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‘Networks that work too well’: intervening in algorithmic connections

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Abstract
Within the emerging field of critical algorithm studies, this article theorises that forced connections happen when algorithms exacerbate human actions in connecting otherwise disparate data points on digitally networked platforms to the subject of the data’s detriment. Although social media users may not have a comprehensive understanding of how algorithms work to make some content visible, when users form their own explanatory theories about these algorithms, they often intervene in these connections. Drawing on Michel de Certeau’s notion of strategies as the manipulations in which platforms engage to profile and control their users, and tactics as everyday acts of resistance, this article investigates two tactics within algorithmic cultures – Voldemorting, or not mentioning words or names in order to avoid a forced connection; and screenshotting, or making content visible without sending its website traffic – to demonstrate users’ understandings of the algorithms that seek to connect individuals to other people, platforms, content and advertisers, and their efforts to wrest back control.

Keywords
algorithms, connections, networks, practices, Reddit, social media, strategies, tactics

Introduction

Social media algorithms are designed to make connections between people and information. This article argues that most social media users don’t have detailed knowledge about how algorithms work, but when they know that algorithms have the potential to force connections, they attempt to intervene in them.

The content made available on social media platforms is curated in part by algorithms: sorting processes that operate automatically and opaquely, contributing to a myth that algorithms are authoritative, accurate and objective. Scholarship on algorithms and algorithmic cultures has

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critiqued this idea, which Tarleton Gillespie (2013) calls a 'carefully crafted fiction' (p. 179). Before proceeding with an article on social media algorithms, I must note that algorithms are not limited to the digital realm. As Ted Striphas (2015) argues, the term 'algorithm' maintains close etymological ties with 'arithmetic', and its most common contemporary meaning is a set of step-by-step procedures, often expressed mathematically. Alexander Galloway and Eugene Thacker (2007) trace the algorithm back to 18th-century musical instruments that could perform under the control of rolls of punched paper. In 1842, Ada Lovelace developed the first software algorithm to calculate the Bernoulli number sequence. Galloway and Thacker point out that algorithms always need a processing entity: whether it is a piano, the analytical engine that Lovelace used or a social media platform, algorithms must be articulated within the grammar of the processor.

According to Gillespie (2013: 167), algorithms are now 'a key logic governing the flows of information on which we depend', and as algorithms are so essential to online life, the study of how people engage with digital and social media algorithms is a rapidly emerging field within the humanities and social sciences. Gillespie and Seaver (2016) have compiled a reading list for the field they call 'critical algorithm studies', which broadly maps out some themes and key references. The six areas of scholarship they identify within this field include basic overviews of algorithms, implications of algorithms, specific worldviews that algorithms advance, algorithms as technical assemblages, algorithms as fundamentally human in their design and use and methods for their study. This article fits within section 4.3 of this list, which deals with what users understand about algorithms.

Algorithms and platforms are political: they mediate between the decisions their owners, designers, researchers and users make about the huge amounts of data that flow through them. People interacting with these platforms don't yet have a strong understanding of how algorithms mediate, curate and shape content and information. This article responds to David Beer's (2013) call for an understanding of how algorithms mesh with everyday routines and decisions by theorising forced connections, and how algorithms and human decisions work together to make certain things visible. For Seaver (2017), algorithms are enacted by practices, and in investigating algorithmically related practices, I take on Michel De Certeau's (1988 (1984)) theory of strategies and tactics, following Michele Willson (2017) and Kate Mannell (2017), to investigate two key tactics of avoiding connections: Voldemorting – not mentioning words or names in order to avoid a forced connection; and screenshotting – making content visible without sending its website traffic.

Social media users have a collective awareness of the potential of forced connections, gleaned from personal experience, anecdotes posted to social media, and news and academic articles. I argue that one effect of an awareness of forced connections is tactics that attempt to intervene in them.

Tactics of connections and disconnections

Willson (2017) argues that platforms attempt to control and manipulate users throughout their everyday online practices. The algorithms used by these platforms may not be clear, but the goal of any platform is easy to understand, as it is rooted in neoliberal systems of profit. Increasing the number of users and the time they actively spend on the platform is paramount, as this leads to data creation, which facilitates more comprehensive personal profiles that platforms can sell to advertisers, so they can target their products to the individuals and groups most likely to buy them.

Willson (2017) draws on the work of De Certeau (1988 (1984)) to suggest that platforms employ *strategies* to engage in this management and manipulation, because platforms hold a lot of power. At the same time, users of these platforms still have agency: they subvert the control that platforms have through *tactics*, or everyday acts of resistance. For De Certeau (1988 (1984)), tactics are

calculated actions that lack a view of the whole, common to those 'caught in nets of discipline' (p. xiv). These tactics of consumption – whether of searching, navigating, reading, shopping or, as I explore in this article, Voldemorting and screenshotting – lend a political dimension to everyday practices. Mannell (2017) deploys de Certeau's work as a basis for expanding our understanding of resistance to technology to include everyday acts. When she examines butler lies – someone using technology to pretend they are unavailable – she calls this a tactic to push back against the socio-technical imperative to connect through resistant practices by momentarily rejecting the connectivity that mobile technology provides.

