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Drilling a Telegram-YouTube Pipeline: Cross-Platform Affordances of German Anti-Government Extremist Networks

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ABSTRACT

This study examines social media platforms in the mobilization and convergence of German Anti-Government Extremist (AGE) networks Querdenken and Reichsbürger in the lead-up to their coup-attempt in December 2022. Using a longitudinal URL analysis of 785,865 Telegram messages from August to December 2022, we assess how platform affordances shape inter-group interactions across the digital ecosystem. Our findings reveal two distinct yet interdependent platform usage patterns, with both milieus relying heavily on instant messaging and video platforms. The "Telegram-YouTube pipeline" emerges as a key structure for mobilization and radicalization, demonstrating how affordances of different platform types function to sustain inter-group engagement.

Introduction

On 7 December 2022, German authorities prevented a coup attempt by a network of 50 individuals seeking to overthrow the government. While primarily attributed to the Reichsbürger movement, the coup plot also involved key figures from Querdenken, the covid19-measures-protest movement that mobilized large-scale demonstrations across Germany.[1] The event symbolizes current trends within political violence, having been labeled as the new phenomenon of Anti-Government Extremism (AGE) that blends heterogeneous actors, conspiracy theories, and diverse ideological fragments.[2]

Social media played a critical role in driving this process. Querdenken relied on digital infrastructure for their consolidation and organization of protests,[3] which were exploited by extremist factions like Reichsbürger for recruitment and ideological dissemination.[4] Research observed spikes in online convergence between these milieus following major demonstrations, suggesting a dynamic interplay between the use of

Telegram and real-world extremist mobilization.[5] This interrelation of milieus and the online and offline domain does not only demonstrate the changing nature of extremism but also makes the coup an instructive case study for understanding the social media usage behavior of extremist milieus.

Despite the acknowledged role of social media in AGE activities, there is a gap in (a) cross-platform analyses to (b) holistically understand the affordances of extremist digital ecosystems. This article seeks to address this gap by (a) exploring and comparing the online activity of Querdenken and Reichsbürger on Telegram and beyond. We collect 785,865 messages from 86 public Telegram channels from 2020 to 2022 and conduct a longitudinal analysis of the outlinks.

To conduct this ecosystem analysis, we (b) introduce a platform typology informed by affordance theory, resource mobilization theory, as well as radicalization and political violence research. While affordance theory helps identify how technical features shape user interactions, resource mobilization theory elucidates how these affordances play a role in the movements. Further refining this framework against our data, we discuss how the 7 out of 11 statistically significant types provide different behavioral and cognitive affordances for Querdenken and Reichsbürger until the coup.

We provide several contributions to academic literature. First, we add to the dearth of literature on AGE. By analyzing the social media activity of the milieus involved in the coup attempt, we provide empirical evidence on the distinct digital ecosystems of issue-driven (Querdenken) and ideological (Reichsbürger) AGE. These findings challenge previous research that classifies both under the far-right umbrella. We also expand the literature on platform affordances to inter-group contexts, while more broadly, adding to a body of knowledge of online political extremist ecosystems.

Literature Review

Since its creation in 2013, Telegram has been a home to extremists of many ideologies. This began with jihadists, particularly the so-called Islamic State (IS), after they began to face content moderation on mainstream social media platforms,[6] followed a few years later by the far-right.[7] The platform is popular with extremists because it has minimal content moderation and offers a higher level of operational security;[8] Telegram uses end-to-end encryption and rarely complies with court orders.[9] Both Querdenken and Reichsbürger have a heavy digital footprint on the platform.[10] The growth of these movements on Telegram has been linked to the pandemic; a report by the German security services highlights an expansion of Querdenken's presence between 2020 and 2022.[11] Schrimpf et al. show that their activity was primarily used to call for physical protests against lockdowns,[12] while Schulze et al. observe a radicalization of the language used on Telegram between 2020 and 2021.[13] Reichsbürger also expanded significantly on Telegram during this period.[14]

Telegram is an important part of both the online Querdenken and Reichsbürger ecosystems. However, it is common for extremist movements to operate across several platforms with different affordances. Therefore, one must look further to better understand the networks and cultures that exist within extremist movements.[15] One way to do this is by examining "outlinking" from one platform to another, enabling the understanding of the types of spaces that are being used and which are prevalent.[16] Several studies have assessed

the ecosystems of Querdenken and Reichsbürger by analyzing Telegram outlinks. One piece suggests that video platforms such as YouTube and DLive are important vectors in the ecosystem,[17] while also emphasizing the importance of Facebook.[18] Others point to a range of platforms including Facebook, X/Twitter, YouTube, Instagram, and fringe platforms such as Gettr and Odysee,[19] all demonstrating the centrality of Telegram within both Querdenken and Reichsbürger ecosystems. Yet, most studies on this topic have focused on either one of the AGE movements, failing to explain how and why their Telegram-based ecosystems merged in the run-up to the attempted coup.[20]

In fact, research and policymakers have highlighted this plot as *the* example of the growing threat of AGE, an umbrella term to make sense of blurred barriers between anti-vaxxers, conspiracy theorists, sovereign citizens and right-wing extremists since the pandemic and over social media.[21] AGE research helps us to understand why more comparative angles are needed between those movements: Even though inter-group barriers are collapsing, Querdenken and Reichsbürger represent different types of AGE.[22] Research shows how this difference might translate to social media: Querdenken exploits Telegram to a large extent for protest mobilization compared to the far right. Reichsbürger on the other hand, utilize YouTube for interview-based formats, while Querdenken appears to post more demonstration livestreams.[23] Thus, our study seeks to expand on both strands by analyzing two AGE movements comparatively:

RQ1: What are the differences and similarities in the usage patterns of Querdenken and Reichsbürger adherents of various social media platforms?

We also explore *why* these AGE movements opt for the platforms that they use. Affordance Theory helps to further this understanding. Introduced by Gibson in ecological psychology in 1979, it conceptualizes how the specific opportunities of the environment shaped its' perception by animals.[24] Since then, the concept has been adopted to other disciplines including communication,[25] helping to distinguish the modes of human agency afforded by the technological features of social media.[26] Contemporary communication, which blends both online technologies and offline interactions offers users a much greater ability to reinforce their existing worldviews with ideologically homogenous information.[27] This has led to concerns of "echo chambers" in which individuals self-select into groups who tend to think alike, and sometimes, groups gravitate toward more extreme versions of their ideologies.[28] It also blurs the traditional conception of public versus private communications, with "town square" discussions often taking place online,[29] as well as changing the nature of social relations; for much of human history, people tended to have small geographically proximate social circles. Today, people are easily connected to tens, or even hundreds of thousands of other people all around the world.[30] However, these relationships are different; they are shallow, often lacking the trust that can only be built up from knowing an individual for a long time.

