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Article

Stuck With the Algorithm: Algorithmic Consciousness and Repertoire in Fridays for Future's Data Contention

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Abstract
By focusing on the transnational youth climate movement Fridays for Future, this article explores how activists understand algorithms and how they try to use them in their digital campaigns. A qualitative case study, this article provides insights from nine virtual in-depth semi-structured interviews with organizers in social media roles from Fridays for Future country collectives across the globe, giving youth activists the opportunity to tell stories about their understandings and experiences in working in datafied spaces. Four central themes emerge via a three-step qualitative data analysis: algorithmic consciousness (understanding, functions, issues, pitfalls, and misinterpretations), algorithm as stake (contentious importance, tactical politics), algorithm as repertoire (role in activism, algorithmic campaigning), and data contention (data analysis, digital contentious tactics, uncritical uses). The interviews show that activists are stuck with the algorithm in two ways: They have to engage with them but are often unsure how. In that sense, activists frame algorithms as a stakeholder in their campaign but are often unclear on how they work. While organizers recognize algorithmic dependency on campaign success, they lack specific mobilization strategies, which prevents them from leveraging algorithms as a contentious tactic. Data contention includes conducting analytics and tailoring strategies to platforms; yet, datafied spaces are used largely uncritically. This article prompts scholars to go beyond textual analyses of digital activism and conduct research that centers on the experiences and practices of activists in dealing with algorithms and data as structural conditions for digital activism.

Keywords
algorithmic activism; data contention; environmental justice; Fridays for Future; social media mobilization; youth climate activism; virtual interviews

Issue
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1. Platforms in Environmental Activism

Fridays for Future (FFF) has made it to the global political stage, emerging as one of the most important actors in contemporary environmental activism. FFF's mobilizing power also shows across the movement's social media: A cursory look at the central hub FFF International reveals nearly 500,000 followers on Instagram and country collectives across Europe have a collective follower count of over 330,000 (Sorce & Dumitrica, 2022). Since FFF has successfully mobilized youth who are also considered "digital natives" (Nasrin & Fisher, 2022), studies have begun to study the movement's activism with a focus on FFF's engagement with the digital.

Boulianne et al. (2020) have examined the Twitter network during the 2019 Global Climate Strike, arguing that the movement has successfully leveraged the platform to create a trending topic. Chen et al. (2022) subsequently analyzed five million tweets with FFF hashtags and found that the platform is not only used to mobilize but also to frame issues or culprits and make political demands. In the context of the Covid-19 pandemic, recent studies show how the assembly restrictions have affected the movement's flagship action. Haßler et al. (2021) focused on FFF Germany's use of the hashtag #FridaysForFuture on Twitter, showcasing that tweeting decreased and movement messages began to deviate. At a larger comparative scale, the study by Sorce

and Dumitrica (2022) typologizes how the pandemic has created a forced digitalized repertoire for the movement around digital contentious actions, online information and education, digital community engagement, and online partnership development. This, they argue, has also shifted the internal dynamics of the movement, as contention decreased and collective identity work increased.

What becomes evident from this brief overview is that existing studies on FFF's digital activism focus mainly on textual evidence, analyzing hashtag activism (Boulianne et al., 2020; Chen et al., 2022; Haßler et al., 2021) or protest communication patterns on social media (Sorce & Dumitrica, 2021). Research that engages youth organizers' personal perspectives on digital activism or experiences with platforms as sites of political mobilization is still scarce. As Cotter (2019) explains, social media users often adapt their posting practices to what they think the platform algorithm will do with it, without necessarily knowing its inner workings. The understanding of activists around the affordances and technological architectures of platforms directly mediates their ability to use them as tools and sites for digital contention. Textual analyses cannot yield insights into these cognitive processes or reveal intentions behind particular movement practices. While FFF is a particular case of a transnational youth movement, other environmental collectives engage with datafied spaces in similar ways, having to find ways to manage platforms and leverage digital media for their political goals.

In employing a qualitative approach, the main purpose of this study is to find out more about what FFF activists do with data, how they understand the effects of algorithmic mediation on their political work, and how they deal with the affordances and logics of platforms in their digital activism. Today, algorithms and datafication play a key role in digital campaign design, affecting how activists engage with digital followers and how they develop digital actions for political mobilization. Using the transnational youth climate movement FFF as a case of a contemporary movement with a strong digital presence, this study builds on nine virtual in-depth semi-structured interviews with organizers in social media roles from country FFF collectives across the globe. A three-step coding process reveals four central themes: Algorithmic Consciousness, Algorithm as Stake, Algorithm as Repertoire, and Data Contention. The interviews yield that there are substantial differences in how activists imagine algorithms, both on a technical level and with respect to their impact on campaigns. Though activists are aware of issues such as exposure and visibility and understand their contentious importance, precise functions are often seen as elusive. With respect to the employment of algorithms as an activist tool, activists recognize that their campaign success depends on measurable outcomes, such as growing followers and optimizing content. Yet, instrumentalizing platform affordances—such as triggering the algorithm—are often left up to chance. Leveraging post analytics and optimizing posting strategies show the most promise as a form of Data Contention; indeed, all collectives have developed tactics that work for the specific platforms they employ. Yet, the conversations with organizers also demonstrate an overall uncritical usage of datafied spaces, including an ignorance towards the commodification of their own data production.