Michel De Certeau's (1988 (1984)) work on tactics and strategies is a way to build on the framework of media practices as an approach to studying social media. In my work with James Meese and Jenny Kennedy (Meese et al., 2016), we deployed a practice framework to argue that practice, or what people do with social media, is crucial to the development and maintenance of platform governance.

Platform rules form the basis of what kinds of content are allowed – including adult content, advertising, reposting and harassment. But just considering the platform's terms of service and official user agreements overlooks the myriad interventions that people make into what content is acceptable to remain circulating on these platforms. Nick Couldry is a key theorist here, as his investigations into media practices deliberately turn away from media texts and institutions to instead consider what people *do* in relation to media. Couldry grounds his approach to media studies in analysing everyday actions and habits. He argues (Couldry, 2012, italics in original) that, 'There is a big difference between the basic possibilities for using technology, and how it comes to be *used in practice'.* (p. 11) A separation between strategies and tactics can be seen in this statement: strategies set up technology's basic possibilities, and tactics are how technologies are actually used. When Golding (2013) draws on De Certeau (1988 (1984)) to study the experience of playing video games, he draws a distinction between viewing the whole video game 'from above', as a designer using strategies to guide play, and 'from below', as a player who most often moves through the video game bit by bit.

Understanding practice from the two distinct levels provided by De Certeau (1988 (1984)) is not a turn back to emphasising media institutions, but rather a recognition that platform owners, designers, programmers and even researchers are users too. When people who use platforms understand the four elements of social media logic (Van Dijck and Poell, 2013) – programmability, popularity, datafication and, importantly for this article, *connectivity* – they develop tactics to intervene in it.

Social media platforms are designed to foster connections, which are assumed to be desirable and valuable: 'Google+ is a place to connect with friends and family' claims Google+'s homepage, and Facebook implores people to sign up so they can 'connect with friends, family and other people you know'. Social media researchers like José Van Dijck (2013) have criticised the concept of connection, as within the ecosystem of connective platforms, these connections can be manipulated and exploited. Van Dijck (2013) argues that platforms code relationships and actions into algorithms, and deliberately blur the meaning of 'social' to stress human connectedness and downplay automated connectivity: 'Connections between people inform automated connections and vice versa'. (p. 157)

Some research focuses specifically on the tactics people use to disconnect. An example is Ben Light (2014) book *Disconnecting with Social Networking Sites*, in which he argues that people deliberately disengage with the connectivity of platforms through tactics such as untagging or unfriending. Elija Cassidy (2016) examines these disconnective tactics through the lens of participatory reluctance: begrudgingly using parts of social media when there aren't viable alternatives. Writing together, Light and Cassidy (2014) argue that disconnecting and participatory reluctance can be ways of

making someone's social media experience more engaging, beneficial or enjoyable. Disconnections are sometimes necessary to ensure continued participation and connection making. These disconnections can include not 'liking' business Facebook pages to avoid profiles being connected with Facebook's corporate imperatives, ignoring friend requests from colleagues, and keeping other social media accounts like Twitter or Spotify separate so as not to bombard friends with excessive posts. Light and Cassidy make the key point that disconnections can actually be ways of negotiating how best to engage with social media, rather than rejecting these platforms altogether.

Forced connections and their consequences

Algorithms can connect digital information in unintended, sometimes negative ways. Willson (2017) says automated reminders and recommendation systems can lead to 'unlikely or unintended relationships', and Taina Bucher (2016b) says a year in review feature on Facebook showing someone their most liked post and inadvertently reminding them of a death in the family is a 'cruel connection'.

Sometimes, algorithms cause harm when they fail to connect information in ways people find meaningful: 'Unstable negotiations, slippage, fragility, and a proneness to failure are in fact important features of algorithmic cultures' (Seyfert and Roberge, 2016: 26). The expectation that algorithms use all kinds of data about individuals to personalise their online experience can result in confusion or disappointment when people are shown content or advertisements that don't match their demographic or personal information: Bucher (2016b) reports seeing tweets that lament, 'I feel like the Facebook algorithm doesn't know me at all!' (p. 81) Profiles derived from algorithmic connections are not necessarily comprehensive or accurate – but this article is about what happens when algorithms *do* work.

