Amplification, evasion, hijacking: algorithms as repertoire for social movements and the struggle for visibility

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Abstract

While scholars of activism have begun to unfold the dynamics of the 'contentious politics of

data', less explored are the forms of appropriation of algorithms to pursue political objectives

by social movements. This article fills this gap by offering a novel theoretical framework, a

conceptual vocabulary, and a typology to foreground and articulate algorithmic activism as a

subset of algorithmic politics. It starts discussing why an excessive focus on the power of

platforms risks disregarding the exploration of agency and provides the definitions of

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algorithmic agency and politics. Subsequently, it centres on algorithmic activism and demonstrates that algorithms have become the latest addition to the contention repertoire of social movements. Drawing on a heterogeneous set of examples and case studies (including our own research and a database of 250 articles), we propose and examine a typology of three dynamics of algorithmic activism, i.e., algorithmic *amplification*, *evasion*, and *hijacking*. We show that the struggle for visibility (either to achieve it or deny it) lies at the centre of all these types of activism. In the conclusions, we reflect on the key takeaways of our work, clarifying that algorithmic activism (1) exceeds the notion of 'hashtag activism' (2) constitutes an agnostic concept (3) is part of an incessant political struggle between algorithmic strategies and tactics.

Key words:

Data politics; algorithmic politics; algorithmic agency; algorithmic resistance; algorithmic activism; social movements

Introduction and outline

Various strands of research have reaffirmed the importance of looking at data systems as battlegrounds of contrasting forces. These studies show that citizens, small-scale organizations, and social movements can make sense of data 'from below' using them for their own needs within their struggles. While scholars of social movements and activism have unfolded the dynamics of the 'contentious politics of data' (Beraldo & Milan 2019), much less explored are the forms of activist appropriation of algorithms to pursue political objectives. Our contribution fills this gap by critically interrogating the practices that activists and social movements perform to exercise their agency upon algorithms. In our endeavor, we draw on research on data politics (Ruppert et al. 2017; Beraldo & Milan 2019), social

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movement studies (Tilly & Tarrow 2015; Tilly 2008; Tufekci 2017; Yang 2016), resistance studies (Velkova & Kaun 2021) and algorithm studies (Maly 2018, 2019). We build on the emerging scholarship around the political use of data to foreground and articulate the realm of algorithmic politics as a subset of data politics. To accomplish that, we propose and elucidate a novel framework (Fig. 1), a related conceptual vocabulary (algorithmic agency > algorithmic politics > algorithmic activism) and a typology of three types of algorithmic activism (algorithmic *amplification, evasion,* and *hijacking*).

The article starts by discussing why an excessive focus on the growing power of platforms risks disregarding the exploration of agency. Then, it offers the definitions of algorithmic agency and algorithmic politics. Subsequently, we focus on algorithmic activism as a form of contentious algorithmic politics and demonstrates that algorithms are the latest addition to the contention repertoire of social movements. Next, drawing on a heterogeneous set of examples and case studies, we propose and examine three types of algorithmic activism, i.e., algorithmic amplification, evasion, and hijacking. We demonstrate that the struggle for visibility (either to achieve it or deny it) lies at the centre of all these types of activism. In the conclusions, we reflect on the key takeaways of our work and its ability to foster dialogue across disciplines.

The infrastructural turn and the limitations of platform power

The central position acquired by commercial technological giants and their impact on the lives of citizens around the world has propelled an 'infrastructural turn' in media and data studies (Plantin & Punathambekar 2019). This has spurred a renewed attention to the material aspect of technological infrastructures. Yet, this attention is not a recent 'discovery' of media studies, but rather a 'continuous low' of this discipline (Casemajor 2015). Scholars such as

Peters (2015) have contributed a great deal to foreground the significance of media as infrastructures but, decades before them, the so-called 'Toronto School' (with thinkers as Innis, Ong, McLuhan, Postman and Strate) had already highlighted the material properties of media and their consequences on the political organisation of states. Another benefit of this turn has been to ground the presumed immateriality of 'cyberspace', scrutinizing the social, material, and political dimensions of digital platforms (Parks & Starosielski 2015; Peters 2015; Plantin et al. 2018; Van Dijck et al. 2018). Scholars such as Langlois & Elmer (2013) have demonstrated that the realm of data capture of social media platforms greatly expands as they reach a quasi-infrastructural scale. Zuboff (2019) has coined the term 'instrumentarian power' to capture the specific form of power exercised by the recent mutation of industrial capitalism into surveillance capitalism. Couldry & Mejias (2019) have highlighted the colonial continuities of extraction and exploitation of land, labour, and relations through data infrastructure, postulating a new social order where data relations enact a new form of data colonialism. In other words, 'it is becoming clear that companies including Google, Tencent, Amazon, and Facebook that began as platforms with specific aims and areas of operation (shopping, social networking, web search, etc.) now seem to function as vital infrastructures in the world at large' (Plantin & Punathambekar 2019, p. 164), with disruptive consequences for democracy, citizenship, governance, autonomy, justice, and the environment.