Knowing more about data practices and the influence of algorithms on campaigns is crucial to nuance assumptions about activist intentions in political mobilization. As this study will demonstrate, organizers are stuck with the algorithm in two ways. First, algorithms are built into platform architectures and cannot be evaded completely—They have become key considerations for all activists who use social media for political mobilization. Second, organizers' lack of knowledge of the intricacies of platform algorithms has them running up against the limits of digital activism. Using social media for political mobilization takes more than adding activist content to platforms. Speaking with youth activists about campaign design and online tactics provides much-needed insights into the experiences of doing activism in datafied spaces. While FFF is a particular case of a transnational movement, digital organizers in other contexts often reach the same dead ends. As such, the study contributes not only to research on this particular movement but can also inform future studies at the intersection of critical data studies and social movement research.

2. Data and Algorithms in Activism

Digital platforms and datafied spaces have long become political arenas for civil society, including social movement actors. Here, activists and organizers are confronted with the structures and dynamics of data and must find ways for productive engagement. While hashtag campaigns (Gerbaudo, 2012) or cloud protesting (Milan, 2015a) have become common tactics for digital contention, activist action repertoires have become increasingly digitalized (Theocharis et al., 2015), transforming the very logics of mobilization and collective action. In the case of FFF, social media became the main site for activism during the Covid-19 lockdown periods across Europe (Sorce & Dumitrica, 2022). Alongside these digital developments, activist collectives employing platforms have begun to harness the power of data in their efforts (Milan, 2015b).

Theorists often speak of "data politics" (Ruppert et al., 2017) as the meta-level domain to capture the interactions between power and knowledge in the context of platforms. For contemporary social movements, datafied spaces become battlegrounds where activists conceptualize, launch, and manage digital contentious actions, while (potential) adherents can assemble, participate, and protest. "Data activism," however, goes beyond "connective action" (Bennet & Segerberg, 2013),

in that it leverages the platform architectures and its codes for social justice. This includes both *reactive* data activism to circumvent data threats and *proactive* data activism that actively (re)appropriates and employs data (Milan & van der Velden, 2016, emphasis in the original). Correspondingly, Lehtiniemi and Ruckenstein (2019) draw out the potential of new forms of civic and political engagement around data by arguing that data activists share both a technological (solution-oriented) and socio-critical (human control) imaginary of their data activism, which can sometimes come into conflict.

Beraldo and Milan (2019, p. 2) bring these perspectives together, arguing for a theoretical framework around the "contentious politics of data," which denotes "the multiplicity of bottom-up, transformative initiatives interfering with and/or hijacking dominant, top-down processes of datafication, by contesting existing power relations and narratives and/or by re-appropriating data practices and infrastructure for purposes distinct from the intended."

In conjunction with this particular framing of data activism, activists' active engagement with data becomes a repertoire in its own right. Beraldo and Milan (2019, p. 6) distinguish between "data as stakes" (identifying data as objects for activism and designing contention or tactics around data) and "data-enabled activism" (putting data to use as contentious action). A key factor of data activism, then, concerns the interaction between algorithms and activism.

In the context of social movements, Galis and Neumayer (2016, p. 2) call the interplay between algorithms and social media a "complicated marriage." Activists must engage with commercial platforms such as Facebook and Instagram to reach their adherents, mobilize sympathizers to join the cause, and offer avenues for participation. In that sense, the mainstream success of social movements cannot exclude mainstream social media. These platforms are based on algorithmic architectures that filter content, sort data flows, and rank interactions into hierarchies. Thus, algorithms become an essential part of the power of platforms (Bucher, 2018). Indeed, Velkova and Kaun (2021, p. 535) call activist campaigns operating within datafied spaces and algorithmic frameworks "complicit." Maly (2019) studies how right-wing activists have leveraged algorithms in the perpetuation of their cause and theorizes a new subset of data activism, which he terms "algorithmic activism." The term refers to the theoretical or practical knowledge about algorithmic systems as "proxies for human judgment" (Maly, 2019, p. 12). This includes, for instance, knowing how to trigger a social media algorithm to enhance reach and interaction with a given post in order to manufacture virality (Maly & Beekmans, 2018). Within the context of a pro-social online campaign, Velkova and Kaun (2021, p. 536) point to the engagement of activists with algorithms alongside "repair," i.e., the potential of mending (some of) the damage that algorithms do. In these cases, activists "repurpose [algorithmic] power to pursue social justice and political transformation" (Treré, 2018, p. 173).

Treré and Bonini (2022, p. 2) pick up this theoretical thread and illuminate how algorithmic politics as an activist practice becomes "the latest addition to the contention repertoire" within the larger ecosystem of data politics. They typologize three types of algorithmic activism: *algorithmic amplification* (the integration of algorithms into activist repertoires), *algorithmic evasion* (the circumvention of algorithmic censorship), and *algorithmic hijacking* (the exploitation or appropriation of data structures). The authors illustrate their ideal types by highlighting algorithmic strategies and tactics in recent (albeit scarce) social movement scholarship while pointing to the dynamic nature of algorithmic activist practices. However, we still know relatively little about how activists understand datafied platforms and how they actually engage with algorithms in social media campaigns. The present study considers recent theoretical offers (Beraldo & Milan, 2019; Treré & Bonini, 2022) as a prompt for empirical work and applies it in the context of one of the most mediatized contemporary social movements—the transnational youth climate movement FFF.