Alexander Galloway and Eugene Thacker (2007) claim that people thrive on network interaction, yet the moments when the network logic takes over are disorienting and even threatening to the human ego. They claim that even though computer viruses are considered to be networks out of control, 'they are not networks that are somehow broken but *networks that work too well*' (Galloway and Thacker, 2007: 6, emphasis in original). The way algorithms can result in unintended negative consequences leads me to my own understanding of *forced connections*: algorithms exacerbating human actions in connecting otherwise disparate data points on digitally networked platforms to the subject's detriment. Even while networks are inextricably bound with sociality, non-human entities like algorithms are also essential to the way networks function (Galloway and Thacker, 2007). I theorise forced connections as a confluence of decisions and algorithms: the coming together of what Gillespie (2013) calls 'warm human choices' and 'cold mechanisms'. (p. 169)

Engagements with an algorithmic society can be compromised by forced connections, with outcomes as potentially serious as compromising politics. During the 2016 US election, misinformation generated by Russian troll and bot accounts on Twitter was retweeted, and therefore amplified, by people who advocated right-wing politics. The US Congress has since discovered thousands of these accounts, which displayed malicious intent to impact the political process (Badawy et al., 2018). According to a *New York Times* article, the way these tweets drew upon keywords, hashtags and trending algorithms increased the chances that they would be seen, and therefore connected with broader discourse on the election, which 'helped fuel a fire of anger and suspicion in a polarized country' (Shane, 2017: n.p.).

On a smaller – although no less harmful – scale, algorithms that drew connections between phone numbers, email addresses, location information and data-rich Facebook profiles recommended a psychiatrist's clients connect with each other through the People You May Know feature,

damaging doctor–patient confidentiality. The psychiatrist lived in a small town and had people being recommended to each other who didn't fit their age range or interests. One client showed her the recommendations and said, 'I don't know any of these people who showed up on my list – I'm guessing they see you'. Some of the psychiatrist's patients have HIV, have attempted suicide or are women in violent relationships (Hill, 2016). These forced connections may have come about because Facebook assumes phone numbers stored in smartphones indicate social relationships.

Another outcome of Facebook's People You May Know algorithm was technology writer Kashmir Hill (2017) finding a long-lost relative: her great aunt by marriage. The article she wrote about her experience was posted under the 'creepy' section of news site Gizmodo, and led Hill (2017) to ponder some of the other connections the algorithm makes:

> *Now, when I look at my friend recommendations, I'm unnerved not just by seeing the names of the people I know offline, but by all the seeming strangers on the list. How many of them are truly strangers, I wonder – and how many are connected to me in ways I'm unaware of?*

'Creepy' was a keyword that Taina Bucher (2016b) used when studying how people know and perceive algorithms by searching Twitter for the terms 'algorithm AND Facebook', or 'algorithm AND creepy'. Bucher (2016) found that plenty of experiences with recommendation systems and forced connections were construed as disturbing rather than helpful: 'Algorithms particularly reveal themselves in moments of disruption, surprise, and breakdown' (p. 91). The People You May Know algorithm, as well as other algorithms that curate social media content, isn't open to outside scrutiny, and Facebook hasn't explained the decisions behind the code. But is studying algorithmic code the best way to learn more about algorithmic cultures?

How algorithms are understood, and how they really work

Attempting to break open the black box of the algorithm and examine its inner workings seems like a place to begin when studying algorithmic cultures. But this is not easily done. The inner workings of algorithms are often deliberately opaque, as they are trade secrets for companies like Facebook, Google and Amazon (Seyfert and Roberge, 2016), or simply because they can be unavoidably complex (Hamilton et al., 2014). Helen Kennedy (2016) reminds us that access to data and algorithms, and the skills to comprehend and work with them, are uneven, leading to new divides in knowledge. Sometimes, not even the programmers who build the algorithms fully comprehend the decision-making process they have coded. In a TED Talk, sociologist Zeynep Tufekci (2017) gives the example of algorithms that are programmed to learn patterns from existing data and apply them to new people. When these algorithms learn to identify people who are likely to buy plane tickets to Las Vegas, they may eschew traditional marketing categories like young single males, and instead pinpoint those who are bipolar and about to enter their manic phase, as these people tend to become impulsive, over-spenders and gamblers.

Scholarship on algorithms that compares them with a 'black box' (Bucher, 2016a; Hamilton et al., 2014; Kennedy, 2016; Seyfert and Roberge, 2016) makes the point that, most of the time, we can only observe the inputs and outputs of algorithms, not how they process the data they receive through social media posts and activity. Rather than accepting that algorithms' opacity makes them an unknowable black box, Bucher (2016a) argues that there are many ways of knowing algorithms, if they are understood broadly. She claims to follow the lead of social media users to ask, when confronted with seemingly unknowable algorithms, 'What are our options?' Bucher is here addressing researchers of algorithms, and goes on to give advice when researching: do not fear the black box, do not expect the solution to be inside the black box, consider the way the box becomes black.

I focus instead on the social media users who do not allow the opacity of algorithms to stop them from developing tactics designed to address them.