Yet, in realigning our gaze towards how platforms and data systems profoundly reshape media industries, social life and politics, there is a risk of losing sight of the space still available to people to resist the power of these infrastructures. Zuboff (2019) claims that data collection and the use of predictive algorithms by tech industry corporations represent a means of behavioural modification capable of making human behaviour not only completely predictable and manageable, but also automated through a 'digital order that thrives within

things and bodies, transforming volition into reinforcement and action into conditioned response' (2019, p. 378). These accounts may risk reasserting 'monolithic accounts of power that tend to downplay or exclude audiences and the significance of the lifeworld' (Livingstone 2019, p. 171). We believe that the focus on the increasingly central role of algorithms feeding commercial digital platforms should be combined with the appraisal of the agency that still holds in the hands of citizens in the age of datafication.

Defining algorithmic agency

The importance of agency in relation to big data has been at the centre of the reflections of scholars who have stressed that datafication should not exclusively be understood as the process of collecting and processing data about users online. This procedure also entails feeding such data back to them, enabling users 'to orient themselves in the world' (Kennedy, Poell & van Dijck 2015, p.1). While big business, governments and corporations often deploy data for surveillance purposes, community groups, small organizations and activist collectives are also leveraging the possibilities of datafication, pursuing objectives, fulfilling needs, and infusing values that are different from those of commercial tech giants (Van Dijck, 2014). Hence, big data constitutes a contested terrain of contrasting forces, where civil society can also produce, gather, and analyse data in ways that enhance the agency of the public, shaping a different kind of datafication. Instead of focusing on top-down processes of datafication, studies on data agency (e.g., Couldry & Powell 2014), data activism (e.g., Milan 2017) and everyday practices of 'living with data' (e.g., Kennedy 2018) dwell on the ways in which different actors make sense of data 'from below' and appropriate them for their own purposes.

It is key to underline that the value of big data originates not so much from the data itself, but from the ways in which it is assembled into new forms of 'meaningfulness by the associational infrastructure of the respective software systems in which algorithms play a key role' (Bucher 2020, p.94). Algorithms can be seen as 'encoded procedures for transforming input data into desired output, based on specified calculations' (Gillespie 2014, p. 167). Yet, algorithms are much more than mere computational agents. They are designed to be executed and to bring about particular outcomes according to certain desires, needs, and possibilities' (Willson, 2017, p. 4). They represent 'ethicopolitical arrangements of values, assumptions, and propositions about the world' (Amoore 2020, p. 6). Data agency and algorithmic agency are intimately connected. Just as data power depends on the ways data are assembled and interpreted, the power of algorithms originates from the choices of who design and apply them. Both data and algorithms respond to certain needs and desires, but they can be appropriated from below to achieve different aims from the ones that were assigned to them. As Bucher argues, 'while algorithms certainly do things to people, people also do things to algorithms' (2017, p. 42). Echoing studies on data agency and activism, scholars have also started to look at algorithmic systems as a battleground of contesting actors, centring on questions of agency and resistance. For instance, Velkova & Kaun questioned 'the extent to which everyday media users are only subjects and victims of algorithmic power' (2021, p. 527) asking if users are powerless against the workings of algorithms. In order to further clarify what we mean by algorithmic agency, it is useful to turn to some definitions. Couldry's understanding of agency underlines the centrality of reflexivity: 'the longer processes of action based on reflection, making sense of the world so as to act within it' (2014, p. 891). Jansen (2016), while distinguishing human agency from the agency of algorithms, considered the former an evaluative and reflexive action and claimed that algorithms lack evaluative and reflexive agency. We are aware of the ongoing conversation

regarding the differences between human and non-human agency in relation to algorithms (Klinger and Svensson 2018). However, combining the above definitions, with the term *algorithmic agency* we hereby refer not to the agency of the algorithms but rather to the user's 'reflexive ability' to make the algorithms work to their own needs.