Many have argued that technological differences offer different opportunities for radicalization.[31] Whittaker develops this, arguing against focusing on the online/offline dichotomy, instead for specificity between different types of communications, such as textual posting on X/Twitter, watching videos on YouTube, communicating visually on Skype, or interacting anonymously on Telegram. These platforms offer diverse affordances which result in entirely different user experiences, rules and

realities.[32] Schulze and colleagues offer six affordances—algorithmic amplification, modes of communication, anonymity, community management and opportunities for building (para-)social bonds and group identities—that may be appealing to extremist movements.[33]

Research on the 2022 coup attempt offers important insights into why specific platforms, and their affordances, may have been used by the two AGE movements. Network analyses highlight that one of the affordances of Telegram is to easily coordinate and connect, identifying 11 different communities on the platform that are connected to Querdenken; protest-centered actors represent the largest community, far-right actors act as intermediaries to German- and English-language QAnon channels.[34] Zehring and Domahidi also find "Querdenken's subcommunities preferably forward content from far-right and QAnon communities, while far-right conspiracy theorist alternative media channels act as content distributors for the movement."[35] The ease in which conspiratorial content can be disseminated across Telegram milieus is also posited to be an affordance that may play a role in the radicalization of members of Querdenken.[36]

Resource Mobilization Theory (RMT) can act as a framework in understanding how the affordances provided by online platforms *can* play a role in the movements. Developed in the 1970s, RMT sought to understand how access to material, human, and social-organizational resources affected the successes or failures of social movements.[37] Previous explanations theorized social movements as sudden increases in grievances due to structural strains of rapid social change. RMT posits movements as rational and adaptive and that grievances as secondary to the level of resources that are available.[38] A key resource that contemporary social movements have available to them is a range of online platforms which are inexpensive, non-labor intensive, and allow for a wide berth of communication, and the formation of parasocial relationships. This is important for fringe groups that do not enjoy support from the traditional media.[39] Research on Querdenken has found Telegram to be a key vector in its mobilization, using appeals for online support (such as reposting messages), offline action (e.g. attending protests) and to a lesser extent fundraising and calls for violence.[40]

We expand the current knowledge base into the two movements' ecosystems by exploring the affordances of chosen platforms for (extremist) mobilization in the attempted coup. While there have been several studies which seek to understand Querdenken, comparable studies on Reichsbürger and their online presence have not been conducted at a comparable scale. Part of the explanation is that Reichsbürger are often subsumed as part of right-wing extremism on which the few social media analyses have focused.[41] Their increase in online activity over the pandemic offers an important case study to not only add a more granular angle on their online ecosystems. The lead up of this timeframe toward the 2022 thwarting of a coup attempt involving both Querdenken and Reichsbürger also highlights their joint plotting as a valuable case to understand the affordances of their digital ecosystems for extremist mobilization. Therefore, we also ask:

> RQ2: What affordances do the platforms identified in RQ1 offer and how may they have helped to mobilize the thwarted coup plot of Querdenken and Reichsbürger?

Platform Typology: A Theoretical Framework for Inter-Group Contexts

We explore these similarities and differences in the Querdenken and Reichsbürger ecosystems, and how their silent features afforded a joint coup-plot by drawing on two theoretical frames: AGE and affordance theory.

First, we use AGE to explore the similarities and differences between Querdenken and Reichsbürger. Following Jackson, we argue that they reflect different types of AGE. Querdenken originated as a protest movement—"issue-driven" AGE—which opposes a particular stance taken by a government. "Ideological AGE" is broadly opposed to government, in the case of Reichsbürger ideologically rooted in conspiracy theories.[42]

Second, research highlights that classifying platforms into distinct types aids understanding the affordances of their technical features.[43] This study builds on existing frameworks surrounding affordance theory to develop a typology that addresses three gaps in the literature:

1. Expanding Affordances Beyond Radicalization: While affordance theory has been introduced to digital extremism research, prior studies focus primarily on radicalization processes.[44] This study incorporates RMT to account for affordances related to financing, logistical coordination, and political mobilization, reflecting the broader strategic objectives of extremist plots.[45]

2. Bridging Online and Offline: Existing models, such as Frischlich et al.'s "opportunity structures," emphasize affordances for "dark participation" by contrasting mainstream and alternative social media platforms (e.g., X/Twitter vs. Gab).[46] Despite drawing on the theory of planned behavior,[47] these models primarily address online behaviors, whereas the coup mobilization targeted both online and offline aspects. Buehling and Heft specifically highlight how Querdenken appropriated the affordances of Telegram for continuous online and offline mobilization,[48] validating the concept of connective action.[49]

3. Affordances in Group Contexts: Current frameworks often focus on individuals, overlooking the different technical needs for group settings. Since the datasets trace two distinct groups that partially merged until the coup attempt,[50] this study specifically examines affordances for inter-group contexts. We draw on group radicalization research to explore group affordances along the paradigm of cognitive and behavioral factors.[51]

We fuze and amend the typologies of Schulze et al. and Frischlich et al. to capture how technical features of social media platforms enable inter-group contact through either behavioral affordances (e.g. enabling social interaction within and between groups) and cognitive affordances (e.g. fostering shared social identities and narratives that promote collective grievances or co-radicalization). We understand "social media" as an umbrella term for digital services that, through their networked infrastructure, allow users to communicate and maintain social bonds.[52] Following this understanding, we only include platforms that allow users to create a profile, aligning with the research

Table 1. Platform types.

Genre	Subgenre		Examples
1) Personal Publishing Centered	1.1) Microblogging		X/Twitter, Gab, Gettr, Parler…
	1.2) Content or Format Centered Publishing	1.2.1) Video	YouTube, BitChute, Odysee..
		1.2.2) Short Video	Instagram, TikTok…
		1.2.3) Image	Pinterest, (Instagram)…
	1.3) Livestreaming		Twitch, DLive…
2) Social Exchange Centered	2.1) Social Networking		Facebook, LinkedIn, VK…
	2.2) Imageboards		Reddit, 4chan, 8kun…
3) Instant Chat Centered	3.1) Instant Messenger		WhatsApp, Telegram…
	3.2) Instant Audiovisual Messenger		Snapchat, Zoom, Skype…
4) Services Centered	4.1) Money Sharing		Paypal…
	4.2) Music/Podcast Sharing		Spotify, iTunes, Podbeam…

aim of understanding structured, group-oriented engagement. This also entails the introduction of new categories, such as short-form video platforms (e.g. TikTok),[53] and services-centered platforms (e.g. PayPal).[54]

Moreover, as Kaye shows, additional differentiation between the level of activity for users can help in further distinguishing the "socialness" of social media.[55] Hence, the revised typology classifies platforms by their technical features for "active user" in terms of their ability to distribute information, content or services. To clarify, we define an active user as either producer or "prosumer" (a user who both produces and consumers material) of content, whereas a passive user only consumes. The typology is summarized as follows, see Table 1:

Given the still-growing body of research on (a) group dynamics in radicalization and mobilization,[56] (b) of cross-platform ecosystems,[57] (c) particularly in the context of AGE,[58] this study adopts an exploratory approach. After applying this concept to our data, we use our findings to warrant further conceptual development for affordances in inter-group contexts beyond online factors and radicalization.

