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Adrian Rauchfleisch & Jonas Kaiser

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The German Far-right on YouTube: An Analysis of User Overlap and User Comments

Adrian Rauchfleisch [ID][a] and Jonas Kaiser [ID][b]*

[a]Graduate Institute of Journalism, National Taiwan University, Taipei, Taiwan; [b]Alexander von Humboldt Institute for Internet and Society, Berlin, Germany

ABSTRACT

This study focuses on the formation of far-right online communities on YouTube and whether the rise of three new actors (Pegida, Identitarian movement, AfD) can also be observed with user behavior on YouTube. We map the network of far-right, conspiracy and alternative media channels in the German-language YouTube sphere, how this network evolves over time and identify the topics that users discuss. Our analysis shows that the overall common denominator within the German far-right YouTube sphere is the refugee crisis and the problems associated with it. Furthermore, we show that the community is getting denser and more centralized over time.

With over 2 billion active users per month (YouTube, 2020), YouTube is one of the largest platforms on the Internet and one of the most important publics within the networked public sphere (Benkler, 2006). For a long time, YouTube's slogan was "broadcast yourself". This included teenagers that play the newest video games or exchange beauty tricks and tips, as well as political actors, who are now able to circumvent the mass media's gate-keeper function and connect with like-minded people and create their own alternative influence network on YouTube (Lewis, 2018). This is especially true for political actors that are usually not represented–or not in the way they want to be–in the mass media like the far-right in Germany, which has seen a drastic rise in popularity in the last few years after the influx of almost 1 million refugees into Germany in 2015.

While the so-called "refugee crisis" helped the far-right social movement Pegida to mobilize and the far-right extremist Identitarian Movement (IM) to prominence, the far-right party *AfD* (Alternative for Germany), in particular, harnessed this discursive opportunity (Koopmans & Olzak, 2004), as it is now represented in the federal parliament as well as all state parliaments. What all these actors have in common is that they rarely reach the mass media without being critically assessed with regards to their xenophobia, racism or nativism. Online, however, they are in charge of their own framing: both of themselves as well as the events they talk about. Indeed, an article in the liberal magazine *Zeit* calls the IM a "Scheinriese" (an illusionary giant), as they will appear big online but small offline; so small, in fact, that the German IM often needs support from the Austrian IM. YouTube, however, offers them and other far-right actors like the AfD the opportunity to broadcast their unfiltered opinions, offers their viewers to discuss and connect in the comment sections, and might even offer them the opportunity to impact the public's agenda (Sayre et al., 2010).

In our study, we are interested in the formation of online communities on YouTube. More specifically, we are interested in whether the rise of the far-right in Germany and the rise of three new actors (Pegida, IM, AfD) and the issues they focus on lead to stronger connections between different far-right user communities on YouTube. Social media platforms, in particular, are highly relevant for the networked public sphere (Benkler, 2006) as they bring together a high number of users that form communities on the platforms. YouTube is not only a video sharing platform, but also a social networking platform with follower structures and comment sections below its videos. Platforms like YouTube enable isolated groups to create and consume their own alternative media (Puschmann et al., 2016) that often reject the mainstream media's framing (Haller & Holt, 2019). We understand this public in the sense of Fraser's (1990, p. 68) "counterpublic" that "function[s] as spaces of withdrawal and regroupment [and] as bases and training grounds for agitational activities directed toward wider publics."

In general, one has to be careful, when referring to the "far-right," as this evokes the image of a solid bloc. Whereas several authors were able to show that the extreme right in European countries, the US is still very fragmented (e.g., Caiani & Parenti, 2013; Zhou et al., 2005). Consequently, "far-right" is more of a carpet term based on the classic political left-right scale (see for a critique e.g., Bauer et al., 2017) that lumps conservatives, populists, radicals, or extremists together, than a precise taxonomy. However, it is a useful framework for our study, as we are interested in the temporal change of the far-right communities on YouTube.

Empirically we use state-of-the-art approaches such as classification of videos through comments (Filippova & Hall, 2011) – as well as large scale overlap – (Xu et al., 2016) in combination with a backbone extraction

approach (Serrano et al., 2009). We are especially interested in the communities that we are able to identify within the far-right – whether they differ with regard to the topics under discussion – and how this network fits within the counterpublic of the far-right/networked public sphere (Benkler, 2006). Furthermore, we extend the existing research from Caiani and Parenti (2013) analyzing the linking behavior of German far-right websites as well as O'Callaghan et al. (2015), which addresses the extreme right and the recommender system on YouTube.

YouTube

With over 2 billion active users per month on its platform (YouTube, 2020), YouTube is one of the most important social media platforms on the Internet, but still understudied in political communication. Additionally, as we will explain later, YouTube's role as a media platform directly challenges traditional media while also including common functions of social networking services. Kim (2012) describes YouTube as "a convergence medium between the Internet and TV" that highlights "a series of contradictions between traditional broadcasting and digital narrowcasting" (p. 53). Furthermore, YouTube is part of an "expansive ecosystem of connective media" (Van Dijck & Poell, 2013, p. 5). YouTube is not only an isolated user-generated content site, but also a content hub which has strong links to other pages or even mainstream media (e.g., Antony & Thomas, 2010). YouTube describes itself as a "platform" and content provider "just hosting – empowering all by choosing none" (Gillespie, 2010, p. 357). Thus, a clear conceptual classification of YouTube is challenging (Burgess & Greenberg, 2009). Here we mainly want to focus on the political aspect of YouTube and what role the platform plays in a networked public sphere (Benkler, 2006).