Defining algorithmic politics

As we saw in the previous section, data and algorithmic agency can be exercised from above and from below for different purposes. But what happens when we move to the realm of politics? Ruppert et al. (2017, p.1) argue that 'data politics is concerned with the conditions of possibility of data that involve things (…), language (...), and people (…) that together create new worlds'. They then define 'data politics' as 'both the articulation of political questions about these worlds and the ways in which they provoke subjects to govern themselves and others by making rights claims' (2017, p. 1), specifying that it is 'concerned with not only political struggles around data collection and its deployments, but how data is generative of new forms of power relations and politics at different and inter-connected scales' (2017, p. 2). Expanding on this definition of data politics and building on the notion of 'contentious politics' by social movement scholars Tilly & Tarrow (2015), Beraldo & Milan (2019) have introduced a differentiation between the 'institutional politics of data' - which refers to the top-down effects of datafication on groups and individuals - and the 'contentious politics of data' - which refers to 'the bottom-up practices embodied and promoted by individuals and groups' (p. 4). With contentious politics of data, the two scholars refer to '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' (2019, p. 2). In the wake of this distinction made by

Beraldo & Milan, we propose a similar distinction for what we call *algorithmic politics*, a subset of data politics concerned with how different groups exercise their algorithmic agency by appropriating and acting upon algorithms to fulfil their political objectives (see fig. 1 in the conclusions). We differentiate between an '*institutional* algorithmic politics' and a '*contentious* algorithmic politics. The former refers to the attempts to act on algorithms undertaken from 'above' - by a state, an institution, a corporation, etc. And is often referred to as 'computational propaganda' (Woolley 2020) or 'algorithmic populism' (Maly 2018, 2019). The latter denotes instead all those practices initiated from 'below' – by a collective, a social movement or individual activists and has been addressed as 'algorithmic resistance' (Treré 2018, 2019) or 'algorithmic activism' (Maly 2018, 2019). The latter type is the focus of this article and is detailed in the next section.

Contentious and tactical algorithmic politics (algorithmic activism)

Datafication and algorithmically mediated environments are restructuring collective action and the dynamics of social movements at a profound level (Milan 2015), changing the very conditions under which social movements operate (Beraldo & Milan 2019; Flesher Fominaya 2020; Treré 2019). The algorithms of social media platforms have several implications for the activities of activists. Algorithms represent key actors in what Dolata (2017) has called the 'socio-technical constitution of collective action'. Maly (2018, 2019) has coined the concept of 'algorithmic activism' to tackle the rise of a Flemish far-right activist movement. In his analysis, Maly sheds light on how 'algorithmic activists' from this movement strategically exploit the affordances of social media to reach their goals, 'boost their popularity rankings' and make their content go viral (Maly 2019, p. 1). In this article, we identify *algorithmic activism* with the contentious politics of data that is concerned with how a range of actors including activists, social movements and civil society actors engage with and act upon

algorithms to achieve their political aims and pursue social change. We therefore conceptualise this phenomenon as a form of contentious algorithmic politics exercised through a tactical form of algorithmic agency.

Algorithms as repertoire and the struggle for visibility

Tilly originally defined a 'repertoire of contention' as including the "whole set of means [a group] has for making claims of different types on different individuals" (1986, p. 2). He later clarified that this notion refers to "claims making routines that apply to the same claimant-object pairs: bosses and workers, peasants and landlords, rival nationalist factions, and many more" (Tilly 2010, p. 35). While Tilly's original conceptualisation has been criticized for its narrow focus on public display of disruptive action, more recently (2008) he has extended its focus to include broader contentious performances, underlining the constant innovation of contentious politics. Reflecting on the increasing relevance that new media have acquired within the repertoires of social movements, scholars have started to use labels such as 'electronic repertoire of contention' (Rolfe 2005) and 'digital network repertoires' (Breindl & Briatte 2010). Both social movement and media scholars have adopted repertoires of contention to address how activists integrate digital technologies as a set of means to challenge authority, protest, and mobilise (Liu 2020). In the realm of data activism, Beraldo & Milan (2019) have introduced a distinction between 'data as stakes' and 'data as repertoire'. In the latter type (data-enabled activism), data are inserted within the repertoire of action of social movements and activists 'alongside other more traditional forms of protest and civic engagement' (Beraldo & Milan 2019, p. 6). Inspired by this distinction, in this article we focus on citizen practices that deploy algorithms as repertoire (algorithm-enabled activism), including the creativity, the resourcefulness, and the difficulties that activists face

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while coping with opaque decisions taken by an algorithm. Algorithms constitute the latest addition to the repertoire of contention of contemporary protest.

