-Aug.pdf

Theorin N (2019) Maintainers of ethnic hierarchies? Investigating the relationship between media use and attitudes toward perceived remote versus perceived close immigration. *Mass Communication and Society* 22(6): 827–850.

Theorin N and Strömbäck J (2020) Some media matter more than others: investigating media effects on attitudes toward and perceptions of immigration in Sweden. *International Migration Review* 54: 1238–1264.

Tsfati Y and Nir L (2017) Frames and reasoning: two pathways from selective exposure to affective polarization. *International Journal of Communication* 11(1): 301–322.

Van den Bulck H and Hyzen A (2020) Of lizards and ideological entrepreneurs: Alex Jones and Infowars in the relationship between populist nationalism and the post-global media ecology. *The International Communication Gazette* 82(1): 42–59.

Van Deth JW (2013) Politisches Interesse [Political interest]. In: Tausendpfund M and Van Deth JW (eds) *Politik im Kontext: Ist alle Politik lokale Politik?* Wiesbaden: Springer, pp. 271–296.

Wasilewski K (2019) US alt-right media and the creation of the counter-collective memory. *Journal of Alternative and Community Media* 4(1): 77–91.

Wimmer J (2015) Counterpublic. In: Mazzoleni G (ed.) *The International Encyclopedia of Political Communication*. Hoboken, NJ: Wiley. DOI: 10.1002/9781118541555.wbiepc110.

Winterbauer S (2016) Kopp, Sputnik, Epoch Times and Co: Nachrichten aus einem rechten Paralleluniversum [Kopp, Sputnik, Epoch Times and Co: news from a right-wing parallel universe]. *Meedia*, 18 March. Available at: http://meedia.de/2016/03/18/kopp-sputnik-epoch-times-co-nachrichten-aus-einem-rechten-paralleluniversum/

Yablokov I (2015) Conspiracy theories as a Russian public diplomacy tool: the case of Russia Today (RT). *Politics* 35(3–4): 301–315.

Ylä-Anttila T, Bauvois G and Pyrhönen N (2019) Politicization of migration in the countermedia style: a computational and qualitative analysis of populist discourse. *Discourse, Context & Media* 32: 1–8.

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