



Playing the visibility game: How digital influencers and algorithms negotiate influence on Instagram

new media & society

1–19

© The Author(s) 2018

Article reuse guidelines:

sagepub.com/journals-permissions

DOI: 10.1177/1461444818815684

journals.sagepub.com/home/nms**Kelley Cotter** 

Michigan State University, USA

Abstract

Algorithms are said to affect social realities, often in unseen ways. This article explores conscious, instrumental interactions with algorithms, as a window into the complexities and extent of algorithmic power. Through a thematic analysis of online discussions among Instagram influencers, I observed that influencers' pursuit of influence resembles a game constructed around "rules" encoded in algorithms. Within the "visibility game," influencers' interpretations of Instagram's algorithmic architecture—and the "game" more broadly—act as a lens through which to view and mechanize the rules of the game. Illustrating this point, this article describes two prominent interpretations, which combine information influencers glean about Instagram's algorithms with preexisting discourses within influencer communities on authenticity and entrepreneurship. This article shows how directing inquiries toward the visibility game makes present the interdependency between users, algorithms, and platform owners and demonstrates how algorithms structure, but do not unilaterally determine user behavior.

Keywords

Algorithm, algorithmic power, brand cultures, digital influencers, Instagram, platform studies, social media

Introduction

In early 2016, Instagram announced that users' feeds would soon be "ordered to show the moments we believe you will care about the most" (Instagram, 2016). Although the sub-text of this announcement was that the company would be introducing algorithmic

Corresponding author:

Kelley Cotter, College of Communication Arts & Sciences, Department of Media & Information, Michigan State University, 404 Wilson Road, 409 East Lansing, MI 48824, USA.

Email: cotterk6@msu.edu

ranking to the platform's main feed, Instagram did not refer to algorithms explicitly. Like other platform owners, Instagram shares few details about the platform's algorithmic architecture or how it works. In general, algorithms function behind the scenes with many users unaware of their presence (Eslami et al., 2015; Rader et al., 2018). Even so, algorithms play an important role in structuring our online experiences (Beer, 2009; Bucher, 2012; Cheney-Lippold, 2011; Gillespie, 2014). In particular, algorithmic ranking determines who and what gains visibility on social media. By establishing the conditions by which social media users are seen, algorithms serve as disciplinary apparatuses that prescribe participatory norms (Bucher, 2012). Through observing the content and users that attain visibility, users discern the participatory norms that algorithms "reward" with visibility (Bucher, 2012). While there is a growing concern that algorithms exercise too much power in influencing social realities (Beer, 2009; Gillespie, 2014; Kitchin and Dodge, 2011), little research has addressed knowledge-building and interpretive processes surrounding algorithms as a window into the complexities and extent of algorithmic power. This study pursues this line of inquiry by exploring conscious, instrumental interactions between digital influencers and algorithms on Instagram.

Through a thematic analysis of online discussions among aspiring and established Instagram influencers, I observed that influencers' pursuit of influence on Instagram resembled a game constructed around rules embedded in algorithms that regulate visibility. While the media and scholars often describe certain pursuits of influence as "gaming the system," I suggest that influencers might be reframed as "playing the visibility game," which shifts focus from a narrative of a lone manipulator to one of an assemblage of actors. Within the *visibility game*, there is a limit to the extent that algorithms control behavior. Influencers' interpretations of Instagram's algorithmic architecture—and the visibility game more broadly—influence their interactions with the platform beyond the rules instantiated by its algorithms. To illustrate this point, I present two prominent interpretations among influencers of Instagram's algorithms and the game, which correspond to their conceptualizations of influence as either constructed through relationship building or the simulation thereof. Such interpretations combine information influencers glean about Instagram's algorithms with preexisting discourses within influencer communities on authenticity and entrepreneurship, and ultimately shape visibility tactics. Re-directing inquiries toward the visibility game, rather than narratives of individuals "gaming the system," makes present the interdependency between users, algorithms, and platform owners and demonstrates how algorithms structure, but do not unilaterally determine user behavior.