Methodology

Study Design

The research aims of this study are to (1) compare the social media usage behavior of Querdenken and Reichsbürger as subgroups of AGE to (2) discuss the salient features of relied on platforms in aiding their joint plot to overthrow the German government in December 2022. These aims brought about specific requirements for the data:

1. For the best comparison, the data should contain two datasets representative of each subgroup and of equal sample size.
2. To best capture the usage patterns of the milieus, the data should be longitudinal.
3. For the best and comparable insights into the social media ecosystem, the data should be collected from a frequently used platform of both subgroups that can be used as field access to other platforms.
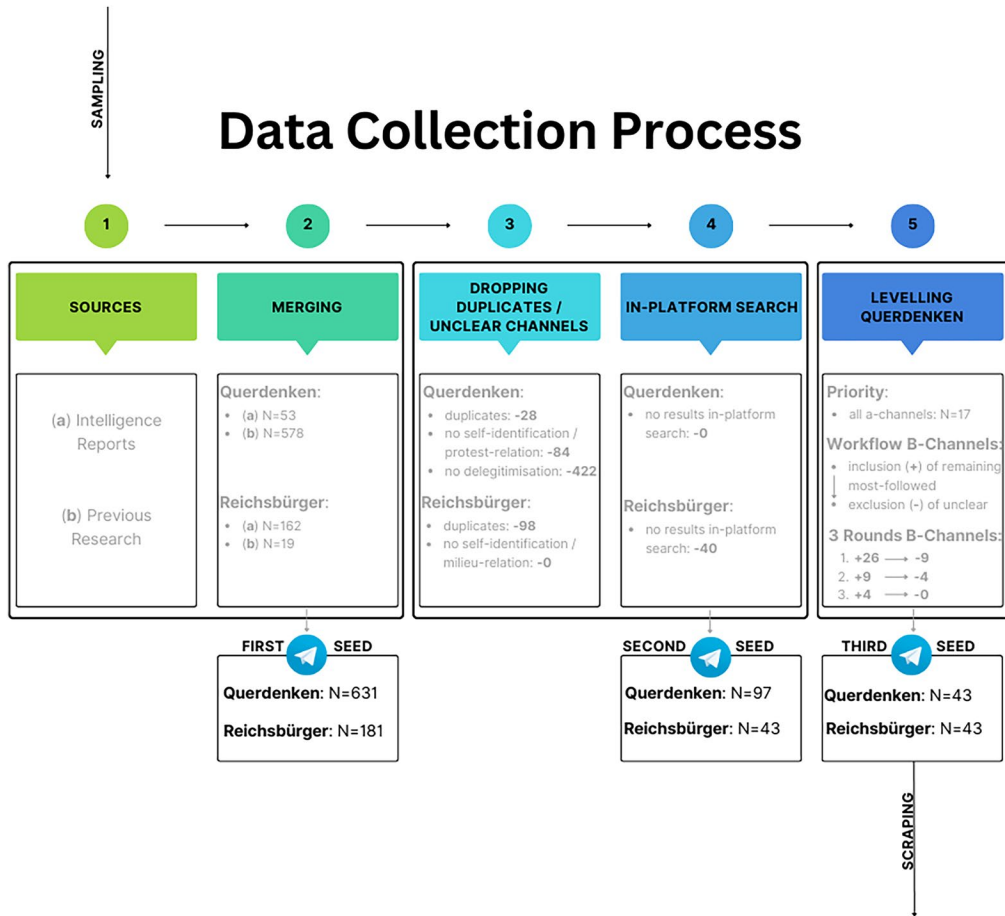
Figure 1. Graphical representation of data collection process.

Given these aims and requirements, we employed a two-step strategy. We first used predefined seed lists (Figure 1) to scrape 785,865 Telegram messages from 43 public channels of each sub-group between the first know sight of radicalization of Querdenken and convergence with the Reichsbürger, the storming of the Reichstag (01.08.2020), until their joint and prevented coup attempt (18.12.2022). We chose these lists as they were included in a previous study to investigate the degree of convergence of Querdenken and Reichsbürger milieu until the thwarting of their plot. [59] Then, we extracted 332,506 URLs from the scraped messages and performed an exploratory quantitative analysis of all platform outlinks.

Sampling

As Telegram is not only widely used in both groups,[60] but as an instant messenger brings about the affordance to easily share links to other platforms,[61] the platform serves as field access. To mitigate the challenges of sampling a dynamic, heterogeneous, and largely unknown population, different approaches were combined, drawing on the

models of Semenzin and Bainotti as well as Jost et al.[62] We therefore performed three sampling rounds cleaning research-driven seed lists to find channels through the in-platform approach. For channel classification, we combined time-restricted content screening with inclusion criteria defined through previous research.

First Seed List

The heterogeneity of both AGE subgroups, as well as the sparse data on their population owing to their dynamic nature, complicates actor categorization into either a Reichsbürger or Querdenken group. As we performed a comparison of both groups that demands clear categorization, we developed inclusion and exclusion criteria for an initial seed list. Due to the field's narrative and ideological overlaps, content-based sampling was excluded for the initial seed. Instead, we chose to include only actors that can be unambiguously classified as Reichsbürger or Querdenken based on 35 intelligence reports and prior research.

The annual reports from the German Federal Office for the Protection of the Constitution for 2020, 2021, and 2022, along with the independent reports of Germanys' 16 states of 2021, served as an important pillar to identify extremist factions. We used MAXQDA to code the chapters of the observation categories "Reichsbürger und Selbstverwalter" (Sovereign Citizens and Self-Administrators) as well as "Verfassungsschutzrelevante Delegitimierung des Staates" (Delegitimization of the State Relevant for the Protection of the Constitution) for named actors, entities, social media channels, or websites. This resulted in a list of 215 actors and their potential channels, which was then supplemented with 578 Querdenken-related channels identified by Zehring and Domahidi and 19 Reichsbürger actors monitored by CeMAS.[63]

Second Seed List

After merging the lists for Querdenken ($N=631$) and Reichsbürger ($N=181$), duplicates were dropped. In the second step, we removed channels that could not be clearly identified as either Querdenken or Reichsbürger by screening the channel descriptions or their message content for no longer than 5 min. To capture the extremist-leaning factions of the movements, we derived inclusion criteria from security reports and previous research. The Federal Office for the Protection of the Constitution succumbs parts of Querdenken under an observation category created in 2021 in response to unassignable extremist tendencies amidst demonstrations of anti-covid19 policies. These include a set of heterogeneous actors that delegitimize the state by concurrent demeaning of and agitation against representatives and institutions of the state.[64] This meant dropping all channels that (1) not clearly self-identify as Querdenken or protest related. As the state-wide Querdenken movement emerged through local chapters copying the Telegram presence of the founding chapter in Stuttgart,[65] we defined "protest-related" as channels that (a) mobilized for protests, ideally in (b) a specific city or area, reflecting the spatial dispersion of the movement. Additionally, we excluded channels that (2) only demonstrated ideological or narrative closeness to the movement without signs of state delegitimization. This excluded channels calling for, i.e. "freedom amongst all mankind" and all channels of Zehring and Domahidi labeled as "alternative media".