YouTube as Networked Public

On the one hand, YouTube "has afforded individuals who are victim to repressive state and federal authorities the opportunity to broadcast their strife and turmoil for the world to view" (Antony & Thomas, 2010, p. 1293) and helped to "safeguard expressions by communities that are not officially recognized" (Pietrobruno, 2013, p. 1272). Also for protests such as the G20 protest in Toronto, YouTube was used by protesters to "broadcast breaking news" (Poell & Borra, 2012, p. 696), but also highlighting the deep connections between offline and online publics (Friedland, 2015). Furthermore, YouTube offers new opportunities for citizen journalism, as the case of the Oscar Grant shooting incident showed (Antony & Thomas, 2010). On the other hand, YouTube has also become a platform for problematic actors such as jihadists (Conway & McInerney, 2008; Klausen et al., 2012).

These empirical examples show how complex and multi-layered the platform is. On YouTube, seemingly apolitical user-generated content and popular culture merge and memes spread (Xu et al., 2016). Gaming videos, pranksters, fitness videos, and other entertainment-oriented content make up the majority of the mainstream. Yet, as Nagle (2017) highlights, "apolitical" content like gaming or memes are an important channel for the far-right to reach more viewers. Furthermore, YouTube has the potential to empower marginalized groups and share videos of protests (Poell & Borra, 2012), police violence (Antony & Thomas, 2010), or human rights violations (Jenkins, 2009). The platform can thus promote perspectives as well as actors that might be ignored or deemed illegitimate by the mainstream public sphere. It further invites users to comment on videos, thus allowing for the potential formation of counterpublic spaces (Kaiser, 2017; Toepfl & Piwoni, 2015). As YouTube's comment sections allow for the immediate reaction to a video as well as to each other, they are also a prime example of what Papacharissi (2015) calls "affective publics."

YouTube allows citizens to circumvent traditional media, critically question the political mainstream, and possibly set the agenda; both on a creator and user level, i.e. through videos and comments. Against this background, YouTube can be seen as an integral part of the networked public sphere (Benkler, 2006). It is "a network for communicating information and points of view" (Habermas, 1996, p. 360) that can in certain cases set the agenda. And while YouTube itself is not a public sphere (Rauchfleisch, 2017), per se, it certainly is the sum of a myriad of networked (counter-)publics. The platform offers both narrow- and broadcasting and thus covers the different levels of the publics ranging from the comment section up to the level of "mass media" with channels reaching millions of users. YouTube incorporates many-to-many communication and more traditional one-way communication.

YouTube, like other social media platforms as well, thus offers marginalized actors a space to create and promote their perspectives, connect with like-minded users, or find new members (Puschmann et al., 2016; Renninger, 2015). Such publics can also include problematic positions like the far-right (e.g., Downey & Fenton, 2003; Kaiser, 2017; Puschmann et al., 2016; Toepfl & Piwoni, 2015). According to Fraser (1990, p. 68), counterpublics have two main functions: "On the one hand, they function as spaces of withdrawal and regroupment; on the other hand, they also function as bases and training grounds for agitational activities directed toward wider publics." Both aspects, the inward-oriented form of communication as well as the outward-oriented one, can be found on YouTube as well; some channels are aimed at a wider audience and are usually somewhat more moderate in their tone, while others are more concerned with connecting within the far-right

counterpublic and are usually more radical and less accessible from a mainstream point of view.

The latter can also be thought of within the concept of "affective publics" (Papacharissi, 2015), which highlights that publics do not only form around shared topics, but also emotions. In this paper, we are focusing on inward-oriented communication, i.e. the communication that is aimed at fostering the creation of a collective identity. We understand inward-oriented communication on a topic- as well as network-level. On a topic-level, we follow Kaiser and Rauchfleisch (2019), who highlight that far-right inward-oriented communication is often marked by radical language and often expressed itself in racism or anti-Semitism. On a network-level, inward-oriented communication that is aimed at fostering a stronger collective identity will express itself through a more centralized and denser network over time.

Far-right on YouTube

From early on YouTube attracted various extremist groups. Conway and McInerney (2008) analyzed as early as 2007 the possible bottom-up radicalization of Islamic extremists on YouTube. In general, Jihadists have moved in the last few years from closed forums to mainstream sites such as YouTube (Klausen et al., 2012). The same holds true for far-right extremists that relied in the past heavily on membership bulletin board systems, such as Stormfront (Bowman-Grieve, 2009). Nowadays, the extreme right in different countries complements its online presence with activity social media platforms such as YouTube (O'Callaghan et al., 2015). In an analysis of German Twitter users that discussed Pegida, Puschmann et al. (2016) showed, for example, how relevant YouTube was for the Pegida supporters as well as the opponents as information source. In the U.S. context, Lewis (2018) could show in her qualitative analysis how the far-right creates an alternative influence network on YouTube.