Digital influencers

Digital influencers are a type of *micro-celebrity* (Senft, 2008) who have accrued a large number of followers on social media and frequently use this social capital to gain access to financial resources (Abidin, 2015). Influencers have made it their business to understand the algorithms that govern visibility on social media as a means of growing their follower-base. Influencer marketing revolves around on the idea that influencers can impact their followers' beliefs and practices so long as they can captivate and maintain their attention (Hearn, 2010; Hearn and Schoenhoff, 2015). Such a focus on what

influencers *do* reflects the defining characteristics of who the influencers (supposedly *are*: ordinary individuals who achieve micro-celebrity through an entrepreneurial drive (Abidin, 2015; Duffy, 2017; Duffy and Hund, 2015).

In an era marked by brand cultures, “realness” has become a pervasive and animating force (Banet-Weiser, 2012), particularly among influencers, who cling tightly to an ideal of authenticity from which they derive strategic advantage (Abidin, 2015; Duffy, 2017). Through an impression of “realness,” influencers cultivate a sense of intimacy, accessibility, and relatability, which forms the basis of affective relationships with followers (Abidin, 2015; Duffy, 2017; Marwick, 2013, 2015). Asserting authenticity also allows influencers to distinguish themselves from other influencers by offering something relatively unique to their followers (Duffy, 2017). An air of authenticity also differentiates influencers from traditional media and celebrities, who often serve audiences carefully crafted fantasies that stand in stark contrast to lived experiences of “real” people (Duffy, 2017). Furthermore, whereas traditional celebrities tend to maintain distance from and build hierarchical relationships with their fans, influencers use their “realness” to create a sense of proximity to and parity with their followers (Abidin, 2015).

Given their self-presentation as ordinary individuals, influencers premise their accrual of influence on “entrepreneurial gumption” (Banet-Weiser, 2012). Like the authenticity ideal, contemporary brand culture fosters a pervasive logic of entrepreneurialism—the individualistic idea that “everyone is entrepreneurial” (Banet-Weiser, 2012: 217). The pervasiveness of entrepreneurialism also symptomizes the economic instability of the past decade and represents a shift in economic well-being as the responsibility of the individual, rather than a shared responsibility among companies and government (Hearn and Schoenhoff, 2015; Neff et al., 2014). This shift toward individual responsibility inspires a project of self-production and self-improvement that emphasizes ingenuity and hard work (Marwick, 2013). Social media plays an important role in the entrepreneurial ideal by seemingly offering a means of independently supporting and promoting oneself (Duffy and Hund, 2015; Marwick, 2013). Entrepreneurialism drives digital media industries and encourages the idea that anyone can succeed in this realm with a little bit of smarts, perseverance, and grit (Duffy and Hund, 2015; Marwick, 2013). In reality, influencers often achieve success by way of pre-existing social privilege (Banet-Weiser, 2012; Duffy, 2017).

Authenticity and entrepreneurship represent core tenets of self-branding, a commodification of the self as a means of participating in a culture increasingly defined by a commercial logic (Banet-Weiser, 2012; Hearn, 2008, 2010; Marwick, 2013). Visibility and self-branding share an intimate relationship in the realm of social media (Marwick, 2013). Self-branding demands feedback as individuals seek to construct an ideal self that is both authentic and entrepreneurial (Banet-Weiser, 2012). Social media provides a mechanism for such feedback through metrics of engagement (e.g. “likes,” comments, and followers), which also contribute to the degree of visibility one can earn on these platforms (Banet-Weiser, 2012; Hearn, 2010). Consequently, engagement both evidences and validates influencers’ social status and social capital in the so-called “attention economy” (Marwick, 2015). Engagement’s role in this configuration encourages influencers to orient themselves toward data-driven self-branding, which entails responding to and generating more feedback via engagement data (Carah, 2017).