Conversely, German security services define Reichsbürger as people or organizations that refuse to acknowledge the authority of the Federal Republic of Germany and its

judicial system. Similar to Sovereign Citizens, they view themselves as "citizens of the German Reich". This self-identification is embedded in conspiracy theories and often serves as the rationale for declaring their own realms, statutes, or quasi-feudal governance structures.[66] Based on that definition, included channels are typically named like a kingdom or duchy, their self-proclaimed leaders and mentors or conspiracy theories that are central to their ideology. Then, using the in-platform approach of Semenzin and Bainotti,[67] 139 public channels were identified through a keyword and entity search guided by this second seed list.

Third Seed List

Due to the highly unequal composition of the results (Querdenken $N=97$, Reichsbürger $N=43$), a third seed list was created for Querdenken ($N=43$) to match the Reichsbürger list for better comparison. This list prioritized extremist actors from constitutional protection reports ($N=17$). From the channels found through research, we filled the 26 remaining spots with the most followed accounts in descending order. Because of the high impact of sampling decisions on the representativity of the results, we re-tested those accounts against our inclusion criteria for the second seed list. For higher accuracy of criteria fulfillment, we omitted content screening and only coded the account descriptions as they intended to summarize the overall direction of the channel. This led us to drop eight accounts. We repeated this protocol twice, again starting by including and reevaluating the remaining most-followed accounts, until the third seed list comprised 43 public channels for both Querdenken and Reichsbürger. We used this list as our sample.[68]

URL Analysis

Data Collection

From the final sample, 785,865 messages from 01.08.2020 to 18.12.2022 were scraped using the Telegram API and Telethon Python package integrated into 4CAT.[69] The scraped messages informed the second step of our research design. We employed a combination of inductive and deductive strategies to collect the shared URLs to analyze the outlinks to other platforms. Initially, we extracted 332,506 URLs from the body of messages utilizing the Python-built "extract URLs" processor of 4CAT. This processor uses regular expressions and the "urls_from_text" utility from the "ural" library to identify and extract URLs from textual data, handling various input formats and exceptions for robust data processing.[70]

To streamline the data for analysis, we first reduced these extracted URLs to their respective domains again using 4CAT. The URL consolidation processor utilizes customizable rules, including domain-only extraction, removal of URL components (such as scheme, path, or query), and predefined social media-specific transformations, to standardize the URLs for structured outputs.[71] For example, links to posts on Facebook were reduced to "facebook.com". Second, all domains linking to the same platform were subsumed into one category. For Facebook, merged duplicates came in a format like "fb.me", "facebook.de" or "fb.watch". We then conducted a deductive search for platforms identified by Matlach and Hammer, given the large overlap of the sample.[72] We filtered out all URLs shared less than 50 times. Next, we performed an inductive

screening of all remaining and not yet coded URLs to identify additional platforms, again merging any duplicates and incorporating platforms into the initial list. For accuracy, the number for inductively identified platforms in the "above 50" sample were matched with duplicates shared less than 50 times form the total list. Thus, we only excluded platforms that were shared fewer than 50 times in one or more formats. This approach ensured control for milieu-specific alternative platforms that would not have met the inclusion criteria (excluding platforms shared fewer than 50 times) and scope ("far-right" as opposed to differentiation between subgroups) of Matlach and Hammer. Overall, we found 30 platforms for Querdenken and 28 for Reichsbürger.

Data Analysis

We analyzed the frequency of platform URLs independently and in relation to shared messages of both Querdenken and Reichsbürger to compare their social media behavior as AGE subgroups. To explore the platforms' affordances, we classified and grouped a total of 34 platforms into 10 out of 11 types as developed above.

To evaluate the significance of differences in platform usage pattern between Querdenken and Reichsbürger, we conducted a pairwise chi-square analysis, following Beasley and Schumacker[73] and García-Pérez and Núñez-Antón.[74] This approach allowed us to statistically test two key aspects:

1. The significance of differences in platform usage between the two groups.
2. The robustness of the platform typology developed in this study by assessing whether the categories reflect distinct patterns of engagement.

We began with an initial chi-square test on both datasets as a whole, yielding a statistically significant result ($x = 8951.45$, $p = <0.001$). To identify specific categories that contributed to these differences, we analyzed the standardized residuals (z-scores) for each platform type, where values greater than 1.96 indicated statistical significance. To avoid a familywise error, we then conducted Bonferroni corrections by multiplying the p value by the number of categories ($n = 10$) to generate a more conservative adjusted p value. The refined analysis excluded non-platform URLs to focus solely on platform-related behavior, ensuring percentages summed to 100%.

Limitations

We have chosen to explore a single platform—Telegram. While we justify the reasons for this approach above, including its wide use within terrorism studies,[75] we also accept that it carries limitations. By choosing a single source platform, we only offer a snapshot of a specific part of a radical milieu and cannot make broader generalizations about the wider information environment which the movements inhabit. It is possible that individuals within our dataset used other platforms more widely or for more radical means, but because they were not outlinked from Telegram, they are not captured in this study.

Moreover, the use of seed lists derived from intelligence reports comes with limitations of our sample. While this approach is justified by identifying the extremist-leaning faction of a wider protest movement, the sample overlooks unnamed actors as German security services are not legally bound to share all information.[76] This also means that the sample includes actors that are spatially dispersed across Germany without

guaranteeing a balanced representation of all states. To navigate those potential blind spots, we included previous research on the online presence of both groups. As the field is relatively young, solely extremism-focused sampling has not been conducted on the milieus. Although we applied strict inclusion criteria to "clean" the research derived lists, our sample composition can at best reflect extremist-leaning accounts in the wider ideological information environment of the "Patriotic Union". We should be clear that this is a social media analysis, *not* a behavioral analysis of the individuals that perpetrated the coups. We do not offer an explanation of how or why potential perpetrators radicalized. As the trials are still ongoing and the composition of perpetrators is unknown, this would be unethical. Rather, we seek to understand the online network which a group of like-minded individuals inhabited (far greater than those who were involved in the coup) and explain how, theoretically, the activity and affordances of their information environment *could* afford the run-up until the foiled plot.

With that decision comes the final limitation of our sample. Jost et al. note that sampling heterogenous and largely unknown actors on Telegram comes with a number of challenges.[77] In our case, the two-year time-log between the time frame of analysis and sampling had implications for data access. Given the highly dynamic nature of Telegram, two Querdenken and five Reichsbürger accounts were not available (in our time frame) for data collection. Therefore, the sample comprises 38 Reichsbürger and 41 Querdenken channels.