3. Methodology

The main scope of this study around the contentious politics of data in contemporary activism emerges from an epistemological curiosity in finding out more about what activists do with data. This pairs with an axiological impetus that seeks to underscore the role of human agency in the handling and remediation of data (Beraldo & Milan, 2019), which context with how activists deal with the affordances and logics of platforms in their digital activism. Scholars working in the area of data activism—employing, for instance, text-based research—can run the risk of reading digital media practices as purposeful activist strategies without bringing into question two important aspects: activist capacity (e.g., technological skill) and activist knowledge (e.g., platform architectures, codes, etc.). Hence, the objectives of data practices as a form of social movement contention or even repertoire are not always clear. As Treré (2018) aptly illustrates through his fieldwork in Mexico and Spain, speaking with activists about their intentions and background is necessary for understanding the effects of algorithmic mediation on digital contention.

In this spirit, the present study builds on semi-structured virtual interviews with youth activists in the global FFF movement. A case study design enabled me to zoom in on a particular movement and show how data and algorithms mediate the efforts of a highly digitalized collective. Yet, FFF is also a representative case of youth activism and the insights from this research have the potential to "illuminate a larger empirical reality" around the importance of algorithms and data in contemporary social movements (Snow & Trom, 2002,

p. 148). As an important methodological consideration, the recruitment of interviewees sought to provide a multitude of perspectives, another quality criterion of case studies (Snow & Trom, 2002, p. 149). Despite the popularity and political force of FFF in Europe, it was important for the research design to invite organizers at the margins of the transnational youth climate movement and include the experiences of activists in Africa, Asia, and Latin America. To accomplish this, I began by creating an initial interview of country collectives with a focus on their social media engagement, including activity on platforms such as Instagram, Facebook, and Twitter. I eliminated collectives that were only marginally active or did not employ social media regularly. Using the map function on the central hub (www.fridaysforfuture.org), I gathered relevant contact information and contacted 27 collectives who met our criteria. During recruitment for study participants, I reached out to country collectives via email and direct message on social media, explaining the basic scope of the study and asking to be connected to organizers in social media roles. In the end, 11 country organizers agreed to be interviewed though only nine interviews materialized. These included activists from Austria, Germany, India, Israel, Russia, Uganda, Uruguay, the US, and the international FFF Digital team (see Figure 1).

The participants in the study were all either the main officer or part of the larger digital media teams, and all were between 19 and 30 years old (see Table 1). This skews a bit older than the target demographic of the FFF movement; however, six participants recount that they have been involved in their respective collectives for over three years. Two interviewees were pursuing formal degrees in media or information technology (FFF Germany, FFF Austria), while others had professional experience working in marketing contexts (FFF Uganda, FFF India). The remaining interviewees were mainly self-taught and assumed roles in digital organizing either by personal interest or by assignment. These varying degrees of technological expertise and digital media literacy made the sample rather heterogeneous, an observation that echoes the fluctuating data practices and platform engagement across the collectives.

As this case study was carried out amid the Covid-19 pandemic, the qualitative semi-structured interviews were conducted via the videoconferencing platform Zoom (for an overview of opportunities and drawbacks, see Oliffe et al., 2021). Qualitative interviews enable scholars to gather information that cannot be obtained through textual artefacts, giving participants an opportunity to explain their viewpoints and experiences, while validating external observations by the researcher and others (see also Chapter 7 of Lindlof & Taylor, 2018). Since the virtual interviews marked the first in-person interaction with the recruited participants, semi-structured interviews provided a comfortable framework for both the interviewer and interviewee. The original interview guide included nine questions, largely non-directive, such as: How would you, in your own words, describe a social media algorithm? These sought to prompt participants to elaborate their understanding of datafied spaces as a baseline to discuss specific organizing and mobilization practices, including strategic ways of leveraging algorithms as part of their digital activist repertoire. These questions were not supposed to quiz participants on their technical knowledge but rather allow them to speak to their understandings of platform architectures and affordances to learn more