Algorithmic power

As algorithms have become more sophisticated and ubiquitous, concern over the power vested in them has grown. Algorithms are computer programs that define a series of steps that involve operating on data to produce some outcome (Gillespie, 2014). Algorithms intervene in our daily practices and routines as we increasingly delegate tasks to them (Willson, 2017). As we shop, browse, watch, play, and interact online, we leave trails of data upon which algorithms act to make decisions on our behalf. These decisions rest on ontological processes of defining and categorizing the data resulting from our online activities. For example, visiting certain websites could be algorithmically “read” as a signal of a one’s gender (Cheney-Lippold, 2011). Once an algorithm has classified the user, the classification can be mobilized in decisions about which information or products to show the user.

The engineers who design algorithms are influenced by extant social, cultural, economic, and political forces (Just and Latzer, 2017). As Kitchin and Dodge (2011) explain, engineers “place a particular philosophical frame on the world that renders it amenable to the work of code and algorithms” (p. 247). In practice, this means that when engineers operationalize concepts like content users “care about the most” (Instagram, 2016) or “meaningful interactions” (Zuckerberg, 2018) through algorithms, they can impose certain valuations, meanings, and relationships to objects and actors with which we interact (Willson, 2017). Consequently, as algorithms reason, synthesize, and act on our behalf, they produce social relations (Kitchin and Dodge, 2011) and social realities (Cheney-Lippold, 2011).

From this context, Bucher (2012) uses a Foucauldian-inspired framework to argue that social media algorithms, and Facebook’s news feed ranking algorithm particularly, make assumptions about relevancy and newsworthiness that establish the conditions under which users are seen. Bucher (2012) argues that instead of establishing participatory subjectivity through constant surveillance, as Foucault suggested, establishing conditions for visibility via algorithms renders visibility a privilege: “something to aspire to, rather than feel threatened by” (p. 1174). Bucher (2012) elaborates by stating, “[the] possibility of constantly disappearing, of not being considered important enough”—the *threat of invisibility*—disciplines influencers into normalizing their behavior or risk becoming invisible (p. 1171). As such, algorithms serve as disciplinary apparatuses that prescribe desirable forms of participation on social media (Bucher, 2012).

The threat of invisibility becomes more formidable when platform owners obscure or withhold information about what their algorithms do, how they do it, and why. Platform owners, like Instagram, engage in “visibility management” (Flyverbom, 2016: 112) in which they strategically make certain information about their algorithms visible (or invisible) to certain actors. Previous discussions of algorithmic power have called attention to the hazards of limited visibility into systems (Beer, 2009; Gillespie, 2014). Such discussions often downplay user agency by foregrounding the information asymmetry between system proprietors and users, which leads to a *technological unconscious* that invisibly wields power over everyday life (Beer, 2009). Bucher (2017) additionally theorizes that algorithmic opacity contributes to an *algorithmic imaginary* constructed experientially via how users think, talk, and feel about algorithms. Still, it is not clear how those who actively pursue understanding of algorithms for instrumental use of social

media confront algorithmic power. Such information pursuits likely contribute to the algorithmic imaginary and impact the ways users direct their interactions with algorithms (Bucher, 2017; Van der Nagel, 2018). Indeed, previous research has documented how users use their understanding of algorithms to minimize the visibility of certain content (Van der Nagel, 2018). Yet, though those who consciously interact with algorithms know their behavior is subject to “a court of *algorithmic* appeal” (Hallinan and Striphas, 2016: 129), it is not certain that they rigidly abide by algorithmically forged disciplinary norms in a vacuum. The next section offers a lens through which to examine the extent of algorithmic power, specifically focusing on how influencers consciously respond to the algorithmically derived threat of invisibility.