The case of the German far-right is interesting, not only due to the country's history, but also because until recently, far-right parties or actors, in general, had little to no chance of reaching the political mainstream (e.g., in elections, or in the classic mass media coverage). This, however, has changed due to the financial crisis and the refugee crisis. Indeed, in recent years, Germany has seen the rise of three new, very different, far-right actors: the far-right party AfD which is now represented in all state parliaments, the federal parliament, and the European parliament, the civil society movement Pegida (Vorländer et al., 2016), and the extremist Identitarian Movement (Hentges et al., 2014). This rise of new far-right actors also fostered research on these three actors. Since all three actors and their supporters are very active and visible online, several studies took a closer look at what the actors were writing on Facebook, Twitter or in online comment sections

(Puschmann et al., 2016; Stier et al., 2017; Toepfl & Piwoni, 2015). Although there are clear signs, that the German far-right is using the video platform as an alternative information source (e.g., Puschmann et al., 2016) – potentially to share their ideology, mobilize their users, and recruit new members – research on the German far-right on YouTube is lacking.

Research Questions

Based on our initial question asking whether YouTube is bringing the far-right users together, we analyze the German-language far-right YouTube sphere. Prior research has shown that in recent years far-right extremists have moved to mainstream social networking sites (O'Callaghan et al., 2015). In addition, research on the German far-right (Caiani et al., 2012) showed that they were relatively clustered around the far-right political party NPD (National Democratic Party of Germany; which can be considered a neo-Nazi party). There are two reasons why we want to analyze the German-speaking YouTube sphere. First, there is a rise of the far-right, both internationally as well as in Germany. Our results might highlight the role YouTube plays in forming a far-right public. Second, with the AfD in, Germany we have an institutionalized far-right party that makes heavy use of social networking sites. The NPD, too, is part of our network, so this will also be a comparison of the old and the new far-right party. Third, the Identitarian Movement (IM) mobilizes and communicates their "brand" over YouTube. And fourth, by looking at the temporal aspect of the comments we contribute to the research on the formation of networked publics over time. We want to extend the research of O'Callaghan et al. (2015) and focus on the communicative networks of users that help to foster a collective identity. As such, we want to measure the similarity of channels based on user behavior. We are also interested in where the audience of different channels overlap, which channels in the far-right bubble are important, and what topics are most prevalent in different parts of the resulting network. As prior research has shown, even in homogenous communities the issues differ strongly on YouTube (O'Callaghan et al., 2015) and in narratives of the far-right in general (Wodak, 2013). We expect to identify user communities that represent the "old" right as well as the so-called "new right" (Neue Rechte). We thus check how strong the network for communicating information and points of views is in the German far-right YouTube sphere.

RQ1: What kind of comment overlap user communities can be identified within the German far-right YouTube sphere?

Furthermore, we expect that the commenting communities will over time become stronger. We thus expect a non-stationary upward trend with regard to density and centrality of the commenting network.

H1: The comment network is not stationary over time.

RQ2: What topics are discussed in the YouTube far-right sphere and what are their temporal patterns?

Different actors of the far-right public have described themselves as a counterpublic that positions itself as an alternative for the mainstream public and its media. The official channel of the far-right-populist party AfD, for example, is called *AfD TV* and one of the channels of the far-right-extremist party NPD is called *weiterdenken TV* (transl. think beyond TV). The direct reference to TV channels, i.e. the "old" media, is remarkable, and not an exception either, given that several YouTube channels call themselves after the classic media television.

Data and Methods

To analyze the German far-right YouTube sphere, we downloaded data over the official YouTube application programming interface (API). We first created a list of YouTube channels that represent the range of the far-right public on YouTube (n = 94). Our list is mainly based on a pre-study of the German YouTube sphere that also includes far-right channels – such as the AfD's party channels as well as extreme right channels – such as the NPD's channels but also hooligan channels. The list is based on a snowball crawl of YouTube's channel recommender system, which is more stable and less prone to personalization that the video recommender system.[1] Our crawl resulted in a final list of 141 channels. We, then, removed all channels that were not mainly in German, had no direct connection to the far-right sphere in Germany, or did not allow comments below any of their videos. This gave us a final set of 116 channels with comments that could be analyzed.[2]

We then downloaded all channel information and all statistics about the videos that have been uploaded on the channels. In the last step, we downloaded all comments and replies to comments available for all videos with at least one comment (n = 39,850) in our data set. This gave us a list of 2,298,737 comments and replies in total from 276,142 unique users. In order to create networks and identify overlapping channels, we relied on the comments and replies. This is the only available user data to assess possible connections between channels. Knowing the names of users that subscribed to a channel or watched videos on a certain channel would be

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[1]We only added KenFM manually as a channel as it has deactivated the channel recommendation. It is one of the most important channels with connections to the far-right (Korn & Umland, 2014). A list with all channels included in our study is in the appendix.

[2]We downloaded all data in June and July 2017. Only videos before June 1, 2017 were included. Only comments before July, 2017 were included.

more precise. However, this data is not available. Commenting behavior is a suitable proxy for viewers and has been used before to identify the audience overlap between channels on YouTube (e.g., Xu et al., 2016). For each channel (A) we checked which unique users wrote at least one comment. In the next step, we checked how many of these users also wrote comments on one of the other channels (B). We then calculated the percentage of users from channel A that also wrote comments for channel B as well as the percentage of users from channel B that also wrote comments for channel A.

Based on this calculation we could create a directed network with channels as nodes and the relative overlap of users as edge weight. This method takes into account the size of the channels. For example, 1,000 users wrote comments for channels A and B. However, A is only a small channel and has in total 2,000 unique commenters, whereas channel B has 100,000 unique commenters. Using an undirected edge with the total number of users would connect the larger to the smaller channel with an equal weight, even though only 1% of the users from the larger channel are active on the smaller channel and 50% of the users of the smaller channel are active on the larger channel. As almost all channels have at least an overlap of just one user, we are forced to define thresholds for the edge weights in order to filter edges. We decided to use the backbone extraction method developed by Serrano et al. (2009), which identifies "the edges that represent statistically significant deviations with respect to a null model for the local assignment of weights to edges" (p. 6483).