While the proprietary algorithms of Facebook and Google are not open to me, and I do not have a working knowledge to explicate the code behind Reddit's open-source content sorting system, there are notable exceptions to algorithms remaining black boxes. Nick Seaver (2017) presents the example of the bubble sort algorithm to demonstrate that not every algorithm is difficult to understand. He explains it in a sentence-long footnote: 'Repeatedly step through a list, comparing adjacent items and swapping them if they are out of order, until nothing remains to be swapped' (Seaver, 2017: 10). But reading and understanding algorithms is usually a highly specialised skill, argues Dourish (2016).

Some algorithms order social media and news content, but this doesn't mean a platform like Reddit – on which people vote content up or down – automatically presents the most popular links on the Internet. Algorithms are programmed to make decisions in specific ways, and they can also be programmed to make omissions. In a post to the atheism subreddit by Reddit CEO Steve Huffman, going by his pseudonym spez, he explains why r/atheism is excluded from appearing on the Reddit homepage: because r/atheism is a subreddit that attracts arguments, generating a lot of activity and leading the algorithm to conclude the subreddit is popular. But Spez (2009) claims that not everything is appropriate for Reddit's homepage – he doesn't want new users being put off the platform when they are greeted with heated arguments. When algorithms are complex, owned by private companies, capable of machine learning and able to make exceptions to their own code, looking inside the black box may seem an impossible task. But three blog posts on Reddit algorithms by programmers provide valuable insights into the decisions that are important to how content becomes visible on this platform.

Amir Salihefendic (2015), Randall Munroe (2009) and Evan Miller (2009) are concerned with how platforms order content when people vote on it. Their focus is Reddit, but platforms like Twitter, Instagram and Facebook are increasingly sorting and displaying content, in part because of how many likes, responses and shares it has. Building on Munroe and Miller's posts, Salihefendic presents the 'best' algorithm, which sorts comments. People can order the content they see on Reddit chronologically, or by algorithms including one named 'hot', in which submission time has a big impact on ranking. As Salihefendic explains, the 'hot' algorithm weights early votes highly, while the 'best' algorithm treats the vote count as a potential hypothetical vote from every person on the platform – like an opinion poll – and does a better job of surfacing the best comments, not just those with early upvotes.

Bucher (2016b) emphasises the need for studies that delve into everyday experiences with algorithms. She notes that the affective dimensions of algorithms can't be found in the 'black box' of the algorithm's code, but rather in the stories people tell about their algorithmic encounters; getting behind the tweets instead of looking in the black box was more useful for Bucher's study of this emerging phenomenon. For this article, the way people understand algorithms and develop tactics to intervene in them is more important than unpacking how they actually work. Studying how user perceptions of algorithms lead to sense-making about them is a useful way forward (Hamilton et al., 2014).

Even when people don't have the level of understanding that a programmer does about the specific code of an algorithm, they still hold 'perceived knowledge' (Eslami et al., 2015), 'imaginary expectations' (Seyfert and Roberge, 2016), 'folk theories' (DeVito et al., 2017) and 'intuitive causal explanatory theories' (Rader and Gray, 2015) about how they work. A study by Motahhare Eslami et al. (2015) showed that if people noticed missing posts on Facebook from their friends and family, they were more likely to think they were deliberately being excluded by people in their life, rather than attributing this to an algorithm showing them content tailored to their demographics and preferences.

DeVito et al. (2017) looked at tweets about algorithms to better understand folk theories about how they work. Reactions to changes in algorithms reveal that people have particular expectations of platforms, and DeVito et al. (2017) recorded tweets identifying that a key part of Twitter was violated through the change from a chronologic to algorithmically curated timeline:

> *Just don't, @twitter. We like chronological tweets. And live tweeting. And TWITTER BEING TWITTER. Leave it alone. #RIPTwitter*
>
> *Showing tweets in order by most popular, LOL some tweets will never be seen. #RIPTwitter*
>
> *Only huge accounts will be in timelines. And advertisers. Just like Facebook. You'll see only what Twitter says you'll see. #RIPTwitter (tweets in p. 3167)*.

On Facebook, 73% of people feel they don't see every post their friends make (Rader and Gray, 2015). Usually, someone's explanatory theory for how Facebook's algorithm works is based on their personal experience of their news feed. From their survey of 505 Facebook users, Emilee Rader and Rebecca Gray (2015) found people speculated about the decisions that informed the algorithm curating their news feed. One respondent reported mostly seeing Facebook posts from the same people, which led them to conclude Facebook prioritised posts by close friends. Others noticed that posts with more likes and comments were more likely to feature at the top of their news feed. Rader and Gray argue that people who disliked missing posts from their friends would informally reverse-engineer the algorithm by attempting to create posts that garnered responses so they were more confident their posts would appear in the news feeds of others. This is this kind of reverse-engineering of algorithms in which I am interested, and I approach it through De Certeau's (1988 (1984)) notion of tactics.

Responses to automated and forced connections

Two examples of tactics to resist algorithmic and forced connections are Voldemorting and screenshotting.