“Gaming the system” versus “playing the visibility game”

The media and scholars often refer to tactics influencers use to gain visibility as “gaming the system” (e.g. Brown, 2018; Gillespie, 2014; Marwick and Lewis, 2017). Information technology companies have long pointed to threats of users “gaming the system” as rationales for concealing their systems (Pasquale, 2015). In this context, “gaming the system” refers to users acting on knowledge about an algorithmic system to effect certain outcomes. “Gaming” is said to undermine the integrity of a system’s outcomes since algorithms make sense of user behavior based on underlying assumptions about how users will behave and what that behavior signifies (De Laat, 2017). If usage of a platform deviates from what engineers envisioned, the resulting data may not be meaningfully interpreted by algorithms.

The dominant narrative inscribed in the rhetoric of “gaming the system” depicts a reductive view of the dynamic between influencers, algorithms, and platform owners. The narrative suggests that engineers and platform owners determine how a platform will be used and users are mere automatons. The “gaming” narrative implies that knowledge of a system reveals a blueprint that, when followed, guarantees certain outcomes. In actuality, users use platforms as prescribed by the engineers’ design, but usage may also diverge from that which engineers intended (Van der Nagel, 2018; Van Dijck, 2013). The tension between these different usages “embodies part of a negotiation process between platform owners and users to control the conditions for information exchange” (Van Dijck, 2013: 34). The “gaming” narrative focuses too narrowly on “gamers,” rather than considering the assemblage of actors—users, algorithms, and platform owners—who all play a role in how users use a platform (Van Dijck, 2013). Platform owners’ responsibility for the technical constraints on platform use typically does not factor into mainstream discussions of “gaming.” Instead, “the system” is often depicted as if independent of its proprietor, which facilitates the positioning of platform owners as neutral parties not liable for problematic platform use (Gillespie, 2010). The “gaming” narrative lends justification to platform owners for maintaining secrecy of their algorithms and the power therein to scrutinize “gamers” while avoiding scrutiny themselves (Pasquale, 2015).

I suggest that the behavior on social media referred to as “gaming the system” can be reframed as “playing the visibility game.” Rather than implicating lone “bad actors”—corporate, technical, or human—in a vacuum, “playing the game” directs attention to

the interplay between actors that acknowledges each actor's individual role. "Playing the game" captures disciplinary normalization via algorithms that treats visibility as a reward (Bucher, 2012), but also asserts influencers' role in directing and making sense of their own behavior through interpretations of the game. Although I focus primarily on the roles of influencers and Instagram's algorithmic architecture within the game, Instagram looms large in the analysis, taking the role of "game master" by establishing the rules of the game inscribed in algorithms. "Playing the game" acknowledges platform owners' sole authority to define the technical specifications of a platform and delimit how the platform may be used in accordance with the affordances of those specifications (Andrejevic, 2014; Burgess and Green, 2008; Hearn, 2010; Hearn and Schoenhoff, 2015).

Galloway's (2006) vision of video games as objects of algorithmic culture serves as a guiding analogy for the visibility game: "To play the game means to play the code of the game. To win means to know the system. And thus to *interpret* a game means to interpret its algorithm" (pp. 90–91). The game materializes around influencers learning the rules of the game, which shift as algorithms are iteratively updated. Influencers actively discuss what they learn and develop tactics for winning the game. Although, as in game play, influencers do not all agree on the merits of different tactics. As influencers build knowledge about Instagram's algorithmic architecture, they interpret it—and the game more broadly—in line with preexisting ideas about what it means to be an influencer.