Since most of the digital environments that activists navigate are algorithmically determined, the capacity to understand, adapt and re-purpose algorithms lies at the centre of today's collective action. Different scholars have touched upon this topic from disciplines as varied as computer science, political science, media, data, algorithm, management, resistance, and social movement studies. For instance, scholars working at the intersection between social movement and media studies have addressed the ways in which activists and algorithms are mutually entangled in protest-related situations. Galis & Neumayer (2016), in their study of digital protest in Greece and Sweden, have introduced the concept of 'cyber-material détournement'. With this notion, they refer to the alliances between activists and non-human actors (with algorithmic agents *in primis*) that define social media activism. Other thinkers working at the intersection between resistance and data studies have grown dissatisfied with dystopian accounts of algorithmic power and have started to rely on De Certeau's understanding of tactics. Velkova & Kaun, for instance, "foreground the significance of mundane user encounters with algorithms through which users can develop tactics of resistance through alternative uses" (2021, p. 525). Relatedly, authors such as Gangneux (2020) talk of 'tactical agency' to describe the ways in which young people engage (and disengage) with WhatsApp and Facebook Messenger. Kant (2020) describes users who are engaged in 'manoeuvring within, against and through algorithmic anticipation' (2020, p. 215) as 'algorithmic tacticians'. Social movements engage in algorithmic activism by leveraging the opportunities offered by social media's algorithms to various ends. Primarily, they do it to attract the attention of mainstream media by increasing their visibility. Visibility can be understood in this context as the 'digital embodiment and online presence of individuals and

groups and their associated meanings, which are (…) constantly negotiated, reinvigorated, and updated' (Milan 2015, p. 6). Algorithmic visibility is a type of power (Bucher 2018) that selects who and which content can or cannot be seen. In algorithmically determined settings, activists are pushed even more to play the game of visibility (Cotter 2019). But alongside visibility, they also appropriate algorithms to exercise and fuel their 'narrative agency' (Yang 2016), that is the capacity to tell their stories and frame events and experiences in their own terms. This is testified by movements as diverse as #OccupyWallStreet, #BlackLivesMatter and #YoSoy132. As social movement scholar Zeynep Tufekci has underlined (2017), the strongest movements are the ones that are able to develop a 'narrative capacity', understood as the ability to attract public attention and introduce new issues or frames into the political debate. In the datafied society, algorithmic activism represents a key component in the construction of this capacity for many contemporary movements.

The design of the typology of algorithmic activism

In the following section, we build on our own work, on the work of other scholars, and on examples from global socio-political contexts to illustrate the variety of practices in which algorithms are used as repertoire for contemporary movements and activists. We outline how different types of algorithmic activism centre on a struggle around voice and the incessant quest for visibility. This entails attempts to achieve that a social movement's voice is recognized, and its visibility strengthened, while at the same time it includes the negation of other social actors' visibility and the attempts to silence their voice. We derive our ideas from a heterogenous set of examples, including cases from our own research. Based on these examples, we propose a typology of three types of algorithmic activism: algorithmic *amplification, evasion, and hijacking*.

Our own research carried out in Mexico and in Spain within two different research projects on social movements and digital media represents the first source for the typology construction. During 2017 and 2018, we carried out fifteen expert interviews with a selection of prominent Mexican data activists, human rights advocates, journalists, politicians, media strategists and academics. In the case of Spain, the ideas regarding the forms of algorithmic amplification of the 15M movement draw on 20 semi-structured interviews of an hour and a half each with social movement and media activists carried out in 2015 in Madrid, Barcelona, and Seville. A snow-ball sampling strategy was used to select twenty participants covering a range of social movement organisations. The interviews addressed people who played key roles in organising and producing media about the anti-austerity protests, including journalists, web managers and developers, social media curators, graphic designers, media activists, and precarious media researchers. Both projects involved the technique of 'active interviewing' developed by Holstein & Gubrium (1995) that uses broad questions to give agency to research participants. Such a technique, based on a conception of reality as an ongoing and interpretative accomplishment, is consistent with a conception of the relationships between activists and algorithms as a changing, dynamic complex. Respondents could address a wide range of meanings by telling stories in response to wide-ranging questions, such as 'How would you describe your relationship with this platform?' or 'In which ways would you define your engagement with the algorithm of Twitter?'. This allowed us to foreground the 'narrative capacity' of activists in their engagement with communication technologies (Atkinson & Cooley 2010, p. xiv). The second source of examples for the typology construction emerges from desk research on both scientific papers and the press around algorithm 'gaming' (cheating) practices.