Our final network consists of 113 out of 116 channels as nodes with 1097 edges. One hundred and thirteen channels have at least one significant (p <.05) incoming or outgoing edge with another channel. The channels missing in our network are music channels with few videos and comments. We ran the Louvain algorithm for directed graphs in Python with code written by Traag (2015) for our extracted backbone network to identify different groups of channels. Furthermore, we calculated for every month between January 2014 and May 2017 temporary networks – covering the comments and replies of the current month – as well as the two preceding months. We included all channels existing at a given time in our temporal networks. For every single network, in time we ran again the backbone extraction (Serrano et al., 2009) and kept only the significant edges before we calculated the density and the centrality.

In the last step, we were interested in the topics of the videos of the 113 channels (39,480 videos). We first considered the description of the videos. However, many descriptions are very short and do not cover the relevant context of the videos. Therefore, we decided to analyze the comments of users as a proxy for the content of the videos. Filippova and Hall (2011) have shown that this approach leads to better classification of the videos as "the video title, description and tags are not always indicative of the most relevant

category" (p. 7). As single comments are too short to use for a topic model (Hong & Davison, 2010), we combined all comments for a video and used this text as one document (e.g., Llewellyn et al., 2016).

We calculated the topic model with the STM package in R (Roberts et al., 2014) because our data have a clear structure. All numbers were deleted and we replaced all hyphens with space characters and converted all words to lowercase – before we stemmed the words with a specific stemmer for German language (Weißweiler & Fraser, 2017) – and deleted words that appeared in less than 0.78% of the documents (39′337 documents left). We tested different numbers of topic and decided to work with 30 topics as our main goal was to differentiate broader topics.[3] Finally, we used the words with the highest probability, the most unique words as well as example documents to define labels for each topic (see Figure 3). Structural topic models take into account that some topics are more prevalent on a particular channel.

Results

In RQ1 we want to identify user communities based on comment overlap within the German far-right YouTube sphere. Our analysis shows a tightly connected network of commenter overlap between the far-right channels in which 8.7% of all edges are realized (density = 8.7). even after filtering the not significant edges.[4] Within this network, we identified seven general distinguishable sets of channels with the Louvain-algorithm. These are *AfD, new right, alternative media, nationalists and music, far-right conspiracies, old right*, and *historical channels* (see Figure 1).

New right: *In this group of channels, most channels have a connection to the Identitarian Movement (IM). Besides the official regional channels of the movement, one of the most popular channels in this group is from Martin Sellner, who is the co-leader of the Austrian IM. Kanal Schnellroda, einprozentfilm as well as the writer Akif Pirinçci complement this group (for an overview see Wagner, 2017). Kanal Schnellroda is the official channel of the publishing house Antaios that is the spearhead of the German far-right intelligentsia. While the IM targets mainly a younger audience, einprozent is a self-claimed "lobbying organization" for patriotic citizens that are doing fundraising for "patriotic" projects. Both, the IM and the people behind the Kanal Schnellroda were involved in setting up the einprozent initiative.*

Akif Pirinçcis is one of the most popular authors published by Antaios and was recently fined by a judge for incitement of the people for a speech he

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[3]We validated the topics with the intrusion detection mode proposed by Chan (2020) focusing on the words with the highest probability. All tests received a precision above 93%. Only some of the Channel Comments topics were difficult to identify.
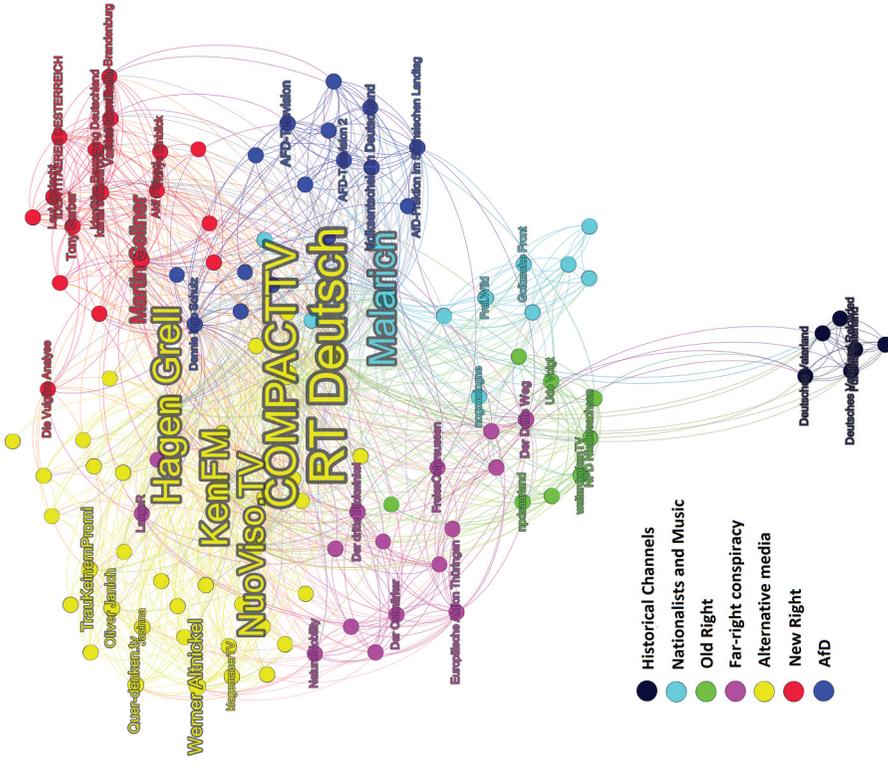[4]The modularity score is 0.312.