The visibility game follows a long-standing tradition in social theory to illustrate the structures that parameterize behavior via analogies of game (Geertz, 1980). The visibility game echoes these analogies, particularly Bourdieu's analogy of a "game of culture" in his field theory (Bourdieu, 1996). The visibility game inherits many features of Bourdieu's ideas, namely the process of acclimation to rules and strategies within a field, the corresponding goal of accumulating various forms of capital, and an understanding of behavior as resulting from an interrelationship between structure, *habitus*, and strategy. Yet, unlike Bourdieu's use of rules, or *doxa*, the rules underlying the visibility game are made somewhat explicit and material in the form of computer code and official policies. Although influencers do not have access to complete "rulebook," their participation in the visibility game entails a conscious engagement with the rules, which permits interpretation of them. In foregrounding the role of algorithms as structural elements, this article refutes deterministic views of algorithms directly causing behavior. Rather than serving as a blueprint that influencers must rigidly follow to succeed—as "gaming" narratives would suggest—algorithms impose a larger structure that influencers interpret to instrumentalize the rules inscribed therein.

Methodology

To explore influencers' conscious interactions with Instagram's algorithmic architecture, I conducted a thematic analysis of online communications among influencers about Instagram's algorithms. The study focused on Instagram specifically since influencers have indicated a preference for this platform (Sharma, 2017). To locate communications, I began by performing keyword searches on Facebook to identify groups designed for aspiring and established influencers. Facebook groups provide a facile and familiar

venue for discussions, thus, the platform has fostered an active community of influencers. The keywords searched include phrases like, “digital influencer,” “Instagram influencer,” and “Instagram.” These searches yielded several Facebook groups, all of which were “closed.” While the names of a closed Facebook group and its members are visible to any Facebook user, the content group members share is only visible to other members. In addition, users must request to join these groups. Members of these groups ranged from those with a few hundred Instagram followers to those with a few hundred thousand followers. As such, while my study population consists of aspiring and established influencers, for simplicity’s sake, I refer to them collectively as “influencers.”

From these Facebook groups, I used snowball sampling to “follow” my object of study across the Internet (Caliandro and Gandini, 2017). Occasionally, those within the Facebook groups shared articles written by influencers, marketing “gurus,” or third-party companies who create Instagram-related tools, which provided additional data, including remarks left in comments sections. In other cases, members of the groups simply referenced third-party companies and/or tools and general terms that I followed up on by performing keyword searches on Google. While I drew on materials produced by third-party companies and other actors involved in the digital marketing ecology for context, my analyses focused on influencers’ reflections firsthand. As I observed influencers’ discussions, I wrote field notes and collected anonymized direct-quotes from subjects. Data collection took place between September 2017 through January 2018. Upon reaching saturation, I performed multiple rounds of open coding on my data and field notes.

In online environments, concerns for public/private content, perceived privacy, sensitivity of material, and vulnerability of users should collectively and contextually inform ethical decision-making (Markham and Buchanan, 2012; Whiteman, 2012). In terms of visibility and openness, the Facebook groups I observed required users to request to join, which closes them off from public view. While the groups were not “explicitly” public (Whiteman, 2012), some of the groups were advertised on public webpages and most of the groups had several thousand—or tens of thousands of—members. Thus, group members could “reasonably expect to be observed by strangers” (Townsend and Wallace, 2016: 8). Nevertheless, to protect the privacy of those I observed, direct quotes from public forums and closed Facebook groups have been slightly altered. The exceptions to this are quotes from influencers’ public blog posts and YouTube videos, which have “publicity expectations” (Richterich, 2018: 10) and, thus, are quoted verbatim and cited.

Rules of the game

Instagram, like other platform owners, defines appropriate user behavior and consequences for noncompliance through its Terms of Use and Community Guidelines. These documents serve as regulatory devices or the articulation of platform “rules” that Instagram encodes into and enforces with algorithms (Van Dijck, 2013). To enforce these rules, algorithms can be conceived of as instruments of governance that urge behavioral norms (Just and Latzer, 2017). Platform owners hold a significant degree of power in establishing the institutional conditions of influencers’ labor within platforms (Burgess and Green, 2008; Hearn, 2010; Hearn and Schoenhoff, 2015; Van Dijck, 2013). Indeed,

by establishing certain forms of participation on platforms as more desirable than others (Bucher, 2012), platform owners enact the rules of the game.