For the selection of this sample, we first extracted relevant keywords from a set of 10 articles concerning cases of 'algorithmic gaming' or 'cheating' in the context of gig working, political

activism, and cultural production, which we had read independently. The most relevant words, such as 'algorithmic gaming', 'algorithmic scams', 'cheating algorithms', 'optimization', 'amplification', 'resistance', 'solidarity', and 'algorithmic manipulation' have been paired with 'activism', 'gig working' and 'cultural production' and used as keywords in Google, Twitter and Google Scholar search engines. From this search we build a database made up of 100 press articles and 150 scientific articles, whose publication dates range from 2013 to 2021. We carried out a content analysis on this database and coded the press articles according to three categories: 'gaming culture', 'gaming politics', and 'gaming work', while the scientific articles were coded according to their relevance to one of the previous categories and the themes of agency and resistance. For this article, we selected key examples from the 'gaming politics' category.

Algorithmic amplification

In specific political junctures, activists can integrate algorithms into their repertoire to multiply and amplify their voice to acquire more visibility while strengthening their agency and narrative capacity. For example, scholars from political science have addressed the use of algorithms on Twitter to pursue social change and insert alternative narratives through the notion of 'hashtag activism' (Jackson, Bailey & Foucault Welles 2020). These scholars examine how marginalized groups rely on hashtags on Twitter (e.g., #MeToo, #GirlsLikeUs, and #BlackLivesMatter) to pre-empt political spin, build networks of dissent and challenge dominant understandings of gender and race. In our own work (Treré 2018, 2019), we have mobilized the notion of 'algorithmic resistance' to characterize various strategies of appropriation of social media algorithms by protest movements to pursue their political aims and achieve greater visibility. This concept relates specifically to the technopolitical practices of the Spanish movement 15M. Through the tactical adoption of social media and their

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algorithms, the movement was able to spread information, organise protests, build powerful narratives and shape both national and international journalistic coverage. One of the most representative tactics of algorithmic activism established by Spanish activists consisted of the prearranged creation of trending topics on Twitter (see also Feenstra et al. 2017). This was a carefully planned tactic that comprised a blend of internal communication technologies and corporate social media. Tools of internal communication such as online pads (digital notepads for collective writing), were used – in the words of an activist – 'to collectively select a list of possibly successful hashtags and build the narrative of the protest', while 'external' social media platforms (Twitter in particular) - were instead deployed to massively spread the information and reach the desired result. Inside the pads, the most effective hashtags were brainstormed and selected depending on the activist campaign that was undertaken. Once a hashtag was chosen, a range of potential tweets was then created accordingly and shared with other activists through internal communication environments – a variable combination of direct messages on Twitter, instant messaging services (WhatsApp, Telegram, Signal) and mailing lists. This refined tactic presupposes a deep awareness and reflective knowledge of how algorithms operate. As one 15M activist explains, this was 'obtained through incessant sequences of trial and error', originating from 'trying to understand how the Twitter algorithm worked and how we could exploit it for improving our visibility and influence the mainstream media agenda'. As another activist adds:

'Our aim was to hack the Twitter algorithm so our narratives, our voices, our ways of seeing things could reach as many people as possible. We use corporate social media because this is where most people are, and we want to reach the highest number of persons out there. We want to be visible, and we want our message to get across and be picked up by other mainstream media as well. We know that social media are extractive and use our data in many ways, but this time it's us using them to multiply our presence and empower the movement'.

Spanish activists made a series of 'discoveries' in relation to the Twitter algorithm. They found that the general trending topics had a cycle of 24 hours and that 'all the accounts needed to tweet simultaneously with the same hashtag' (Interview with a media activist). Furthermore, they noticed the hashtag had to be 'fresh' – i.e., not used before - since the Twitter algorithm tends to always reward newness.

In other cases, activists can also rely on algorithms to amplify the visibility of someone to expose them with the objective of hurting their public image. For example, in 2018, mainly in response to Donald Trump's policies on immigrations and LGBTQ rights, activists started to manipulate Google' search algorithm by massively linking the word 'idiot' to pictures of him (Haynes 2018). The association between the word 'idiot' and the former president of the USA was partly ignited by the choice of London protesters of the Green Day song 'American Idiot' during the Trump's visit to England. Activists on Reddit started to upvote posts of Trump[1] in connection to the word 'idiot' lending Google's ranking algorithm to associate the two. Google's position in relation to this incident has been not to interfere with its search results. The company has a long history of this type of scandals, with offensive and sometimes racist content being linked to particular individuals. Another illustration of this happened in 2009 when searches for 'Michelle Obama' returned a picture of the first lady's face with ape-like features. These controversies highlight the inherent biases of algorithmically driven decisions (Noble 2018). Further, they exemplify the evolving and contested dynamics of algorithmic power at the intersection between the interests of digital platforms, political figures, activists, and the public. We have seen how activists can appropriate algorithms to achieve more visibility for themselves or to amplify someone else's