Voldemorting

In the fantasy novel *Harry Potter and the Deathly Hallows* (Rowling, 2007), a magic spell is cast so anyone who mentions the name of the villain Voldemort becomes findable:

> *The name's been jinxed, Harry, that's how they track people! Using his name breaks protective enchantments, it causes some kind of magical disturbance … They've put a Taboo on it, anyone who says it is trackable.* (p. 316)

The spell functions much like an online keyword search: web pages containing particular words or phrases are returned when someone enters them into a search engine. Voldemorting has become a key tactic of making things invisible while discussing them online. In a podcast on boycotting 'trash celebrities' by deliberately not mentioning their names, a commenter formalises the term:

> *I think I have a great name for it: Voldemorting. Voldemorting: The act of never speaking the name of someone truly terrible. E.g. 'Don't bother sending me those links, I'm Voldemorting those losers!* (Eugene, in Turkington and Drury, 2013)

Eugene (2013) further explained in their own blog, disparaging reality television stars:

> *Attention is their lifeblood. By paying attention you're keeping them alive. So stop it. Stop it all. Don't talk about them, don't mention them in any way … It's as simple as that. I call this Voldemorting. Voldemorting is when you deprive someone terrible of power by refusing to speak their name. Have you noticed that in this entire blog post I've never mentioned any of the reality stars by name? That's me Voldemorting!*

On Urban Dictionary, Voldemort is a noun instead of a verb, specific to replacing the name of an ex-partner following a bad breakup: 'I saw Voldemort at the club last night and she was grinding on all these dudes' (HLAUSF, 2015). The term was even used by Australian Labor politician Tanya Plibersek, who claimed Prime Minister Malcolm Turnbull was making former Prime Minister Tony Abbott the 'Lord Voldemort' of the Liberal Party, 'because the Prime Minister doesn't dare speak his predecessor's name' (Baxendale, 2017). An article ran quoting Plibersek with a digitally edited photo of Abbott designed to look like Voldemort, with dark clouds in the background and slits for nostrils.

One drawback of choosing Voldemorting to study as an example of a tactic of invisibility is that the use of the tactic itself is difficult to find. Voldemorting was a common tactic within the Gamergate controversy: a backlash against women participating in video game culture (for detailed accounts of Gamergate, see (Kidd and Turner, 2016; Massanari, 2015; and Mortensen, 2016). Harassment coalesced around the Twitter hashtag #Gamergate so frequently that a tactic for thwarting the attackers was to avoid using the hashtag, instead using alternative terms such as Goobergate, Gatergate, GG or G@merg&te. Writing on the controversy, Dan Golding and Leena van Deventer (2016) warn their readers not to use the #Gamergate hashtag on social media: 'if you do, you'll immediately want to throw your laptop into the sea' (p. 4). Research on 316,669 tweets hashtagged #Gamergate showed the people using the hashtag were most often those aligned with the harassment movement, leading the researcher to claim this was probably because critics of Gamergate didn't use the hashtag in order to avoid being targeted (Baio, 2014). At the 2015 Canadian Game Studies Association conference, attendees were asked not to mention the term Gamergate or use the #Gamergate hashtag, even though many panels addressed the controversy. PhD candidate and attendee NatalieZed (2015a, 2015b) instead Voldemorted the hashtag by using #Deatheaters – a term for Voldemort's supporters, also from the Harry Potter novels – to refer to Gamergate harassers:

> *I'm not sure how to livetweet this next panel, as the very title contains terms we at #CGSA2015 have been asked not to use. #Voldepanel*

> *You know what, I'm just going to refer to gators as Deatheaters from now on, how about that.*

Voldemorting is a way that users demonstrate their understanding of how search algorithms function in what Carolin Gerlitz and Anne Helmond (2013) call the 'like economy': a rhetoric of connectivity that sits alongside an infrastructure in which sociality is datafied and commodified. When someone knows that their tweets, which are connected with their Twitter username, will be returned if someone searches for the #Gamergate hashtag, omitting the hashtag in favour of a disguised keyword avoids the potential harassment that can follow. While forced connections can lead to harm, Voldemorting is a tactic to hide in plain sight: people on Twitter using alternative terms for Gamergate can discuss the ongoing harassment campaign without attracting the ire of those seeking targets. Another tactic of strategic visibility is taking a screenshot of an article or website instead of linking to it, in an effort to make the content available without directing traffic to the original page.