Figure 1. Channel networks with commenter overlap as connecting edge (113 nodes, 1097 edges). Network shows the extracted backbone structure (Serrano et al., 2009). Community detection with Louvain algorithm implemented in Python by Traag (2015), visualization with ForceAtlas2 in Gephi. Node and label size according to indegree.

gave at a Pegida event in 2015. A more central position has the anonymous YouTuber *Die Vulgäre Analyze* (The vulgar analysis), which mainly focuses on political correctness, anti-Islam and anti-Feminism. While his connection to the new right is visible in the network (see Figure 1), he still has close connections with the IM, as he was interviewed by a channel of the IM and is also regularly recommended by Martin Sellner in his videos. What unites these channels is that they all attempt to give the far-right a "new" position, that they try to bridge the gap from counterpublic to mainstream with their content, and that they try to distance themselves, at least in public, from the "old" right. The IM, for example, suggests that they are neither right nor left but rather are looking for a "third way" that allows them to be proud of their identity without feeling superior to other countries or races. This, however, has been shown to be only a façade (Hentges et al., 2014). Indeed, these actors attempt to establish an "intellectual" foundation for their "new" far-right (Wagner, 2017).

Alternative media: *Most channels in the largest of our identified groups can be best described as alternative media (Holt et al., 2019).* RT Deutsch*, i.e. the Russian government-funded German-language YouTube channel belongs to this group. Besides RT Deutsch* Compact TV*, with its strong connections to the new right, has a central position in the network. However, not all channels in this group are necessarily political in nature, although some of them certainly are, but rather talk about how Angela Merkel betrayed the German people, George Soros' supposed involvement in the "Islamization" of Europe, 9/11 or Chemtrails.*

One of these channels is KenFM, a well-known conspiracy theorist, that had a radio show before establishing a "free press portal" on YouTube and who, in general, tries to avoid being lumped together with the far-right (e.g., the channel recommendations which would be an indicator for similarity with other channels are deactivated for the channel) (Korn & Umland, 2014). Further away from purely political alternative media is also *NuoViso TV*, a conspiracy theory channel that produces videos on 9/11, the "refugee lie" or aliens. *Hagen Grell*, who describes himself as a moderator, journalist, and media producer on YouTube also questions 9/11 and indirectly implies that the Holocaust can be questioned.

Far-right conspiracy: *Conspiracy theories play also an important role in this group of channels. In contrast to the channels in the alternative media group, the agenda of channels in this community can be best described as a combination of purely far-right conspiracies, blood and soil ideology (völkisch), and sovereign citizen ideology. The so-called Reichsbürger (Reich Citizens), for example, question the legitimacy of the modern state Germany, reject its authority, often believe that Germany is not a state but a company, and believe that the Weimar Republic's constitution is still valid. This idea itself can also be best described as a conspiracy theory. Additionally, anti-Semitic conspiracy*

theories in connection to the Holocaust are more prominent in the comments of these channels than in the alternative media channels.

AfD: *Almost all channels in this group have a direct connection to the AfD. The different (semi-)official AfD party channels are part of this community. The videos in this community mainly cover politicians of the AfD. However, there are also channels with a connection to Pegida as well as the*Junge Freiheit*, a national-conservative newspaper with close links to the AfD.*

Old right: *In this group, channels from the German old far-right party NPD are grouped together with far-right rock music channels. The NPD is the party that the German far-right used to cluster around (Caiani et al.,* 2012*). However, the NPD's channels, like* weiterdenken TV*, barely have commenters in common with the rest of the network and the whole group of channels is separated from the AfD by the channels of the* new right *and the*nationalists *. Still, they share some connections with the alternative media channels and the far-right conspiracy channels.*

Nationalists and music: *While the music of the band* Frei.Wild *can be at best described as nationalistic, they distance themselves from all forms of extremism. But there are also music channels in this group with a connection to the hooligan football scene. And while a band might distance themselves from a political stance, their fans–at least on YouTube–might not feel the same way.* Malarich *(a former member of the Christian Social Union with a strong anti-Islam agenda) as well as a founding member of the Pegida* Lutz Bachmann *also belong to this group. They all describe themselves as patriots with a strong anti-Islam agenda.*

Historical channels: *Channels in this small isolated group mostly publish videos about German history (Third Reich) and German military songs. Some of the songs are shown even with English subtitles and thus attract also more English comments. Still, German users also comment on these channels with German content.*

Furthermore, to test whether a significant commenter overlap with far-right channels can also be easily reached with other non-related channels, we checked the strength of the comment overlap in both directions between the far-right channels and the channel of the SPD (Social Democratic Party) as well as the football club FC Bayern München. For this part, we again used Serrano et al.'s (2009) backbone extraction for the whole network with the two additional non-related channels. The SPD and Bayern both have no significant overlap with our 116 original channels as a target. However, there is an overlap with Bayern as a target for large *alternative media* channels like RT Deutsch, KENFM and COMPACTTV as well as AFD-Television. This suggests that some of the alternative media commenters are also Bayern fans, but in general Bayern fans are not commenting with the alternative media channels. We observe a similar result for the SPD with users from *Malarich* (a former member of the Christian Social Union with a strong anti-Islam

agenda), or channels with a connection to Pegida as sources but not as targets.