Influencers are aware of the regulatory role of Instagram's policies and frequently explicitly refer to "rules" and/or the documents. They also gesture to the sovereignty of Instagram and its algorithmic architecture, characterizing them with language reminiscent of government authorities or law enforcement. For example, one user wrote, "An algorithm decides the 'punishment' for those 'found guilty' (by the algorithm) of violating the Community Guidelines." Other influencers describe Instagram as "actively tracking" certain behaviors, "doing a sweep," or "cleaning up their platform," as well as "cracking down on" or "coming down hard" on certain behaviors. In line with such language, influencers also describe meta-strategies for evading algorithms as they engage in strategies they believe Instagram might not like, though are not explicitly forbidden. Their sense of being monitored and governed by Instagram and its algorithms also extends to the production of content. For example, one influencer lamented algorithmic ranking on Instagram, envisioning a return to a chronological feed and wrote, "It would be about creating cool and interesting content again, as opposed to the same 5 unoriginal images you routinely see now because we're all so afraid of no longer being relevant and doing something the algorithm doesn't like." As evident in this quote, some influencers believe that the transition to an algorithmic platform has bred banality by rewarding conformity.

Reactions expressing distaste for Instagram's algorithms reveal a common anxiety among influencers of being at the mercy of Instagram and its algorithms—a sentiment that reflects a sense of vulnerability and powerlessness to which others have previously alluded (Andrejevic, 2014). While influencers have some latitude in the tactics they deploy to gain visibility, they must still play the game by working within the bounds of algorithmically enforced rules. Exemplifying this reading of the rules, one influencer wrote, "you need to have the attitude of if you can't beat 'em you might as well join 'em ... It sucks, but we can't change it, so you gotta just adapt or get left behind." While influencers view their visibility tactics as governed by the rules, the following sections will demonstrate how their interpretations of algorithms and the game intervene in their instrumentalization of the rules. Thus, as regulatory devices, algorithms parameterize rather than determine behavior.

Learning how to play

Influencers emphasize the importance of gathering information about how algorithms function to learn the rules of the game. They view this knowledge gathering process as part of being an influencer and often refer to it as "research." "Research" includes reading the blogs of third-party companies and marketing gurus, learning from each other through discussion, and gathering and assessing empirical evidence. The kind of information that influencers seek generally falls into two different categories: information to support visibility engineering and information related to boundary conditions for acceptable behavior. For example, information to support visibility may include topics like which hashtags to use, what time to post, and how best to increase engagement. Information related to acceptable behavior includes topics like what kind of actions are

algorithmically interpreted as “spammy” or which tools comply with Instagram’s Terms of Use.

Given the limited information Instagram provides about its algorithms, many influencers express skepticism toward claims made about the algorithms. Influencers often question the merit of information disclosed by others, demanding “factual” and “incontrovertible” “evidence.” Within these discussions, some influencers recognize that Instagram obscures information about its algorithms and updates them constantly, which makes it difficult to “prove” various claims. One influencer wrote,

I’m wondering ... Everyone always talks about the algorithm, but does anyone here actually work for Instagram, and know whether these things are facts? Or do people just repeat what they’ve heard other people say, and it’s all just a myth?

Such skepticism is perhaps what gives rise to what influencers call “A/B” or “beta” tests, mimicking the parlance of Silicon Valley. These tests generally consist of trying two different strategies and comparing results, or gathering and analyzing data about one’s Instagram account to identify what works best in context. As one influencer wrote, “since Instagram doesn’t disclose all the specific details for their algorithm, it’s up to users to A/B test what works.” Similarly, another influencer stated that it was part of their job as influencers to “experiment with and decipher the algorithm.” In some cases, influencers’ discussion of testing adopts scientific jargon with discussion referring to “testing and re-testing” and “trial and error.” One influencer described a “year-long analytics study on the Instagram algorithm” (Americanya Mel, 2017). Such a statement demonstrates influencers’ commitment to unearthing reliable insights.