Screenshotting

Every thread, or subreddit, on bulletin board Reddit is devoted to a specific topic. On TumblrInAction, the topic is mocking 'social justice warriors'. This is a pejorative term for people who publicly articulate themselves as feminists, and was often used in the mid-2000s on blog site Tumblr to refer to a broad pushback against social discrimination (Nakamura, 2016). TumblrInAction is aimed at an audience that tends to characterise feminists as professional victims who complain about being oppressed by made-up privileges, according to an information page about the subreddit (EvilFuckingSociopath and Suavignon_Arcenciel, 2018). For TumblrInAction (2018), screenshotting is an important tactic, because it deliberately surfaces particular content from feminist websites without giving the website the hits and clicks it turns into profit. The subreddit describes the tactic as follows:

> *Put simply, it's to avoid giving these clickbait shitholes traffic and ad revenue. These sites generate money for each visitor they receive, and often use sensationalist headlines or leads to generate traffic. This is called 'clickbaiting', and it's basically traffic-whoring, since an enticing title means more visits, and a quick paycheck. Some of these links can be a good source of social justice bullshit, so we're allowing them to be submitted as a screenshot or web archive, to prevent them from generating any more revenue from TiA traffic. Last thing we want is for them to be laughing all the way to the bank.*

Paul Frosh (2017) argues that the screenshot combines two communicative features of the modern document: *transparency*, as we attend to the post that contains the screenshot, not the screenshot itself; and *self-evidence*, as the presence of a screenshot needs no justification or explanation. Screenshots are also referred to as screen grabs or screen captures – all three terms reference the act of taking. On TumblrInAction, the screenshot is a way of taking content from its original context of advancing feminist discourse and appropriating it into an object of ridicule. Frosh's notion that the screenshot is self-evident also comes into play on TumblrInAction; the screenshots are mostly of text, and could easily be digitally altered, but they are understood as authentic representations of the original page. Especially within Reddit, a repository of links, screenshotting feminist articles rather than linking to them is a deliberate act of resistance that aims to thwart the connective algorithms that drive traffic, and therefore profit, to pages that this audience find politically odious.

Small acts of resistance function as a release valve, Mannell (2017) argues, which ultimately makes it tenable for people to stay within broader systems of technology. But as De Certeau (1988 (1984)) points out, a small act of resistance – like an employee deliberately wasting company time – is temporarily evading an imposed power structure rather than dismantling it. People who screenshot articles from feminist news sites to post on Reddit are attempting to deny these sites traffic, but another form of resistance would perhaps be not visiting these sites or paying them any attention at all. Engaging with what users do in relation to algorithmic cultures can tell us about the agency they have – even if this agency is modest in scale and not fundamentally disruptive (Kennedy, 2016).

Conclusion

By investigating tactics that intervene in algorithms and forced connections, this article has built on existing scholarship in the field of critical algorithm studies to argue that these tactics demonstrate a limited, yet considered, understanding of algorithmic cultures. As van Dijck and Poell (2013) argue, the social media logics that underpin algorithmic cultures are becoming enmeshed in all areas of public life. Although they do not fully determine the visibility of social media content,

algorithms have a role in curating what people see on platforms. Automated processes of calculating which content will be most relevant or valuable are based on data that platforms prefigure through their gathering mechanisms and deploy to connect individuals with other users, platforms, content and advertising. People operating within algorithmic cultures are operating algorithms (Seyfert and Roberge, 2016), and they often do so through tactics that deliberately seek to thwart the connections that platforms seek to make. These tactics evidence specific engagements with, and understandings of, algorithmically sorted social media content, and studying them allows us to better understand algorithmic culture. Voldemorting and screenshotting are tactics of disconnection: they are ways to remain part of social media by minimising the aspects that have the potential to cause harm, or help platforms that already profit from link traffic.

Future research in this area could further investigate user beliefs about algorithms and how they influence tactics of visibility within social media platforms: Voldemorting and screenshotting are two of a host of tactical interventions into the visibilities engendered by social media logics. These tactics may intervene in algorithmic culture in ways users do not anticipate. For example, screenshotting a post instead of linking to it avoids sending its platform traffic, which may be the desired outcome, but the tactic also avoids adding that link to the data profile that platforms like Google and Facebook are always attempting to build. Understanding techniques that resist visibility for other people and platforms within algorithmic culture means being more aware of the way these tactics drive data traces in important ways.

While Bucher (2016b) sees the black box of the algorithm as an epistemological challenge, I believe productive conversations about the decisions behind the automations that surface some content at the expense of others could be had, if more programmers and developers were willing to explain how these algorithms work. The blog posts by Salihefendic (2015), Munroe (2009) and Miller (2009) gesture towards the possibilities for public knowledge of the code behind algorithmic cultures; combined with studies on tactics, these could help make algorithmic cultures more transparent for those who operate within them.

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References

Badawy A, Ferrara E and Lerman K (2018) Analyzing the digital traces of political manipulation: the 2016 Russian interference Twitter campaign. In: *Proceedings of the web conference (WWW'18)*, Lyon, France, 12 February, pp. 1–8. New York: ACM Press.

Baio A (2014) 72 hours of #Gamergate. *The Message*, 28 October. Available at: https://medium.com/message/72-hours-of-gamergate-e00513f7cf5d (accessed 19 January 2018).

Baxendale R (2017) Abbott is Liberals' Lord Voldemort, Plibersek says. *The Australian*, 6 July. Available at: http://www.theaustralian.com.au/national-affairs/tony-abbotts-critiquing-helps-only-bill-shorten-says-one-time-ally-frydenberg/news-story/9e3cdde21ac3a6a1c3d5aec32fb26a52 (accessed 19 January 2018).