For H1 we analyzed how the networks developed over time. A KPSS test (testing whether a time series is stationary) showed that both the density (KPSS level = .99, p < .01) and the centrality (KPSS level = .93, p < .01) are non-stationary time series with a trend. Furthermore, both the density (r(39) = .91, p < .001) and the normalized centrality (r(39) = .78, p < .001) constantly increase over time (see Figure 2).

Although the network structure helps to identify distinct communities, we focus in the next step on the similarities and differences of topics that are being discussed in the comments under the videos of channels in each community (see Figure 3). To fully understand these similarities and differences, we conducted a topic modeling analysis.

Our analysis shows that the users from all different groups of channels are very concerned about the refugees that fled to Germany, as the overview of the topics in Figure 4 shows; a topic that was and still is one of the big political issues in the country and which lead to the creation of Pegida and heavily contributed to the AfD's success and the IM's surge in prominence. At the same time, however, we also see differences between the communities: The *AfD* is obviously focused on itself, i.e. the topic *AfD and German politics*. Users in this group also talk about Angela *Merkel*, the *Euro* (the AfD was originally mainly an anti-Euro party). Associated with the topic *Merkel* are also words such as *Volk* (i.e., people, but with a more nationalist connotation as it evokes for many the Third Reich) or *German*. The prominence of these topics suggests the two priorities for users on the *AfD* channels: an antagonism toward Merkel and the ruling parties, i.e., the status quo and, more specifically, a dislike of refugees. The *AfD and German politics* are also an important topic for the *old right*, together with a stronger discussion about *far-right and far-left*. Comments about the bands (*music*), *Islam* as well as *far-right and far-left* are for the *nationalists and music* group of channels the strongest topics.

Users on the channels of the *new right* mostly discuss the *far-right* (e.g., Pegida) *and the far-left* (e.g., Antifa) topic; a topic where users talk about Antifa in particular and highlight that the left is aggressive and problematic. Martin Sellner often mentions the Antifa in his videos, as they allegedly attacked members of the Identitarian Movement in Austria. Users leave usually negative comments below the videos and call the Antifa "pathetic," "boneheads," "idiots" or the new "fascists" and Nazis. There are no supporting comments of the Antifa in the comment sections of these videos. Interestingly, users in the *new right* channels also are more likely to talk about the channels themselves (*Identitarian Movement*), i.e. the content creators, and they leave more comments in English which indicates the international connections of the IB. The *gender roles* topic is not a surprise,
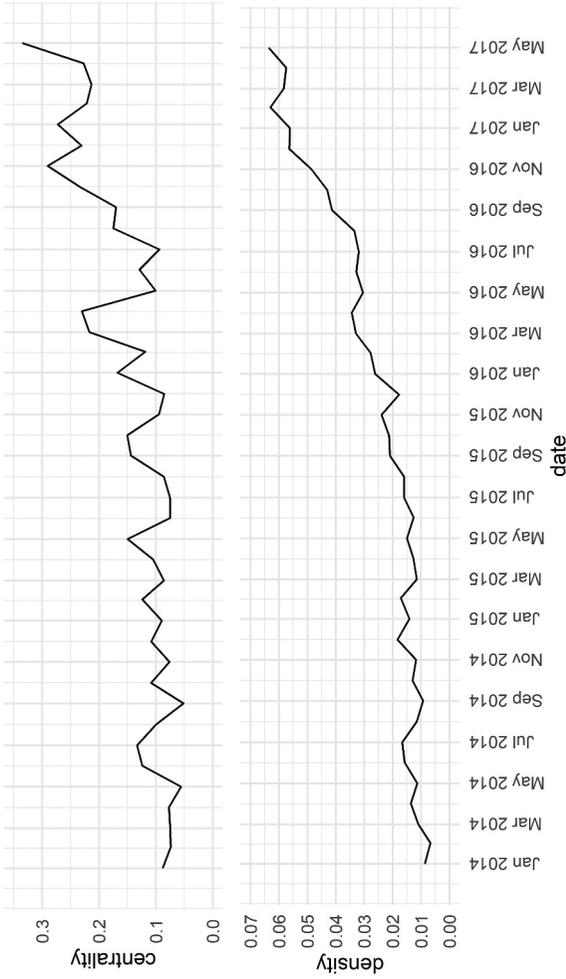
Figure 2. Normalized graph-level centrality and density of commenter overlap networks over time. The data for each month was used with the data of the two proceeding months to calculate the graphs.
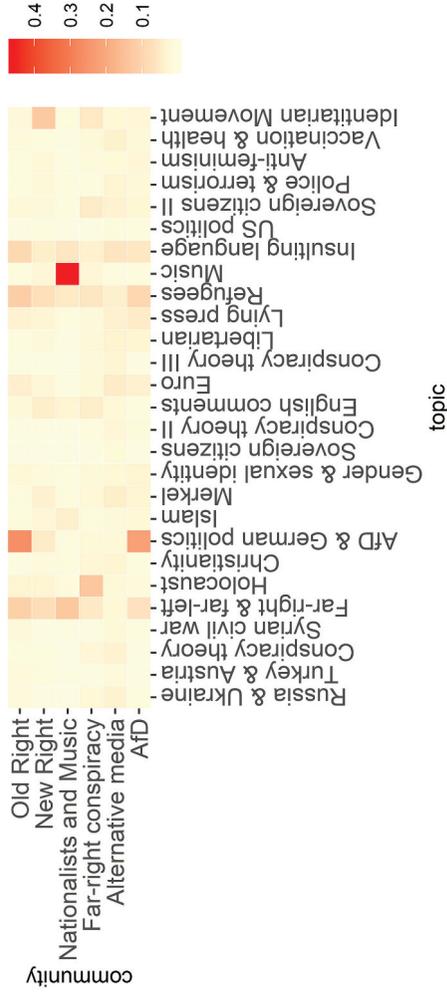
Figure 3. Heatmap of topics identified in the YouTube comment sections. Topics were identified with STM. The channels of the historical channel group are not shown. Channel comment topics are not shown.
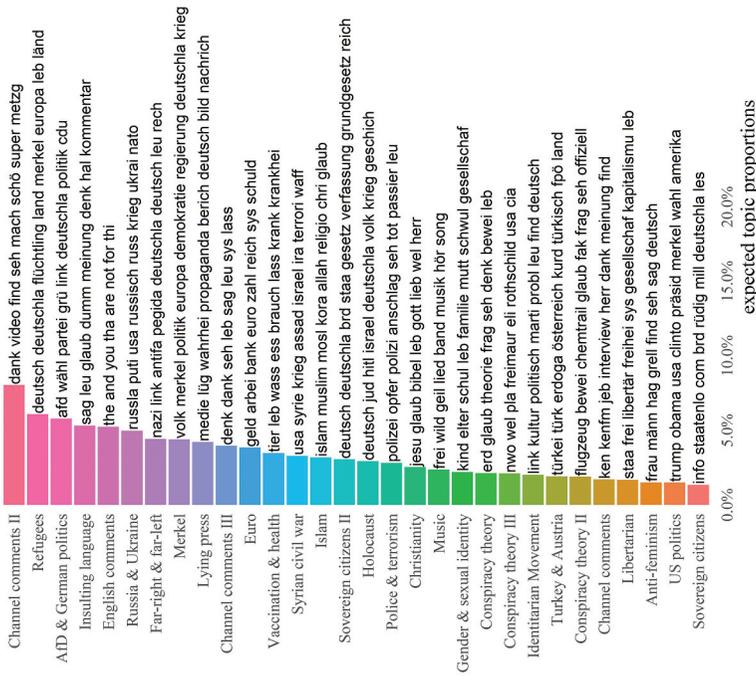
Figure 4. Topics by prevalence with the top words (highest probability) that contribute to each topic.