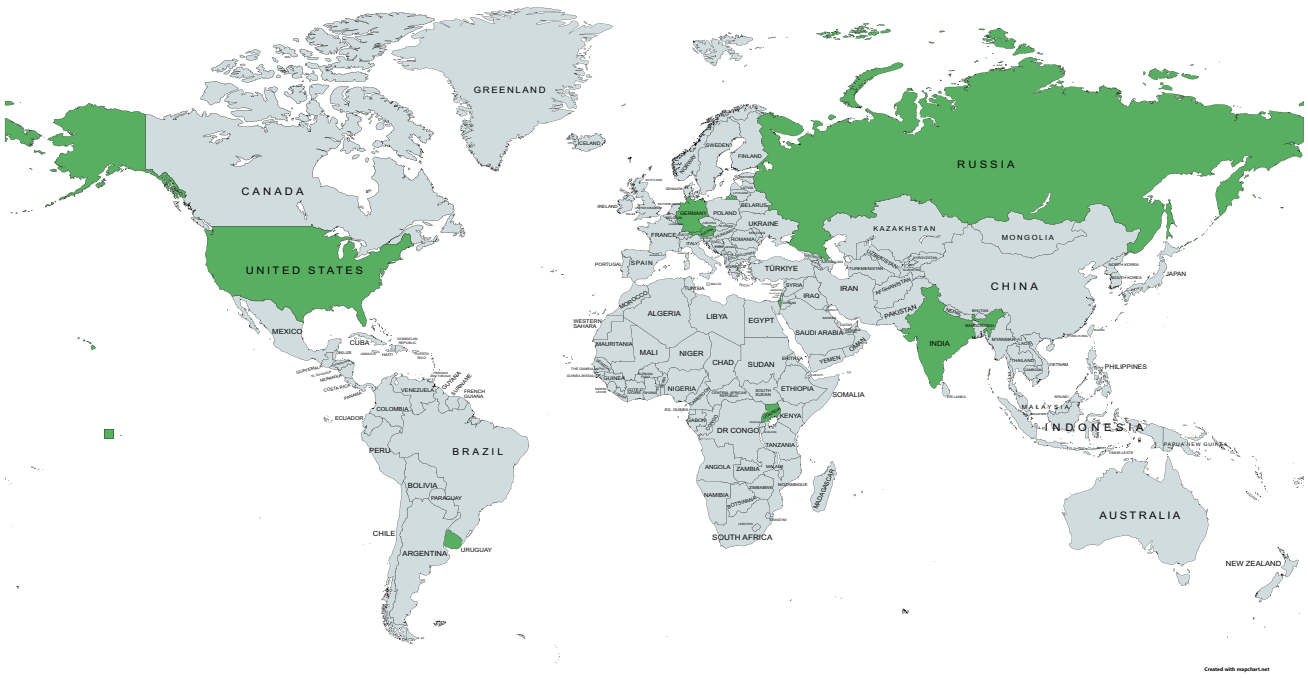

Figure 1. FFF country collectives represented in this study.

Table 1. Overview of participants.

Country collective	Digital platforms used	Organizing team	Gender
1. FFF Russia	Facebook, Twitter, Instagram, VK	Social media team	Female
2. FFF India	Facebook, Twitter, Instagram	Social media team	Female
3. FFF Digital	Facebook, Twitter, Instagram	Social media research team	Male
4. FFF Uganda	Facebook, Twitter, Instagram	Social media management	Male
5. FFF Israel	Facebook, Twitter, Instagram, TikTok	Digital team	Female
6. FFF Austria	Facebook, Twitter, Instagram, LinkedIn	Channel management	Male
7. FFF Germany	Facebook, Twitter, Instagram	Web team	Male
8. FFF Uruguay	Facebook, Twitter, Instagram, TikTok, Spotify	Marketing team	Male
9. FFF US	Facebook, Twitter, Instagram	Digital team	Female

Note: With the exception of FFF Uganda, all collectives have since created TikTok accounts.

about how organizers adapt their activist practices to their ideas about platform logics.

The guide also featured some more structured questions that offered interviewees a specific frame to think within (how do algorithms influence an ongoing FFF campaign?), while also asking about mobilization practices (what do you do to make your content more visible and gain a broader reach?). Since textual analyses often ascribe intention to particular digital activist gestures, these question types were important to understand the design behind particular campaigns. In line with iterative qualitative principles, the interview guide was continuously fine-tuned during the data-gathering phase. This allowed for the inclusion of important emergent themes. To keep with the conversational character of interviews, follow-up questions sometimes engaged a fun fact or emoted response during interviews: "You mentioned that the FFF Israel's Instagram looked 'a mess' last year. Can you tell me a little bit more about that?" Such questions often prompted more detailed insights into both the use of platforms as well as specific practices that involved the handling of data.

The nine virtual interviews were conducted in English and lasted between 28 and 46 minutes, yielding approximately 314 minutes of analyzable data. All interviews were recorded, transcribed verbatim, and subsequently imported into the qualitative research software MAXQDA. A first inductive "open coding" procedure sorted utterances into 24 emergent themes that stayed relatively close to the transcriptions and paid attention to repetition, recurrence, and spoken emphasis; Owen (1984) terms the latter "forcefulness." A second "axial coding" served to cluster related utterances into 12 "distinct thematic categories in preparation for selective coding" (Williams & Moser, 2019, p. 50). Guided by the epistemological interest, the main research question, and informed by relevant literature (Beraldo & Milan, 2019; Treré & Bonini, 2022), a third and final coding round interlinked the conceptual evidence of utterances to form four higher-order categories that captured the main themes of the interviews (see Figure 2).

As illustrated in Figure 2, the final themes involved cognitive structures and ideas about algorithms, the role of platform architectures, the effects of data structuration on digital activism, and the practices and strategies of employing data and algorithms as contentious tools.

4. Findings and Discussion

After a short introduction round, the first question set served to comprehend how the country collectives were set up internally. Knowing more about the organigram of each collective was imperative to understand what segment the "digital" falls under, what platforms they use, and how they manage them. Interestingly, the internal coordination of digital media teams across the sample was handled differently by all collectives. For instance, FFF US deeply identifies with grassroots organizing principles; here, everyone in the leadership team can post to all social media as long as it follows some basic guidelines (e.g., use their flagship hashtag #ClimateJustice). FFF Austria has similar ideals about account access, though the collective divides their web team by platform, handled by so-called "channel managers." Indeed, most country collectives had a platform-based division within their social media team, i.e., one officer (or small group) was in charge of Instagram while another managed Twitter. The reason for this is articulated through global audience targeting. Notably, this was the case with the overarching FFF Digital hub, where:

> All three social media—Twitter, Instagram, and Facebook—are basically handled by a different user. I think Facebook is handled by…I think someone from Bangladesh and Instagram is handled by someone from Ireland and…I don't know about Twitter, who handles that account. (FFF Digital)

Time coordination and optimal post management are named as key factors as to why accounts are managed in different locations. This practice begs questions about message coherency and internal movement hierarchies, as the most popular social media accounts with the largest follower base (in this case, Instagram) get administered in the Global North. Gerbaudo (2017) names social media teams "digital vanguards," fighting at the