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[1] See for instance:
https://www.reddit.com/r/The_Mueller/comments/8on76n/the_first_picture_that_comes_up_when_you_google/

biased voice to hurt their public image. Yet, activists can also repurpose algorithmic power to repair what they feel is an unjust form of invisibility, thus preventing someone else's voice from being silenced or unheard. In relation to this, Velkova & Kaun (2021) have focused on forms of explicit algorithmic resistance though their concept of 'media repair practices'. These 'media practices of repair are tactics to correct existing shortcomings *within* algorithmic culture rather than by producing alternative pathways. In that sense, they establish reactive user agency in an algorithmic aftermath' (Velkova & Kaun 2021, p. 523-4). The two authors explore the 'World White Web' project by Swedish design student Johanna Burai. The artist tried to tweak Google's image search algorithm to disseminate alternative search results, after discovering that her basic photographic search of a human hand returned almost exclusively images of white hands. In 2015, Burai launched a campaign to get six images of non-white hands as top results in Google image searches. Hence, the activist appropriation of algorithms as repertoire is key also to respond to emerging forms of algorithmic injustices.

Algorithmic evasion

Examples of activists fighting against digital platforms' codes and algorithmic regulations to have their voices heard include the realm of 'content moderation avoidance strategies'. These strategies have been observed in different domains as varied as vaccine-opposed groups (Moran et al. 2021), Pro-Eating Disorder communities (Chancellor et al. 2016; Gerrard 2018), and far-right movements (Bhat & Klein 2020). In relation to the first type, Moran et al. (2021) have illustrated that COVID-19 vaccine-opposed groups can bypass community guidelines and moderation features on social media by using various expedients. One of the most diffused is lexical variation on Twitter, where iterations of words – e.g., v@ccine - are used to prevent algorithmic detection and blocking of content. On the same platform, they

would also create vaccine-neutral hashtags to spread misinformation within pro-vax conversations. As Moran et al. (2021) demonstrate, the practices of anti-vax strategists are always carefully adapted to the specific digital platform they are relying on. On Facebook, they would provide links to vaccination misinformation in the comment section, rather than in the original post. On Instagram, they would develop ephemeral content strategies including anti-vaccination content on stories rather than in-feed or rely on coded language using words like 'toxins' and 'metals' instead of vaccines.

In the case of Pro-Eating Disorder (Pro-ED) groups on Instagram, similar strategies of content moderation circumvention were detected in response to Instagram's (and other digital platforms) ban of phrases such as 'anorexia', 'proana (pro-anorexia)', 'thinspiration', 'thighgap' and 'imugly' and the blocking of the results of certain hashtag searches since 2012. This has led to the proliferation of lexical variants of the banned tags to deceive algorithmic control, with for example 'Thighgap' replaced with 'thyghgapp' and 'thinspo' turning into 'thinspooooo'. Research (Chancellor et al. 2016) has shown how the Instagram's ban worsened the situation with new variants having an even further reach than those they were designed to replace, spreading to other platforms such as Tumblr and Twitter.

Similarly, Bhat & Klein (2020) have illustrated how far-right activists engaged in practices of 'dog whistling' to evade censorship by automated moderation on Twitter during the 2016 US presidential election. They draw on the notion of 'dog whistling' to denote the use of symbols and terminology that means something to the larger audience, but acquires a different meaning for a specific public, in this case the white supremacist audience. Words as 'googles' or 'Dindu Nuffins' for African Americans and 'skittles' to indicate Muslims, together with other symbols such as parenthesis and percentages were used to spread hate and racist, xenophobic content that escaped Twitter's algorithmic detection mechanisms.

Relatedly, the reliance on a particular language for avoiding algorithmic control and surveillance under authoritarian governments has been observed in contemporary Turkey. As Tonnesen (2021) points out, activists who oppose the government appropriate the 'vernacular Twitter language and the Western popular culture which includes drawing subtle comparisons between movie villains and the President, references to early Internet phenomena, captioning viral videos with implied political messages etc' (p. 2-3). This allows them to have their voice heard while flying under the radar of Turkish government's social media control, since this playful vernacular language is out of sync with pro-government forces' digital skills. These cases prove that algorithmic activism is not only about appropriating algorithms to amplify visibility and strengthen narrative agency, but also about finding new ways to evade them to avoid being silenced by digital platforms.