as gender, women's rights or the idea of a "traditional" family are part of the far-right discourse (Wodak, 2015).

The *Holocaust* is the most dominant topic for the *far-right conspiracy* channels. Additionally, the Reich citizen conspiracy theory (*sovereign citizen*) topic is a prominent topic for users in this group.

While the conspiracies in the *far-right conspiracy* group are almost all purely far-right conspiracies with anti-Semitic connotations, users in the *alternative media* group discussed within the comment sections more general conspiracies, such as the 9/11 attacks (as a false flag operation). Other such theories include the so-called chemtrails (*Conspiracy theory II*), the flat earth conspiracies (*Conspiracy theory*) as well as the New World Order conspiracy (*Conspiracy theory III* – secretive power elite controls the world). Furthermore, users also discuss international politics such as the war between Russia and Ukraine as well as U.S. politics. This is not surprising, as RT Deutsch is a Russian propaganda outlet and some of the other channels in this community can be described as Russia-friendly (Korn & Umland, 2014).

We additionally analyzed the three topics *refugees* and *AfD* – as they are the most prominent topics overall – and far-*left and far-right* as it includes self-centered discourse. We then calculated the average topic probability for every month between January 2014 and May 2017. The topic *AfD* shows a clear upward trend for the institutionalized right community, highlighting that Angela Merkel (which also appears as a high probability word in this topic), in particular, became the far-right's nemesis after the German chancellor allowed over 800,000 refugees into the country and remained steadfast in her decision. This is even more interesting, when one looks at the topic distribution of the refugee topic. Both the *far-right and far-left* with as well as the *refugee* topic have short spikes (e.g., Pegida in December 2014 during the large protest in Dresden), but become again weaker over time (see Figure 5). The three time series highlight the relevance of topics for each of the community's collective identity and how those are only partly driven by exogenous events. One would, for example, expect that the refugee topic would be more pronounced as the topic seemingly dominated the German public discourse for some time, but for YouTube users, it seems like that the "enemy" figure Merkel and the AfD were even more important.

Discussion

Our analysis shows that the overall common denominator within the German far-right YouTube sphere is the refugee crisis and the problems associated with it. Still, some channels of the far-right conspiracy community also promote anti-Semitic conspiracy theories; in some of the more extreme alternative media channels, infamous extreme right activists appear as guests

(e.g., NuoViso.TV). We further show that the German far-right counter-public on YouTube gets denser and more centralized over time. On the one hand, this can be explained with strong shock events such as the events during the New Year's Eve in Cologne 2015/2016 – but also constantly over time with the importance of the AfD – and the hate against Merkel as the temporal pattern of the topics indicates. On the other hand, a more technical explanation is the increase of the number of videos posted per months, which goes hand in hand with more unique user becoming active commenters which leads to a densification (Leskovec et al., 2007).