Results

Overview of Platform Ecosystem

The data will initially be described by message volume, platform utilization and diversity of platforms. As shown in Table 2, we scraped 320,555 messages from 41-Querdenken channels, out of which we identified 162,436 URLs, representing 50.7% of the messages. The 38 Reichsbürger channels sent 465,310 messages, with 170,070 URLs, accounting for 36.6% of the messages. This indicates a notably higher activity of Reichsbürger on Telegram and propensity of Querdenken for URL sharing among their channels, also translating to the platform-specific URLs. In relation to the total messages of each sample, Querdenken shares 6.7% more URLs even though the total number of Reichsbürger URLs linking to other platforms is outperforming the activity of Querdenken by 7,762 links. Also considering the number of platforms linked to, the analysis identified 30 distinct platforms used by Querdenken and 28 by Reichsbürger.

Table 2. Overview of ecosystem.

	Querdenken	Reichsbürger
Total Messages	320,555	465,310
… from active accounts	41	38
… from which URLs…	…162,436	…170,070
… in %	… 50.7%	… 36.6%
Platform URLs	86,597	94,234
… from total Messages	… 27%	… 20.3%
… from total URLs	… 53.3%	… 55.4%
… no. of Platforms	… 30	… 28

Table 3. Rounded URL shares per social media platform.

Platform domain	No. of URLs querdenken	% of total querdenken	No. of URLs reichsbürger	% of total reichsbürger
Telegram (t.me)	44,744	51.7	58,167	61.7
YouTube	18,258	21	23,069	24.5
Odysee.com	1,670	1.9	4,072	4.3
X/Twitter	6,304	7.3	2,744	3
Facebook	3,253	3.8	702	1
Dlive.tv	1,291	1.5	502	1
Paypal.com	2,733	3.1	582	1
Instagram	1,850	2.1	318	0
Tube.Querdenken	1,831	2.1	—	—
Gettr.com	978	1	488	1
Bitchute.com	594	1	951	1
Telegra.ph	353	0	562	1
Rumble.com	552	1	363	0
Vimeo.com	430	0	73	0
Vk.com	406	0	248	0
Twitch.tv	401	0	224	0
Tiktok.com	320	0	68	0
LinkedIn	183	0	—	—
Wtube.org	—	—	696	1
WirTube.de	—	—	277	0
Parler.com	—	—	52	0
Gab.com	15	0	43	0
Open.Spotify.com	44	0	40	0
Trovo.live	107	0	8	0
Reddit	10	0	8	0
Veezee.tv	116	0	21	0
WhatsApp	11	0	—	—
Ignazbearth.ch	10	0	1	0
Frei3.de	15	0	—	—
Movipo.de	48	0	—	—
Xing.com	35	0	—	—
8kun.top	—	—	3	0
Youmaker.com	5	0	1	0
Pinterest.de	1	0	—	—

RQ1: URL Shares Per Social Media Platforms

Looking at the platforms within this ecosystem (Table 3), the most striking similarity between the Querdenken and Reichsbürger dataset is that both groups predominantly share URLs that link to Telegram.

Even though we were interested in looking at outlinking behavior, this illustrates that both groups are inlinking more than outlinking by referring to the host platform. However, as Table 3 shows, the proportion of Telegram shares is notably different between the two groups. While 58,167 messages in the Reichsbürger sample contained links to Telegram, this was only true for 44,744 Querdenken messages. In relation to the total number of platform URLs, the numbers translate to 51.7% of all platform URLs for Querdenken and 61.7% for Reichsbürger. Referring to Table 2, the 10% difference supports the above observation that Reichsbürger may rely more on Telegram for their communication needs.

Other than their reliance on Telegram, the two most striking similarities are that YouTube is the second most shared platform for both groups, with a distinct third accounting for only roughly 5% of all shares. YouTube makes up about a quarter of all shares for Reichsbürger ($N = 23,069$) and about a fifth for

Querdenken ($N = 18{,}258$). While the distinct third platform for Querdenken is X/Twitter (7.3%), 4.3% of Reichsbürger URLs refer to the alternative video hosting service Odyssee. All other platforms, including mainstream platforms like Facebook and Instagram, accounted for less than 5% of URL shares for both Querdenken and Reichsbürger.

RQ2: URL Shares per Platform Types

Out of the 11 described platform types in our theory, 10 were prevalent in the Querdenken and Reichsbürger dataset. While this implies a wide utilization of platforms, Figure 2 shows a large concentration on instant messenger (Querdenken $n = 44{,}755$; Reichsbürger $n = 58{,}167$) and video platforms (Querdenken $n = 23{,}529$; Reichsbürger $n = 29{,}524$). Yet, the graph also indicates a higher concentration of Reichsbürger on those types than Querdenken.
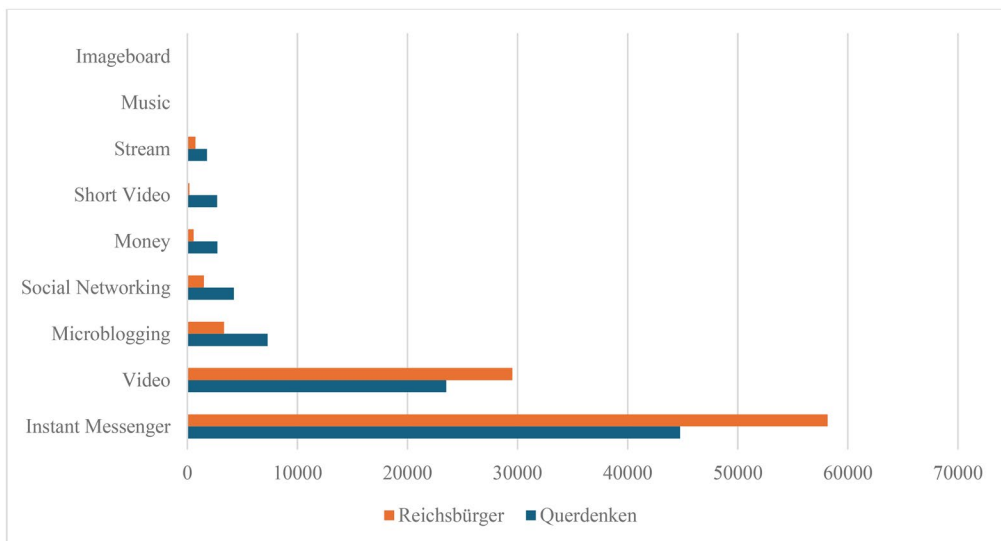

Figure 2. URL shares per platform type.

Table 4. Chi-square test of platform types correction.

	Reichsbürger (%)	Querdenken (%)	x^2	z	p	p (adjusted)
Content Curation	0.0	0.0	1.088	−1.043	.297	2.969
Imageboard	0.0	0.0	.001	.025	.98	9.803
Instant Messenger	61.7	51.7	1855.611	43.077	.000	.000*
Microblogging	3.6	8.4	1939.557	−44.04	.000	.000*
Money	0.6	3.2	1747.834	−41.807	.000	.000*
Music	0.0	0.1	1.082	−1.04	.298	2.983
Short Video	0.4	2.5	1423.1	−37.724	.000	.000*
Social Networking	1.6	4.9	1572.947	−39.66	.000	.000*
Stream	0.2	2.1	1362.754	−36.912	.000	.000*
Video	31.8	27.2	475.925	21.816	.000	.000*
Total	100	100				

*Values significant at $p < 0.05$ after Bonferroni correction.