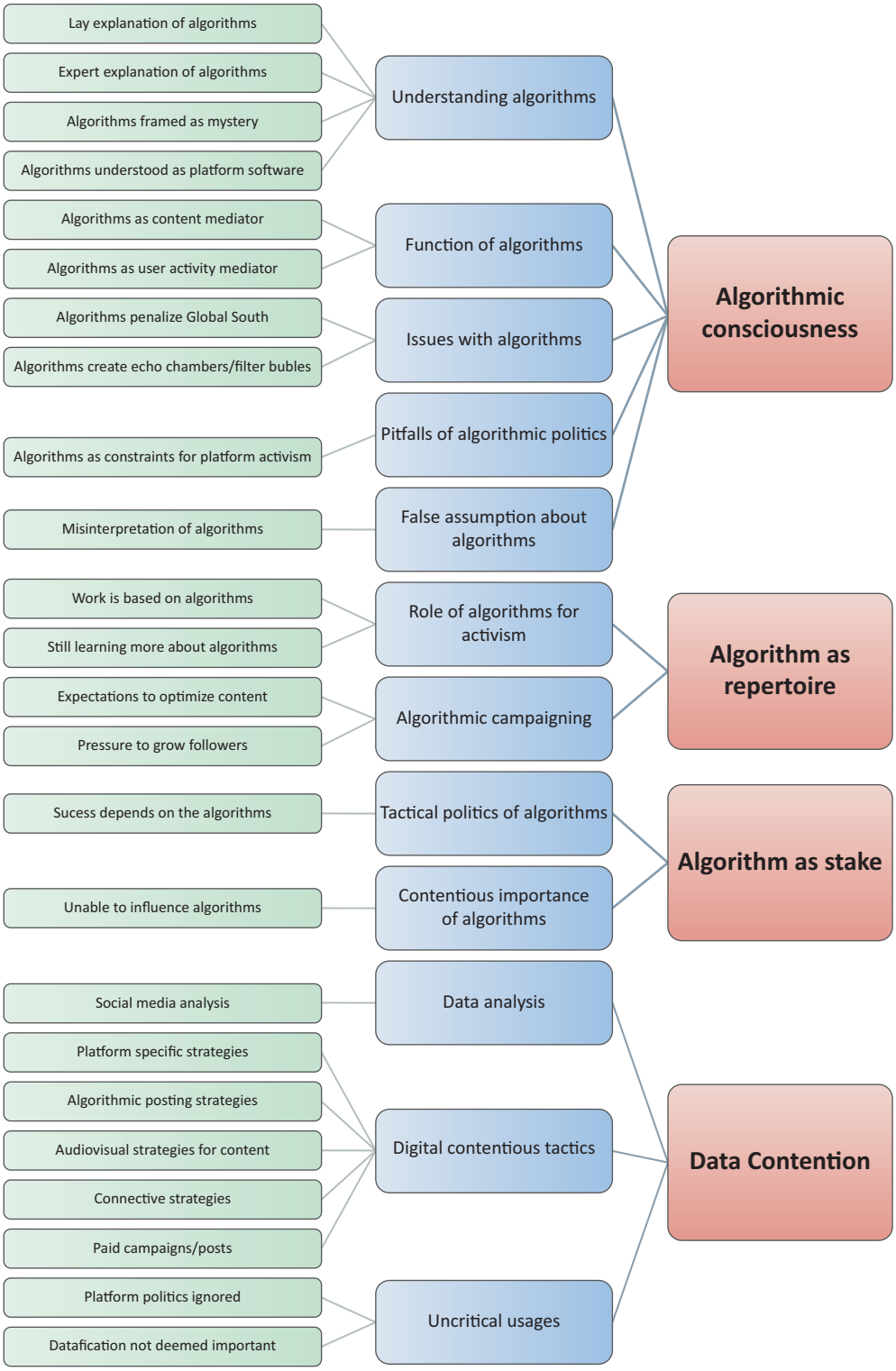

Figure 2. Flow chart of three-step thematic coding procedure.

virtual front of political contention, who share power and embrace an open and horizontal organizational structure. The conversations with FFF social media organizers contrast this argument: FFF Germany and FFF Russia could not even speak to the data practices of their colleagues as they only meet within their platform-specific team. This compartmentalization of protest media ecologies bears associated limits in leveraging digital communication as a contentious tool.

4.1. Algorithmic Consciousness

During the conversations, social media were frequently named *the* key arenas to "manage followers" (FFF India),

"get the word out to the kids" (FFF US), and "share news about the climate emergency" (FFF Russia). A key part of the interview then concerned the question of algorithms in digital organizing. Before initiating a conversation about how algorithms were employed as a contentious tool, it was important to get a sense of how digital organizers across collectives understood algorithms. Importantly, this part of the conversation was not a quiz on technical knowledge but designed to allow organizers to explain what they believe algorithms do. FFF India downplays their own knowledge while offering a fairly accurate lay explanation:

> I don't know much about them but…an algorithm is like a set of instructions which determines the reach of your content and how other people will interact with it and how the app or the website or the program will display content.

FFF Germany offers a quite technical definition: "From a technical perspective, it ranks signals…so, like on Facebook, the algorithm prioritizes people an account interacts with frequently and pairs that information with how many people—people in your network—have already interacted with a post." FFF Austria articulates more generally: Algorithms are "highly influenced by early interactions with content pieces." However, the remaining six collectives really struggled to articulate what algorithms are and why they become important for platform use. Utterances such as "oh, I…I'm not an expert by any means. I just know that we have to be cautious about what we upload in order for it to reach a large audience" (FFF Israel) or "if users engaged with us before then [the algorithm] will probably push us to them again….Yeah. I think that's about where my understanding of the algorithm stops" (FFF US) illustrate this. FFF Russia points to the puzzling and murky nature of platform algorithms, noting that "they feel quite random and mysterious." In that sense, the conversations about what algorithms do provide us with crucial insights into platform consciousness and literacy, two vital conditions for effective digital campaigning.