Our analysis shows that the German-speaking far-right has constructed its own community on YouTube with alternative media that connect the different identified communities. Our results are in line with Benkler's assumption that the "networked information economy provides varied alternative platforms for communication, so that it moderates the power of the traditional mass-media model" (Benkler, 2006, p. 9). However, as we could show this liberation from the mass media public sphere leads to a stronger focus on problematic topics, such as conspiracy theories, which can help to strengthen the identity formation within the counterpublic (Kaiser & Rauchfleisch, 2019; Rauchfleisch & Kovic, 2016). While these alternative media are rather small in comparison to mainstream channels in the German-language YouTube, they are still important and widely consumed by the German-speaking far-right, thus contributing to the formation of a networked counterpublic.

Still, we can see the differences between *new right, AfD*, as well as the *old right* with regard to the topics that are being discussed. Whereas the *AfD* is mostly focused on the political goal to participate in government and to "dethrone" Angela Merkel, the *new right* is more concerned with setting itself apart from the outgroup by riling against their enemy: the far-left. In other words: the institutionalized far-right with the AfD–as well as the old right with the NPD–is mostly preoccupied with outward-oriented communication, while the new right is focused on inward-oriented communication by constructing their "foe": the Antifa. Still, the overall common denominator that connects the publics is the refugee crisis and the problems associated with it. We can observe a tightly knit community that can be best described as a networked affective public, which is "connected or disconnected through expressions of sentiment" and has "been transformed by networked technologies" (Papacharissi, 2015, p. 125). This relative cohesive network is also in line with prior research by Caiani et al. (2012) that analyzed the linking behavior of German far-right websites. We add to this research by showing that the NPD is losing its relevance and got replaced by actors from IM, AfD, and alternative media. Future research should analyze if these new actors can establish a long-term collective identity and unite the different far-right actors.
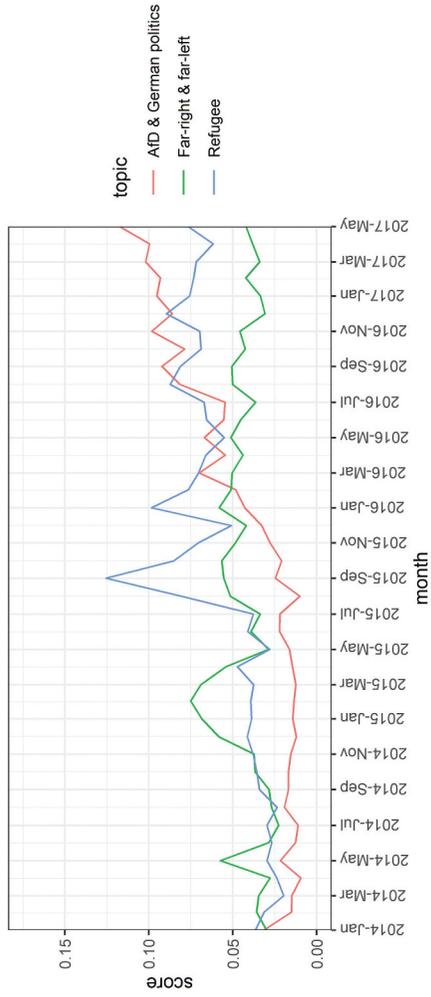
Figure 5. Average monthly topic probability.

Finally, the special role of conspiracies is worth discussing. Indeed, the connection between far-right and conspiracy theories has been outlined by others before (for a historical overview see Graumann & Moscovici, 1987). This, then, begs the question if conspiracy theories such as "vaccinations lead to autism" may be a pathway into the far-right, as conspiracy theories are not political per se and thus potentially blur the line between political and cultural sphere and may attract new users. Future research should further investigate the connection between conspiracy theories and the far-right.

This study also has limitations. Although we used topic modeling, we are not able to be more precise with regard to the frames or narratives that are being discussed throughout the comments and how they differ. We are also not able to pinpoint potential areas where users from the far-right clash with users from the mainstream, or what inspiration users draw from videos as well as comments. This would be helpful to understand which topic might allow for effective counter-speech. Furthermore, more research is needed to understand the role of the most central organizations like COMPACT in facilitating the discourse within the German far-right and how they function as organizations (online as well as offline; Friedland, 2015). There are also well-documented collaborations between KenFM as well as Russian propaganda channels such as RT Deutsch (Korn & Umland, 2014). Future research should specifically focus on potential Russian influence, especially on YouTube as the core of the far-right counterpublic is dominated by RT Deutsch, KenFM, and COMPACT. It should also be mentioned that we only analyzed one platform within the broader networked public sphere. For mobilization Twitter or private chat servers are more important platforms.

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Notes on contributors

Adrian Rauchfleisch (PhD University of Zurich) is an assistant professor at the Graduate Institute of Journalism at the National Taiwan University. In his research he focuses on the interplay of politics, the internet, and journalism.

Jonas Kaiser (Dr. phil. Zeppelin University) is an Affiliate at the Berkman Klein Center for Internet & Society at Harvard University and Associate Researcher at Alexander von Humboldt Institute for Internet and Society. His research focus is on the far-right in Germany and the United States against the background of digital and political communication.

ORCID

Adrian Rauchfleisch ⓘD http://orcid.org/0000-0003-1232-083X
Jonas Kaiser ⓘD http://orcid.org/0000-0001-9252-7448

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