The chi-square test validated the overall differences between their two datasets ($x = 8951.45$, $p = <0.001$). A deeper analysis of the standardized residuals (z-scores) identified seven platform categories with significant differences in usage: Instant Messenger, Microblogging, Money, Short Video, Social Networking, Streaming and Video. Instant Messenger platforms, for instance, accounted for 61.7% of Reichsbürger's usage compared to 51.7% for Querdenken, while Microblogging platforms showed an opposite trend (8.4% for Querdenken vs. 3.6% for Reichsbürger). Similar significant differences were observed across other categories, as detailed in Table 4.

These results highlight the trends observed of the total URL shares and moreover validate their grouping into distinct types. While our findings cannot definitively validate their affordances, they highlight key patterns that we will discuss in the context of coup mobilization to warrant further conceptual development for inter-group contexts.

Discussion

RQ1: Usage Patterns of Various Social Media Platforms

Similarities

Our comparison of outlink behavior to specific platforms revealed that both Querdenken and Reichsbürger still use mainstream platforms, especially YouTube as the second most linked-to platform. Interestingly, we found that most links refer to the host platform Telegram (Querdenken 51.7%, Reichsbürger 61.7%). Both results are in line with previous research on Querdenken or meta-studies on the far-right, including both Querdenken and Reichsbürger samples. A meta study issued by German security services highlight Telegram as a largely closed-off ecosystem that seems to fulfill many functions for the milieu.[78] Beyond Telegram and YouTube, our analysis partially challenges their or Matlach and Hammers results of medium to high reliance on other mainstream platforms like Facebook and X/Twitter.[79] While Querdenken shows low engagement with X/Twitter and Facebook (totaling 12.1% of their shares), Reichsbürger URLs to X/Twitter and Facebook only sum up to 3.6%.

This is important for two reasons. First, it demonstrates the importance of a nuanced analysis of the AGE ecosystem in contrast to succumbing the milieus under the umbrella of "far right." Studies with the latter objective found that the most important Telegram-outlinks are the other mainstream platforms YouTube, Facebook, and X/Twitter.[80] As this only partially applies here, it shows that sub-groups employ different strategies, which is especially important for counterextremism efforts. AGE as a concept

Table 5. Outlinks to Very Large Online Platforms (VLOPs).

VLOP	No. of URLs		Proportion of shares in relation to total platform-URLs in %	
	Reichsbürger	Querdenken	Reichsbürger	Querdenken
YouTube	23,069	18,258	24.5	21.1
X/Twitter	2,744	6,304	2.9	7.3
Facebook	697	3,253	0.7	3.8
Instagram	316	1,850	0.3	2.1
TikTok	68	320	0.1	0.4
LinkedIn	0	183	0	0.2
Pinterest	0	1	0	0
Snapchat	0	0	0	0

has been (re-)introduced to grapple the evolving landscape of extremism beyond a clear right-left categorization toward heterogenous and fluid milieus. The concept followed the introduction of new observation categories by various security services in recent years, addressing the need for distinct approaches.

The difference is illustrated in comparison to the average usage behavior in the European Union. Within the EU, the platforms with the widest user base are YouTube, X/Twitter, Facebook, Instagram, TikTok, LinkedIn, Pinterest and Snapchat; thus, referred to as "Very Large Online Platforms" (VLOPs). As highlighted in Table 5, the behavior of Querdenken and Reichsbürger only partially overlaps with these statistics (again mostly YouTube). Even though Querdenken shows a higher usage of X/Twitter, Facebook and Instagram compared to Reichsbürger, the number of links combined make up only 13,8% of all shares with all other VLOPs taking up less than 1% of the sample.

This observation offers an insight into current models of Internet regulation. The Digital Services Act (DSA), which regulates online intermediaries and platforms (i.e. all the platforms within this ecosystem) with the main goal of, in the words of the European Commission, "to prevent illegal and harmful activities online.[81]" Importantly, the most stringent rules of the DSA are applied to VLOPs and Very Large Online Search Engines (VLOSEs), which have more than 45 million users per month within the EU.[82] These rules compel platforms to proactively take due regard for both illegal and legal but harmful content, as well as to provide an option in their recommender systems that is not based on user profiling. Our analysis demonstrates the problem—in some circumstances VLOPs will make up only a fraction of the extremist ecosystem, leaving more extreme discussions to protected platforms such as Telegram. Content may be signposted from the more sanitized VLOPs like YouTube *toward* those which escape the regulatory reach of the DSA.

Differences

Our datasets exemplify reliance on those "alternative" or "dark" platforms. Both groups demonstrate a preference for YouTube-alternatives like Odysee or other milieu specific alternatives. Querdenken frequently uses "tube.querdenken-711.de," while Reichsbürger also refer to platforms that belong to opinion leaders like Attila Hildmann (wtube. org) or Heiko Schrang (wirtube.de).[83] These platforms cater specifically to their audiences, offering space for content that may be removed on mainstream platforms.

Comparing the ecosystems, Reichsbürger has a higher concentration on YouTube and Telegram with a total of 86.2% in comparison to Querdenken (72.8%) while simultaneously sharing more URLs from fewer accounts.

This indicates different strategic approaches. Understanding the extremist factions of Querdenken through their origination as a covid19-meausers-protest-movement as an issue-driven form of AGE, it seems plausible for them to engage with a wider set of mainstream platforms for maximum reach. Querdenken openly signifies their intention to recruit publicly, arguing it is their legal obligation to defend against the restrictions of the state. The "Connect with us" banner on their website features outlink-icons to Facebook, Instagram, X/Twitter and YouTube right below this declaration.[84] Reichsbürger, on the other hand, reject the state on ideological grounds rooted in pseudo-judicial arguments and conspiracy theories, fitting the type of ideological AGE. As such, their recruitment and social media strategy may be more selective and

less public to avoid prosecution. The coup investigations highlight that the assumed core of the group originated in the Reichsbürger milieu, who specifically appointed "ministers" to their shadow cabinet to personally recruit, i.e. military personnel.[85]

RQ2: Affordances of Outlinked Platform Types

The analysis identified ten platform types, of which seven categories showed statistically significant differences in usage between Querdenken and Reichsbürger. These results show that platform choice is not random but structured by distinct affordances that shape user behavior. Given the exploratory nature of this study, further conceptual refinement is needed to understand how the platforms' features facilitate extremist groups. While prior research has largely focused on affordances for radicalization online, applying resource mobilization theory (RMT) allows us to consider a broader range of platform functionalities for plotting collective action offline. To explore these dynamics, we examine behavioral and cognitive inter-group affordances from highest to lowest outlink shares.