Algorithmic hijacking

With the notion of 'hashtag hijacking', the computer science literature designates a practice where hashtags are used to spread un-related content, spam, or negative sentiments. The objective is to tarnish the intended motive of a hashtag, thus rendering its presence counterproductive (Jain et al. 2015, p. 17). A powerful example of this tactic is represented by the collective hijacking of the Twitter hashtag #myNYPD described by Jackson & Welles (2015) that followed the launch of a public relations campaign by the New York City Police Department in 2014. The authors document how activists' hijacking of the police hashtag led to the formation of a counter-public sphere. They use this experience to explain how the repertoire of digital contention of citizen activists is evolving in the algorithmic age. More recently, K-pop fandoms - known for their dedication to the 'idols' of South Korean music - have used their sophisticated skills in the art of algorithmic manipulation and hijacking at the service of social justice causes. In 2020, protests emerged in response to the police killing of

George Floyd, and the subsequent threat of former US president Trump to deploy the army against protesters. In this contest, the Dallas Police Department asked the public to submit video of 'illegal activity from the protests' through a dedicate app. K-pop fans inundated the app with K-pop-related content, in particular fancams (fan-edited videos of K-pop stars). As a result, the Dallas Police Department were forced to take down the app (Romano 2020). K-pop fans have also hijacked right-wing hashtags like #MAGA, #BlueLivesMatter and #whitelivesmatter flooding them with clips of K-pop groups, memes and other similar content to drown out racist and offensive voices. As Abidin & Baudinette (2020) have pointed out, the fact that K-pop fans are mastering these algorithmic tactics is no surprise to fandom scholars who have been following their practices for years. These communities have a long history of 'being political', relying on online platforms for social justice purposes, charitable causes and online vigilantism (Ohlheiser 2020). Their high level of tech-savviness and algorithmic awareness is born out of their constant interactions with the affordances of social media. Finally, algorithmic hijacking is not merely related to hashtags. For example, police officers in the US have been playing copyrighted music with their phones during attempts to be recorded by activists in the course of their encounters. Their aim is to prevent those videos to be posted on YouTube, and to silence activists' voices avoiding accountability. To do so, they exploit the platform's copyright policy that filters and remove this kind of material through a system called Content ID (Sung 2021). This kind of algorithmic hijacking shows the hybrid nature of the phenomenon that can take place at the intersection between the physical and the digital realms.

The struggle between algorithmic strategies and tactics

So far, we have mainly focused on manifestations of algorithmic activism. In this last section, we instead zoom in on a recent example from the contemporary Mexican political scenario

that perfectly encapsulates a form of institutional/strategic algorithmic hijacking. Our aim is to show that (1) the three mechanisms (amplification, evasion, hijacking) that we have outlined can be used from above by institutional actors and are not the exclusive realm of citizens and activists; (2) algorithmic politics is characterized by an incessant back-and-forth struggle between algorithmic strategies and tactics.

On September 26, 2014, six deaths and the forced disappearance of 43 students at the Ayotzinapa teachers' college in Guerrero (Mexico) spurred the emergence of a social movement in solidarity with the families of the victims whose main aim was 'to present the missing students' lives' (Gravante 2020, p. 88). The spark of the movement was ignited after the event, when several outraged activists started to protest on social media, and the Twitter hashtag #YaMeCanse (IAmTired) – which expressed the feeling of not being able to tolerate any more violence – soon became a key space for protest organizing, information spreading and one of the most used hashtags in Mexican history. Multimedia artist and writer Erin Gallagher has collected a detailed database of bot attacks and algorithmic strategies in Mexico and beyond (Gallagher 2017). In relation to #YaMeCanse, she noticed something atypical in her search results for the hashtags: they were flooded with tweets, including the hashtag, but no other content besides random punctuation marks. The accounts tweeting this kind of empty content were, in fact, bots with no followers and they were tweeting automatically. As documented by the Mexican algorithmic activist Escorcia (2014), automated accounts purposively hijacked the hashtag with 'noise', inserting links to pornography, advertisements, and violent images, so the Twitter algorithm would flag it as spam and consequently block it. The confusion they generated made it difficult for citizens to share and rely on information through #YaMeCanse. Hence, the hashtag vanished from Twitter's list of trending topics. However, activists reacted to this disruption by producing different lexical iterations of it such as 'YaMeCanse1' and 'YaMeCanse2'. These iterations

were able to move the conversation elsewhere eluding the noise created by bots probably fuelled by the local government. These last tactics are a further example of how algorithms can be used to evade their own control, as we have seen in the previous section.