Beer D (2013) Algorithms: shaping tastes and manipulating the circulations of popular culture In: Beer D (ed.) *Popular Culture and New Media: The Politics of Circulation*. London: Palgrave, pp. 63–100.

Bucher T (2016a) Neither black nor box: ways of knowing algorithms. In: Kubitschko S and Kaun A (eds) *Innovative Methods in Media and Communication Research*. Cham: Springer, pp. 81–98.

Bucher T (2016b) The algorithmic imaginary: exploring the ordinary affects of Facebook algorithms. *Information, Communication & Society* 20(1): 30–44.

Cassidy E (2016) Social networking sites and participatory reluctance: a case study of Gaydar, user resistance and interface rejection. *New Media & Society* 18(11): 2613–2628.

Couldry N (2012) *Media, Society, World: Social Theory and Digital Media Practice*. Cambridge: Polity Press.

De Certeau M (1988 [1984]) *The Practice of Everyday Life* (trans. S Rendall). Berkeley, CA: University of California Press.

DeVito MA, Gergle D and Birnholtz J (2017) 'Algorithms ruin everything': #RIPTwitter, folk theories, and resistance to algorithmic change in social media. In: Proceedings of conference on human factors in computing systems, Denver, CO, 6–11 May, Pp: 3163–3174. New York: ACM Press.

Dourish P (2016) Algorithms and their others: algorithmic culture in context. *Big Data & Society*. Epub ahead of print 24 August. DOI: 10.1177/2053951716665128.

Eslami M, Rickman A, Vaccaro K, et al. (2015) 'I always assumed that I wasn't really that close to [her]': reasoning about invisible algorithms in news feeds. In: *Proceedings of human factors in computing systems conference*. Seoul, South Korea, 18–23 April, pp. 153–162. New York: ACM Press.

Eugene (2013) Intro to Voldemorting. *A Life in Juxtaposition*, 6 February. Available at: http://skepticmystic.blogspot.com.au/2013/02/into-to-voldemorting.html (accessed 14 January 2018).

EvilFuckingSociopath and Suavignon_Arcenciel (2018) The dictionary. *TumblrInAction*. Available at: https://www.reddit.com/r/TumblrInAction/wiki/dictionary (accessed 19 January 2018).

Frosh P (2017) Vital signs: screenshots, social media and existential delegation In: Digital existence II: precarious media life, Sigtuna, 30 October–1 November, pp. 16–19. Sigtuna: Sigtuna Foundation.

Galloway AR and Thacker E (2007) *The Exploit: A Theory of Networks*. Minneapolis, MN: University of Minnesota Press.

Gerlitz C and Helmond A (2013) The like economy: social buttons and the data-intensive web. *New Media & Society* 15(8): 1348–1365.

Gillespie T (2013) The relevance of algorithms. In: Gillespie T, Boczkowski PJ and Foot KA (eds) *Media Technologies: Essays on Communication, Materiality, and Society*. Cambridge, MA: The MIT Press, pp. 167–193.

Gillespie T and Seaver N (2016) Critical algorithm studies: a reading list. In: *Social media collective research Blog* 15 December. Available at: https://socialmediacollective.org/reading-lists/critical-algorithm-studies (accessed 16 January 2018).

Golding D (2013) Putting the player back in their place: spatial analysis from below. *Journal of Gaming & Virtual Worlds* 5(2): 117–130.

Golding D and van Deventer L (2016) *Game Changers: From Minecraft to Misogyny, the Fight for the Future of Videogames*. Melbourne, VIC, Australia: Affirm Press.

Hamilton K, Karahalios K, Sandvig C, et al. (2014) A path to understanding the effects of algorithm awareness. In: *Proceedings of human factors in computing systems conference*, Toronto, Ontario, Canada, 26 April–1 May, pp. 631–642. New York: ACM Press.

Hill K (2016) Facebook recommended that this psychiatrist's patients friend each other. *Fusion* 30 August. Available at: http://fusion.net/story/339018/facebook-psychiatrist-privacy-problems (accessed 4 September 2016).

Hill K (2017) Facebook figured out my family secrets, and it won't tell me how. *Gizmodo*, 26 August. Available at: https://www.gizmodo.com.au/2017/08/facebook-figured-out-my-family-secrets-and-it-wont-tell-me-how (accessed 14 January 2018).

HLAUSF (2015) Voldemort. *Urban Dictionary*, 17 February. Available at: https://www.urbandictionary.com/define.php?term=Voldemort (accessed 14 January 2018).

Kennedy H (2016) *Post, Mine, Repeat: Social Media Data Mining Becomes Ordinary*. London: Palgrave Macmillan.