Instant Messenger

Instant messengers provide an architecture for behavioral inter-group contact by offering individuals (safe) spaces to communicate within or with groups in real time. We take the example of Telegram as the most linked to instant messenger. Telegram relies on posters in a chat who can post their own content or outlink to other platforms. For other extremist movements, this often includes material such as photos, recruitment content, videos, and audio files.[86] The main affordance of Telegram is security; users can use end-to-end encryption[87] and can also send disappearing messages.[88] Importantly, it is rarely subject to content removal and presently, in practice, exists outside the jurisdiction in which Western countries can force them to either remove content or share data which may help law enforcement.[89]

It is clear why these affordances would be seen as beneficial to extremists, particularly those who are explicitly discussing and planning illegal activities. Yet, to consider the affordances for inter-group mobilization more broadly, we need to take a closer look at two modes of instant messaging offered by Telegram: Users can choose between an encrypted or secret chat function in private or public group channels or subscribing to or setting up broadcasting or info channels.

As group chats are publicly available and can be joined easily and anonymously, they posit a point of inter-group interaction. As noted above, their function as discussion spaces offers the potential for collective opinion-forming processes. This feature can be intentionally exploited by extremists' groups (i.e. Reichsbürger) seeking to polarize or recruit members of another group (i.e. Querdenken) by strategically targeting groups to spread their narratives. However, the provided operational security of Telegram comes with substantial cost; it is harder to find channels and therefore difficult to recruit new members.[90] Additionally, the site's focus on anonymity does not have the ability to convey personality or trust between users in an effective way, thus providing only limited affordances for cognitive interaction. Moreover, the site is

not designed in a way (like other big platforms such as Facebook; Instagram; YouTube) that optimizes user retention with sophisticated recommendation systems.

Channels, on the other hand, are mainly used to disseminate information to an unlimited number of users under a pseudonym. This technical feature of the messenger supports simple coordination of groups or extremist milieus offline. Querdenken relies on channels to share and coordinate demonstration dates,[91] which Reichsbürger also attended.[92] These points of interactions may have been facilitated by the forwarding function; admins can forward content from other channels or groups with just one click, which followers can access with another click. The resulting network of channels and groups enables interaction between different milieu (leaders) at a scale that is difficult to achieve during demonstrations. Accordingly, Telegram offers the potential to especially accelerate behavioral inter-group mobilization and radicalization by offering easy-to-access interaction spaces.

Video Platforms

Even though instant messengers make up the majority of the outlinks, the platform ecosystem expands beyond Telegram and WhatsApp. Video platforms are the second most used category, with both groups utilizing ten different video platforms for sharing content. Reichsbürger shared 29,524 URLs (31.8%) and Querdenken shared 23,529 URLs (27.2%) outlinking to video platforms.

Schulze, Hohner, and Rieger propose that video platforms afford radicalization by allowing users to remain anonymous and consume personalized and polarizing content that quickly becomes more radical by algorithmic amplification.[93] However, this only applies to passive users or informative content. In addition, we argue that for both active and passive users video platforms may facilitate radicalization by offering a structure to share one's personality and convey narratives or (collective) emotions. Referring to the drivers of group-focused radicalization, video platforms especially afford cognitive drivers.

YouTube, as the most linked to video platform, offers the ability to convey a more personal message for its audience than instant messenger, although still fundamentally different to face-to-face communications. YouTube's video formats can facilitate para-social relationships, taking advantage of cognitive systems that process verbal and visual information, as opposed to text which is only verbal.[94] This depends on some users (e.g. milieu leaders) within an extremist milieu to share some form of intimacy (via storytelling or just by being in front of the camera). In terms of the video content itself, video platforms like YouTube have the affordance to not only present personalities, but also extremist narratives or ideologies more vividly or convincingly through the emotionalizing effect of scripts, editing techniques, or music.[95]

YouTube's recommendation system also offers an ability to retain users within the radical milieu once this type of content is consumed. Research has demonstrated that when users begin to interact with extreme content on the platform, they are increasingly likely to be shown more *via* the platform's recommendations.[96] Algorithms generate their recommendations partially based on content similarity,[97] which may foster inter-group convergence given the ideological overlap between the two movements. A way to assess this may be the salience of group-bridging narratives between milieus. For the case of Querdenken and Reichsbürger, conspiracy theories, anti-elitist and

anti-state narratives may be amplified beyond the milieu of their origin, potentially lowering ideological boundaries between both groups.[98]

Other than that, behavioral inter-group contact may only be intentionally influenced by individual active users owing to the lack of "group" functions. As with Telegram, this can be achieved by specifically "flooding" or targeting comment sections of other (groups') channels.[99] If not amplified by bots or strategically planned, the stimulus for cross-milieu mobilization may however be smaller as the numbers of users reached in the comments may be smaller. Nonetheless, noteworthy is the affordance for individuals to stimulate inter-group contact by specific types of content. Several studies have shown that extremists seek to produce video content with out-group individuals to widen one's own follower base.[100] BAG illustrate that Reichsbürger and Querdenken both utilize interview formats for that purpose,[101] highlighting the importance of milieu leaders for behavioral affordances, as argued by Hartleb, Schliefsteiner and Schiebel.[102]

YouTube's place as a mainstream social media platform offers another important drawback; it removes content on a far greater scale than platforms such as Telegram.[103] Therefore, movements have less control over how they shape their narrative. While it would be wrong to say that violative or illegal content never appears on YouTube, in practice, most of the extremist content that remains on the platform is best described as "borderline"; content that comes close to the policy line to be removed but does not overstep it.[104] This has sometimes been described as the "mood music" for radicalization, but is also subject to downranking from the biggest social media platforms, including YouTube.[105] This may explain why other video hosting platforms appear within the dataset, all of which have less restrictive content removal policies than YouTube's, allowing for greater narrative control over the messages. However, as with the discussion of Telegram above, it comes with drawbacks; there is a much smaller audience on the fringe sites, and therefore a much smaller pool of potential recruits for the message.

Microblogging Platforms

Apart from instant messenger and video platforms, other platform types are mostly insignificant, comprising less than 5% within both movements. As found for RQ2, this is mainly because of the large concentration of Reichsbürger URLs on Telegram and YouTube. Still noteworthy, however, is the 8.2% of Querdenken URLs referring to three different microblogging platforms. Even though Reichsbürger outlink significantly less toward microblogging platforms, their use of four different platforms still suggests an affordance of the platform type distinct from instant messaging and video sharing for both milieus.

Microblogging services such as X/Twitter provide users opportunities to rapidly disseminate short messages, often facilitating the spread of polarizing content. Schulze, Hohner, and Rieger show that this allows for inter-group discourse.[106] The use of hashtags and retweets/reposts amplifies messages across the platform, reaching a wider audience and facilitating real-time reactions to events. This can escalate tensions and thus contribute to both behavioral and cognitive inter-group radicalization, potentially in correspondence to offline events.

Social Networking

Social networking sites allow users to post performatively and self-mange reputations by "pervasive ambience of sharing self-images, brief text, photo's, video's, location, "likes", "dislikes", sport's performance, health status or professional reputation"[107]. This feature also blurs the line of online and offline communications; it is sensitive to users' physical location; the individuals with whom they are proximate to; and the places that they go.[108] This again, allows for both cognitive and behavioral inter-group inter-action distinct from video or instant messaging platforms.