Alongside the elusiveness of algorithms, two organizers identify issues they associate with algorithmic content mediation on social media. FFF US explains:

> We move around in a general echo chamber. Like, because of the bubbles of the algorithm creates….Yeah, I feel like we are preaching to the choir a lot, cause a lot of the other groups that follow us are FFF groups or people who are already involved.

FFF Uganda runs up against an opposite problem, pointing to the discrimination of algorithms against data from the Global South that renders their content less visible: "We are in Africa…most of our content are [sic] not shared widely compared to those in Europe. That's the biggest challenge." This recognition relates closely to arguments about data colonialism and the privileging of user activity in the Global North (Segura & Waisbord, 2019) and underscores that data power is unevenly distributed across the globe (Kennedy & Moss, 2015).

FFF organizers across the sample spoke of ways in which algorithms impede their digital activism. It becomes evident that activists have been trained by platform logics and understand algorithmic limitations within platform language: reach, likes, followers, engagement, etc. Making content visible to relevant audiences and growing this network is a self-defined core task for all collectives. However, it is important to note that there are some key differences between FFF social media organizers and data activists in other movements: FFF youth activists are not hackers or IT specialists (Lehtiniemi & Ruckenstein, 2019) and mainly operate within the provided frameworks and affordances of commercial platforms, such as Facebook and Instagram.

Algorithmic politics are understood within FFF activists' frameworks of what algorithms do, which is why Algorithmic Consciousness becomes such an important aspect of analyzing digital organizing. In particular, the visibility of FFF's digital actions and their recognition across the wider digital publics are frequently named as two key objectives. However, this process is understood quite linearly. In line with Bucher's (2018) observation that *visibility* becomes a key condition of platform logics, FFF activists are very concerned with how algorithms structure their campaigns, including their circulation and longevity. This also dovetails with Cotter's (2019) observation that influencers on Instagram adapt their posting practices to what they think the platform algorithm will do with it, without necessarily understanding its intricacies. In turn, lay users' algorithmic imaginaries get built up from everyday encounters with platform architectures. Visibility then becomes boiled down to account and post engagement, including followers, likes, and comments.

An important distinction, however, needs to be made between visibility and *recognition*. The latter goes beyond platform metrics and considers the values of platform activity in the larger network. In the context of social movements, algorithmic recognition is thus closely tied to digital mobilization, where (potential) adherents engage with the key messages and develop a need to participate. From an organizer perspective, this relates to what Velkova and Kaun (2021) call a form of algorithmic repair practice, where datafied spaces become sites of dissent. However, algorithmic activism is constrained by elusive platform architectures that are difficult for digital organizers to fully grasp.

In sum, the conversations with FFF digital organizers inform the emergence of Algorithmic Consciousness as a necessary prerequisite for employing algorithms as a contentious tool. This includes understandings of algorithms and imaginaries about their functions but also issues that derive from algorithmic mediation, including pitfalls of algorithmic politics and ideas about visibility and

recognition. For the specific case of FFF, the takeaways around Algorithmic Consciousness in data activism also nuance sweeping assumptions about digital activism by youth, who are largely considered digital natives. Nasrin and Fisher (2022, p. 1302) call the FFF movement in the US context a "movement that is peopled by digital natives who are fluent in digital platforms, technologies, and communication." Putting this statement into conversation with FFF US's limited understanding of algorithms featured above illustrates the confines of text-based hashtag activism analyses and underscores the importance of research that engages activists' intentions and testimony of their abilities in using these tools. In that sense, Algorithmic Consciousness also calls into question how far simple hashtag campaigns for protest events "count" as algorithmic activism.

4.2. Algorithm as Stake

Algorithms are part of the architecture of platforms and FFF organizers are—despite their varying conceptual ideas—aware of this. As such, algorithms become of contentious importance. Beraldo and Milan (2019, p. 2) use *stakes* to define how data become "issues/objects of political struggle in their own right," noting that social movements must claim data and engage it as a site of activism. Treré and Bonini (2022, p. 2) take this up as Algorithm as Stake in the visualization of their conceptual framework (though do not elaborate further), nodding to the central role that algorithms occupy in datafied spaces and their implications in the context of social movements. Algorithm as Stake is perhaps best summarized by FFF Uruguay: "We—as a society and also as activists—respect the algorithm and things that the algorithm would like in the posts, so we try to mimic this to engage more people."

FFF organizers in the sample explain the struggle to claim algorithms for their cause around two metrics, reach and follower count. The contentious importance of algorithms is illustrated poignantly by FFF US:

> I mean…the deciding factor is that we can't really influence them. Social media is our main—sometimes only way—of getting the message out. And where [social media] send that…outside of maybe buying targeted ads…that is completely up to the algorithm. So, our reach is defined by the algorithm.

This testimony relates to the notion of *agency* in the sense that an algorithm is often framed as a "thief" who robs activists of their control to spread their own messages. It also appears that the social power of people "do[ing] things to algorithms" (Bucher, 2018, p. 117) also needs to be understood in its geopolitical context. FFF Uganda shares a fairly grim outlook when one of their Facebook posts in the "Rise Up" campaign did not get noticed much: "At the end of the day you feel like you're not really…you feel like your voice is not being heard." At the same time, algorithms might aid the visibility of a cause and can also be useful in reaching new users. FFF Russia explains: "This one influencer who is also like eco-friendly and is also friends with us, just did a repost of our post and we gained all of the followers back. She has like 100 k followers or something."