Kidd D and Turner AJ (2016) The #GamerGate files: misogyny in the media. In: Novak A and El-Burki IJ (eds) *Defining Identity and the Changing Scope of Culture in the Digital Age*. Hershey, PA: IGI Global, pp: 117–138.

Light B (2014) *Disconnecting with Social Networking Sites*. Basingstoke: Palgrave Macmillan.
Light B and Cassidy E (2014) Strategies for the suspension and prevention of connection: rendering disconnection as socioeconomic lubricant with Facebook. *New Media & Society* 16(7): 1169–1184.
Mannell K (2017) Technology resistance and de Certeau: deceptive texting as a tactic of everyday life. *Platform: Journal of Media and Communication* 8(1): 40–55.
Massanari A (2015) #Gamergate and The Fappening: how Reddit's algorithm, governance, and culture support toxic technocultures. *New Media & Society* 19(3): 329–346.
Meese J, Kennedy J and van der Nagel E (2016) Regulation and social practice. *Continuum: Journal of Media and Cultural Studies* 30(2): 146–157.
Miller E (2009) How not to sort by average rating. *Evanmiller.org*, 6 February. Available at: http://www.evanmiller.org/how-not-to-sort-by-average-rating.html (accessed 18 January 2018).
Mortensen TE (2016) Anger, fear, and games: the long event of #GamerGate. *Games and Culture*. Epub ahead of print 13 April. DOI: 10.1177/1555412016640408.
Munroe R (2009) Reddit's new comment sorting system. In: Reddit blog, 15 October. Available at: http://blog.reddit.com/2009/10/reddits-new-comment-sorting-system.html (accessed 19 January 2018).
Nakamura L (2016) Putting our hearts into it: gaming's many social justice warriors and the quest for accessible games. In: Kafai YB, Richard GT and Tynes BM (eds) *Diversifying Barbie and Mortal Kombat: Intersectional Perspectives and Inclusive Designs in Gaming*. Pittsburgh, PA: ETC Press, pp. 35–47.
NatalieZed (2015a) #Voldepanel. *Twitter*, 4 June. Available at: https://twitter.com/NatalieZed/status/606103346311786496 (accessed 19 January 2018).
NatalieZed (2015b) Deatheaters. *Twitter*, 4 June. Available at: https://twitter.com/NatalieZed/status/606103604118884352 (accessed 19 January 2018).
Rader E and Gray R (2015) Understanding user beliefs about algorithmic curation in the Facebook news feed. In: *Proceedings of human factors in computing systems conference*, Seoul, South Korea, 18–23 April, pp. 173–182. New York: ACM Press.
Rowling JK (2007) *Harry Potter and the Deathly Hallows*. London: Bloomsbury Press.
Salihefendic A (2015) How Reddit ranking algorithms work. *Medium*, 8 December. Available at: https://medium.com/hacking-and-gonzo/how-reddit-ranking-algorithms-work-ef111e33d0d9 (accessed 16 June 2018).
Seaver N (2017) Algorithms as culture: some tactics for the ethnography of algorithmic systems. *Big Data & Society*. Epub ahead of print 9 November. DOI: 10.1177/2053951717738104.
Seyfert R and Roberge J (2016) What are algorithmic cultures? In: Seyfert R and Roberge J (eds) *Algorithmic Cultures: Essays on Meaning, Performance and New Technologies*. London: Routledge, pp. 13–35.
Shane S (2017) The fake Americans Russia created to influence the election. *The New York Times*, 7 September. Available at: https://www.nytimes.com/2017/09/07/us/politics/russia-facebook-twitter-election.html (accessed 8 April 2018).
spez (2009) An explanation of why the atheism reddit does not appear on the default front page. *Atheism*, 26 August. Available at: http://www.reddit.com/r/atheism/comments/9efxf/an_explanation_of_why_the_atheism_reddit_does_not (accessed 23 January 2018).
Striphas T (2015) Algorithmic culture. *European Journal of Cultural Studies* 18(4–5): 395–412.
Tufekci Z (2017) We're building a dystopia just to make people click on ads. *TED Talk*. Available at: https://www.ted.com/talks/zeynep_tufekci_we_re_building_a_dystopia_just_to_make_people_click_on_ads#t-443624 (accessed 19 January 2018).
TumblrInAction (2018) Post only screenshots or archives of these websites. *TumblrInAction*. Available at: https://www.reddit.com/r/TumblrInAction/wiki/ssonly (accessed 14 January 2018).
Turkington S and Drury S (2013) Dongtini – episode 78. *Dongtini*, 13 January. Available at: http://dongtini.com/2013/01/30/dongtini-episode-78 (accessed 14 January 2018).
Van Dijck J (2013) *The Culture of Connectivity: A Critical History of Social Media*. Oxford: Oxford University Press.
Van Dijck J and Poell T (2013) Understanding social media logic. *Media and Communication* 1: 2–14.
Willson M (2017) Algorithms (and the) everyday. *Information, Communication & Society* 20(1): 137–150.