The affordance of self-representation may be especially pertinent for the targeted recruitment of groups through self-performative descriptions of posters (as indicators for value alignment) and directly contacting potential recruits either half-disclosed in, i.e. closed Facebook or LinkedIn groups, or privately through direct messaging functions.

Even though social networking sites offer this specific group-communication function that in combination with pages and comment sections allows for the possibility of both behavioral and cognitive inter-group exchange,[109] only 4.9% of Querdenken and 1.6% of Reichsbürger outlinks refer to social networking sites. First, the difference in shares might again be explained by their distinct mobilization strategies. For Querdenken, the management of their reputation as a "legal and democratic protest movement" to the wider public is an integral part of their mobilization, while Reichsbürger are less reliant on public perception for group sustainability. Second, the lack of privacy and distinct group messaging functions simply does not trump the architecture of Telegram in daily instant communication, which might explain the low numbers altogether. Moreover, Hetzel et al. note that covid19 conspiracy beliefs, which is characteristic for AGE movements,[110] has strong correlations with the use of Telegram and only weak positive correlation with Facebook.[111]

Money

RMT highlights the centrality of financial resources in sustaining activist movements and extremist milieus. The findings suggest that Querdenken (3.2%) appears more active in soliciting financial support via PayPal than Reichsbürger (0.6%), further demonstrating distinct organizational and mobilization strategies. For Querdenken, an issue-driven movement, crowd-funding and direct donations via services-centered platforms play a crucial role in sustaining activism. Prominent figures within the movement quit their jobs to dedicate themselves fully to the cause, increasing their reliance on decentralized, personalized funding mechanisms.[112] Personalized micro-transactions enable financial support from a broad base of sympathizers, potentially strengthening inter-group trust with each transaction.[113] In contrast, Reichsbürger, as an ideological AGE network, rely on more hierarchical financial structures like membership fees.[114] Additionally, Reichsbürger activists often finance themselves through products, workshops, and ideological services, such as pseudo-legal counseling or sovereignty certificates, while often also promoting alternative currencies and tax resistance.[115]

Thus, financing platforms afford decentralized sustainability for extremist movements, lowering the barrier for cost-intensive plots.

Short Video

Short video platforms, such as TikTok and Instagram, afford several mobilization opportunities through mainstreaming ideology,[116] accessing younger audiences,[117] and functioning as marketing tools for movement-related products and services.[118] Especially TikTok's' algorithmic infrastructure prioritizes trending content and engagement over the user's connections,[119] facilitating rapid dissemination of polarizing and radicalizing narratives.[120] Additionally, plausible deniability—a key affordance—allows users to embed extremist content within humor, memes, or seemingly benign cultural references, making it more resistant to platform intervention.[121]

However, the strategic utility of short video platforms for inter-group mobilization remains questionable. Unlike platforms with clearly defined behavioral affordances (e.g. Telegram for coordination) or cognitive affordances (e.g. YouTube for long-form ideological content), short video platforms lack a distinct exclusive selling point for extremist groups. YouTube, which has copied the short video format while maintaining a broad age range and the possibility to expand into long-form content, already fulfills many of the functions short video platforms provide. Similarly, Telegram offers a low-moderation, direct communication channel that short video platforms cannot replace.

For Querdenken (2.5% of outlinks), short video platforms can serve as entry points into radicalized online ecosystems, particularly for younger users. However, whether these platforms justify additional effort beyond their role in ideological diffusion remains uncertain, particularly given the functional overlap with more established, strategically valuable platforms.

Stream

Streaming platforms afford a hybridization of cognitive and behavioral interaction processes, allowing users to experience offline events in real-time while fostering digital parasocial community-building,[122] serving as bridges between digital and physical mobilization.[123]

For Querdenken, livestreaming allows supporters to participate remotely in demonstrations, reinforcing group identity even when physical attendance is not possible. This real-time affordance fosters a sense of immediacy and collective action, turning passive viewers into engaged participants, both cognitively (through ideological reinforcement) and behaviorally (through mobilization cues).[124] For Reichsbürger, livestreaming is valuable for interview-based formats, where movement leaders and ideological entrepreneurs reinforce ideological narratives, and facilitate cross-milieu discourse.[125] Unlike prerecorded videos, livestreaming allows for interactive participation through accompanying live-chats, further strengthening group cohesion.

Despite this distinct affordance of live streaming, both groups only outlink to them in 2.1%, for which two explanations are plausible. First, the iteration of either demonstrations or interviews are at best weakly, thus linked to a higher organizational effort beyond platform usage. Second, both milieus already rely on YouTube for the milieu-specific live streaming formats,[126] lowering the justification of resource allocation into other platforms.

Conclusion

This study offers three contributions to the literature. First, by assessing similarities and differences in the social media usage behavior of the milieus of Querdenken and Reichsbürger (RQ1) through an URL-outlinking analysis of 785,865 Telegram messages, we add to the literature of AGE. Our findings confirm that these groups engage with platforms in distinct ways, supporting their classification as issue-driven (Querdenken) and ideological (Reichsbürger) AGE. These differences challenge prior research that subsumes both milieus under the far-right, suggesting instead that AGE provides a more precise analytical frame. As a wider implication, the introduction of AGE should be understood as an expression for the increasing complexity of ideologies through cross-pollination with conspiracy theories, disinformation or the online sphere, similar to MMU-ideologies.[127] While our results are just a small snapshot of those changes, the joint plot of Querdenken, Reichsbürger, and QAnon adherents highlights the need for future research on AGE dynamics.

Second, by integrating affordance theory, resource mobilization theory, and wider research on radicalization and political violence, we developed a framework to analyze the affordances of identified platforms for coup mobilization of both milieus (RQ2). Specifically, we introduced a platform typology for inter-group contexts, advancing the adoption of affordance theory in extremism research beyond radicalization. Our classification found 34 social media platforms which we classified into 10 distinct types, proposing a structured way to assess platform affordances for mobilization. The statistical analysis validated the robustness of this typology, confirming that platform engagement differs significantly between the ten types and two groups. However, as our dataset cannot definitively validate affordances, future studies should continue to add to the conceptual gap in (inter-)group perspectives on affordances.

Third, our analysis revealed that instant messaging and video platforms were the most frequently used platform types, offering distinct behavioral and cognitive affordances that function in symbiosis to facilitate inter-group mobilization and radicalization. The Telegram-YouTube pipeline exemplifies how extremist ecosystems rely on cross-platform interaction: while instant messengers provide secure and private spaces for real-time communication (affording behavioral inter-group contact), their cognitive impact is reinforced when video platforms supply ideological content. At the same time, cognitive video affordances remain limited without the distribution mechanisms provided by messengers, illustrating the interdependent nature of platforms in extremist ecosystems. This finding aligns with BAG's recent analysis on community building[128] and extends it to radicalization research, demonstrating how platform ecosystems evolve to sustain inter-group interaction and mobilization.

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