The stories across the interviews reveal that algorithms media digital campaign success and that social media organizers are aware of their contentious importance; yet, organizers are mostly unsure how to employ them for their cause. In that sense, they are somewhat stuck with the algorithm, and it remains debatable whether the "user's 'reflexive ability' to make the algorithms work to their own needs" (Treré & Bonini, 2022, p. 4) truly unfolds in FFF's context, where youth activists try to work within algorithmic spaces.

4.3. Algorithm as Repertoire

The specific role of algorithms for activism is closely tied to the tactics in algorithmic campaigning by FFF organizers. Treré and Bonini (2022, p. 6) define "algorithm-enabled activism" as its own "repertoire" within the larger context of data activism, which includes "the creativity, the resourcefulness, and the difficulties that activists face while coping with opaque decisions taken by an algorithm." Here, algorithms are understood as engrained in the fabric of contemporary protest movements. By adapting and re-purposing algorithms in the context of their own cause, they become practices that organizers can employ in their platform campaigns.

FFF Germany explains an incident where a social media algorithm boosted their content. A meme post on Facebook involving minions (the yellow, animated cartoon characters) was very successful because it "triggered the algorithm of Parents [for Future]," so while the web team did not fully know why it was popular, they realized that it became visible to marginal audiences more closely related with the demographic of the Parents for Future account. Etter and Albu (2020, p. 75) understand this as algorithmic "interlinking," where existing and new followers can connect on movement-related information. FFF Germany explains accordingly: "So in general, we try to do it in a way that is good for the algorithm." FFF India echoes the point on interaction: "You just have to figure out what type of content suits which app and get your teammates and the people you know…the maximum people from the outside to interact with it so it will grow."

As Maly and Beekmans (2018) explain, to manufacture virality through algorithmic manipulation, activists need to know how to trigger an algorithm. In the case of the minions' meme, the "algorithmic amplification" of activist campaign material is based on the experience of organizers, much of which is trial and error (Treré & Bonini, 2022, p. 9). This data practice artificially augments content and makes it visible to more users in the larger platform network. Here, FFF Israel

attempts an explanation of how they employ Algorithms as Repertoire:

> We just have our rules of the way we work that are based on…tricks about the algorithm….We try to stay trendy, on TikTok and Twitter especially….We've been doing it for a very long time, so it came a second nature to work with the algorithm.

This articulation is admittedly still relatively vague, and FFF Israel struggled to provide a concrete example to illustrate this statement.

Since social media organizers are expected to optimize content and grow followers, FFF's digital campaigns are deeply tied to algorithms; however, most collectives still need to learn more about them to instrumentalize them for their efforts. Thus, FFF is again stuck with the algorithm. Collectively, the interviews show that in the context of transnational youth climate activism, Algorithms as Repertoire is not yet a key factor of social media in political mobilization. FFF's contentious data practices mostly work within platform affordances: Social media analysis, platform-specific strategies for content, or even paying for boosted posts are more accessible to activists than leveraging platform codes for social justice goals.

4.4. Data Contention

Across the sample, questions about algorithmic awareness kept prompting stories about social media analysis, i.e., the ways in which organizers gauge their content reception and follower interactions in order to improve their activist tactics. In the context of social movement organizations, Karpf (2018) calls this "analytic activism." For two collectives, data analysis is done sporadically and not systematically. FFF US notes: "We look at likes and views at the moment and that's the level of analysis that we have because we don't have capacity." FFF Uruguay tells a similar story: "I'm not a marketing agent so I really don't know how to, but if a picture got 1,000 likes or retweets, I look at the characteristics of that post and try to replicate it." The extent to which data analysis is used also depends on the affordances provided by platforms. The commercialized structure of Instagram, for instance, allows account holders to view the in-app "insights" feature. FFF India explains that they check app analytics, which has a user-friendly design, but the metrics are difficult to translate for the activists:

> So now I know the reach of my Insta[gram] page has gone down by 20 people but what does that actually mean? And how do I use those insights to actively improve my performance? That is still a mystery to me.

FFF Austria has by far the most sophisticated approach, largely credited to the external support the collective receives from "Austrian social media and software development agencies" that provide the group with performance marketing and data analysis expertise. While this labor is "donated" as part of these agencies' pledges for environmental impact, Çalışkan and McGregor (2019) chart the emergence of activist consulting firms and the implications of these partnerships for grassroots collectives, arguing that such collaborations enact a neoliberal governmentality. It is due to this borrowed expertise that FFF Austria is able to make sense of Data Contention beyond any other collective in this study. They were the only collective that uses software (Fanpage Karma) to analyze social media, which yields key performance indicators such as productivity (posts per day), growth (percentage per week), engagement (total and individual posts), and gross reach. These are then logged and discussed in FFF Austria's weekly team meeting to further fine-tune their social media mobilization tactics.

Whether professionalized or more amateurish, all FFF collectives have learned to use some level of data analysis to develop platform-specific posting strategies. FFF India explains:

> On Twitter it's better to use hashtags in every tweet…and Instagram, you just have to put the hashtags in the comment but it's better if you put out reels. On Facebook especially, we would use fewer images and the focus will be more on the text.

These platform-specific practices were echoed by five other collectives in the sample, yielding posting conventions that have emerged through both platform affordances and usages.