This example shows how institutions can deploy strategies of algorithmic hijacking to prevent activists' voice from being heard and silence dissent online. However, activists can leverage social media algorithms to react to these institutional strategies promptly. Through algorithmic evasion and amplification, they can reclaim spaces for their own narratives in the never-ending battle between algorithmic strategies and tactics that defines the algorithmic age.

Discussion and conclusion

Relying on contributions from data and social movement studies, this article identified the field of algorithmic politics as a sub-set of data politics, concerned with how different groups appropriate algorithms to fulfil their political objectives. We then introduced the distinction between institutional and contentious uses of algorithms, focusing on the latter type which exemplifies the very field of algorithmic activism. Within this type of activism, we saw that algorithms can be the tools *through* which activists exercise their protest (algorithms as repertoire), representing the latest addition to the repertoire of contention of protest movements. We then introduced and discussed three types of algorithmic activism: algorithmic amplification, evasion, and hijacking. Fig. 1 shows the conceptual framework which represents the main contribution of this article.
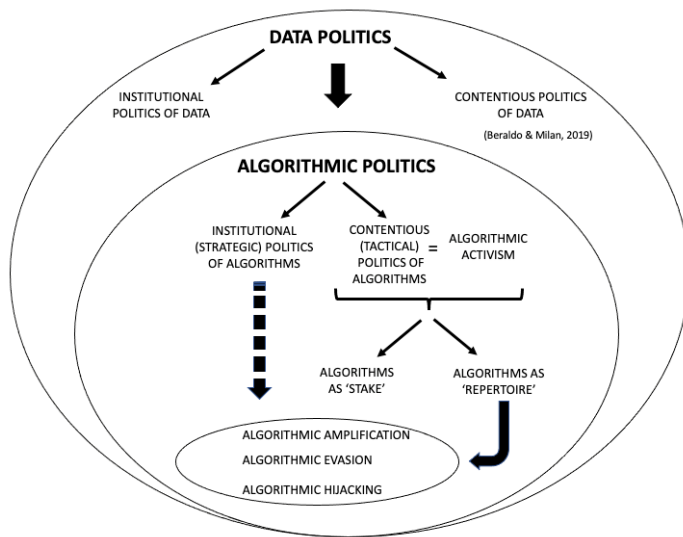
Fig. 1 – From data politics to algorithmic politics: a conceptual framework

This framework brings together the scattered pieces of research that have dealt with emerging forms of political engagement with algorithms from various perspectives and by a diverse range of actors. It foregrounds, connects, and articulates all the facets of the contested battleground of algorithmics politics, conceived as a subset of data politics.

Moreover, there are three additional contributions of our paper. Firstly, it has become evident that our conception of algorithmic activism includes but exceeds the notion of 'hashtag activism'. Algorithmic activism operates not only through hashtags, but over a broader variety of platforms, devices, actors, and socio-political domains. While Twitter has been a key environment for the unfolding of recent protests, algorithmic activism encompasses a wider spectrum of tactics, dynamics, and subterfuges. As algorithms increasingly pervade more aspects of our lives, these practices are becoming more mundane and integrated into the fabric of our everyday experiences. For example, management scholars Kellogg, Valentine &

Christin use the similar term 'algoactivism' to address the individual and collective tactics of gig workers in their resistance efforts against algorithmic control (2020).

Secondly, another important takeaway relates to the *agnosticism* of algorithmic activism. As the cases we have mapped testify, algorithms are being equally appropriated by racist and xenophobic movements, oppressive regimes as well as by progressive activists and radical collectives. The political terrain of this activism is multifaceted and contradictory (Etter & Albu 2021), with various forces at play engaged in a struggle to either obtain or thwart visibility. Thirdly, through the example of institutional/strategic hijacking in Mexico and the reactions it engendered in activists' tactics, we have illustrated how the field of algorithmic politics is crossed by an incessant struggle between algorithmic strategies and tactics. The three algorithmic dynamics outlined in this article can thus be appropriated both from above by institutional actors and from below by activist tacticians. We hope that this framework will be able to foster a dialogue (and generate further research) across the disciplinary boundaries of critical data and algorithm studies and social movement studies. As the processes of datafication and automation through algorithms become pervasive in our daily lives, data and algorithms do not only represent instruments in the hands of institutions and corporations. They also become part of the repertoire that citizens and social movements embrace to exercise their collective and individual agency. We believe that the ideas discussed in this article can enrich the conceptual vocabulary of social movement studies in their engagement with the complexities of politics in the age of datafication.

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