When content runs the risk of being drowned out by the platform's algorithm (e.g., on the occasion of elections or other public events with higher user traffic), some collectives resort to paid content, including individual posts and larger campaigns. FFF Germany explains: "Last year we got 20,000 [euros] from an NGO and with Covid-19, we did everything online, so we increased our social media budget and bought ads on Facebook and Instagram to grow our reach." They elaborate that this was "of course, much simpler than growing organic content." Indeed, it is a tactic that FFF India hopes to make use of in the future: "We haven't turned to monetization…I mean, ads, because we don't have the funds to do that." It seems that most activists working in the datafied realm remain quite ambiguous toward platform politics.

The pressures to optimize content and gain visibility in datafied spaces have also led FFF Austria to capitalize on the popularity of the movement: "Whenever it is productive for a campaign, we work with influencers and celebrities." These "greenfluencers," as Knupfer et al. (2023) explain, use partnerships with popular collectives such as FFF as low-effort (digital) activism. Such commercialized tactics beg questions about the authenticity of social movements, a tension that not only activists but also influencers have to negotiate (see also Van Driel

& Dumitrica, 2021). FFF Uganda has a simpler strategy: "If maybe people can help you amplify your post, people who have been following you…then also tag them."

The final part of the interview guide sought to generate ideas about Data Contention in relation to platform politics. In particular, I was interested in hearing more about issues of platformed activism, such as datafication or data ethics. FFF Germany tells a story from a few years back: "At the time, there were very heated internal discussions about whether we wanted to give Facebook money or not. Because it's a very bad company." When it comes to commercialized aspects of digital activism, including the monetization of data through platform activity by FFF accounts, participants sometimes exuded a sense of internal conflict but quickly rationalized their practices. For FFF Germany, the tone has since changed and Facebook is indeed one of the platforms the national collective invests in the most.

The uncritical platform usages of FFF, including the disregard of data politics is perhaps best summarized by FFF Israel's response to the question of whether they actively thought about the datafication of their activism on social media: "Hm, not really, no." FFF Austria justifies: "For us, social media is the strongest channel for mobilization. That means that social media is extremely important to us in the entire movement." In glossing over the impacts of profit-driven platforms and turning a blind eye towards the (re)uses of activist-produced data, FFF social media organizers echo Galis and Neumayer's (2016) observations that activists simply accept the commercial structures of social media. Perhaps this consent is the baseline of Algorithms as Repertoire when it comes to digital activism on platforms such as Facebook or Instagram.

5. Conclusions

This study sought to provide insights into what FFF activists do with data, how they understand the effects of algorithmic mediation on their political work, and how they deal with the affordances and logics of platforms in their digital activism. Theoretically, it builds on recent conceptualizations in critical data studies in the context of social movements (Beraldo & Milan, 2019; Treré & Bonini, 2022). While many existing studies in the area focus on textual data (e.g., network analyses, hashtag analyses, social media content analyses), this study employs a qualitative case study design with virtual, semi-structured interviews to provide knowledge on digital activism from the activist perspective. Four central themes emerge via a three-step qualitative data analysis (see Figure 2): Algorithmic Consciousness (understanding, functions, issues, pitfalls and misinterpretations), Algorithm as Stake (contentious importance, tactical politics), Algorithm as Repertoire (role in activism, algorithmic campaigning), and Data Contention (data analysis, digital contentious tactics, uncritical uses).

As a central contribution, the study offers empirical evidence rooted in the experiences and practices of FFF activists in social media organizing roles. It also adds depth to recent theorizing around Data Contention and algorithmic activism, showcasing how digital activists get stuck with the algorithm as a platform structure they have to deal with, and one that they have not quite figured out to employ meaningfully as a contentious tool. From the qualitative data, the categorization of Algorithmm as Repertoire emerges as a useful concept, though it also sees limits in applied contexts. In particular, the capacity of organizers to navigate and use platforms in more sophisticated, data-driven ways needs to be a more central concern. Here, the empirical data generated a rich account of the struggles surrounding Algorithmic Consciousness, which is often assumed rather than articulated. From a theoretical standpoint, activists' stories about the contentious importance of algorithms and the associated tactical politics provide an illustration of Algorithms as Stake. Particular posting strategies and social media analysis emerge as pillars of Data Contention, though uncritical uses of datafied platforms remain an issue.

The cross-cultural context of the study provides valuable comparative insights but also bears a set of limitations. Social movement case studies that focus on a particular case such as FFF can run the risk of attributing findings to other movements. While this study does not claim any generalizability, it can inform related activist contexts in two important ways: First, the conversations with FFF activists show that text-based research often misses important factors that affect campaign design, execution, reach, and reception. Second, it is often assumed that youth activists are digital natives who know how to manipulate platforms. The insight from the interviews demonstrates, however, that many activists feel quite unsure about the intricacies of datafied spaces, building their digital actions around imaginations of how these spaces function both technically and socially. The individual collectives within the wider transnational FFF activist network differ in their technical skill and overall resource availability; yet, it is remarkable how similarly participants responded when asked to speak to their understandings of algorithms, data, and platforms. A key constraint of this study is that the virtual interviews were conducted without prior knowledge of the participants and English was not the native language of any organizer besides the officer from FFF US. This language barrier might have contributed to some misinterpretations of questions and potentially posed hurdles for participants.

We need more nuanced accounts of digital activist practices. Future studies could apply the four themes generated in this study as a typology for further qualitative inquiry and study the algorithmic capacity and changing campaign strategies by different social movements. For instance, scholars might want to consider the ethnographic work of local activist collectives using social media for political mobilization to dig deeper into data organizing and algorithm-enabled activism.

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Conflict of Interests

The author declares no conflict of interests.

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