Through information exchanges and empirical testing, influencers identify factors they view as increasing visibility—primarily, increased engagement and followers—and those decreasing visibility—primarily, stagnation, and bans. Most frequently, “engagement” is used as shorthand for “liking” and commenting on posts. Social media companies orient algorithmic ranking toward increasing engagement (Carah, 2017) both because it generates valuable insight about users that Instagram can sell to marketers (Hallinan and Striphos, 2016; Hearn, 2010) and Instagram uses it as a proxy measure of user satisfaction (Dimson, 2017). Perhaps for this reason, many of the rules influencers identify prioritize engagement and discourage behaviors that would threaten the fidelity of engagement data. In this way, the rules urge influencers to “attune themselves to [the] decision-making logic” (Carah, 2017: 397) of algorithms. For their part, influencers view engagement both as a measure of their own success and a means of increasing visibility. This leads to the mantra expressed succinctly by one influencer: “engagement comes from engagement.” In other words, engagement is the means to an end, as well as the end itself.

The number of Instagram followers one has is used as an estimate of visibility, with influencers prioritizing a ratio of engagement to followers for gauging their exposure. One influencer summarized how this perspective is operationalized: “in order to maximize visibility, you need to get as many of your followers to regularly engage with your posts as you can.” Influencers also identified a cyclical relationship between engagement and follower counts. Instagram’s algorithms reward engagement with exposure, which

increases the chances of being seen and, thus, gaining followers; gaining followers, in turn, leads to broader exposure, which increases possible sources of engagement. In short, influencers interpret success as consistently increasing both engagement and follower counts, and particularly the ratio of the two. Conversely, influencers interpret stagnating engagement and follower counts as losing the game.

The sanctioning of behaviors by Instagram delineates further rules that limit the range of acceptable growth strategies. For example, influencers have reported being “banned” or “shadowbanned” by Instagram’s algorithms after leaving too many comments or “likes” in too short a period. “Banning” refers to disabling accounts; “shadowbanning” refers to the (perceived) suppression of one’s post(s), such that a user becomes virtually invisible to others. Although influencers are divided on whether shadowbans truly exist or certain users are simply underperforming, fears of sanctions have material impacts on influencers’ strategies. For example, one commonly repeated strategy for avoiding a shadowban is diversifying hashtags rather than copying and pasting the same hashtags for every post.

Together, these processes of learning the rules of the game demonstrate that it is not enough for influencers to know that Instagram uses algorithms; influencers feel obliged to understand how the algorithms work. Essentially, they need to learn the rules of the game to “win.” Moreover, the emphasis on rigorous research, empirical evidence, and credible information reveals a perception of Instagram’s algorithmic architecture as both powerful and mysterious. This is reflected in one influencer’s critical analogy that influencers seem to be “kneeling in worship of the algorithm.” Influencers appear to grant the algorithms omnipotence by nature of their role in regulating visibility, and they cope with perceived powerlessness by attempting to understand the logic of Instagram’s algorithms—in other words, learning the rules of the game.

Playing the game

Influencers converge on the belief that they must play the game to attain influence—that influence is the goal of the game. They also seem to agree that the rules demand focusing on high engagement and follower counts as both generators and indicators of influence. Yet, learning the rules does not lead to a uniformity of adopted tactics. Instead, influencers’ discussion of different tactics often leads to heated debate in which interpretations of Instagram’s algorithms and the game act as a lens through which to view and mechanize the rules. This is most obvious in the way discussion surrounding two prominent interpretations resembles a familiar negotiation of the authenticity and entrepreneurial ideals among influencers (Abidin, 2015; Duffy, 2017; Marwick, 2013). The first interpretation is that Instagram’s algorithms can accurately detect strategies that circumvent true connectivity, and, as such, influencers should focus on developing “real” relationships. The second interpretation is that “real” relationships are easily simulated in algorithmically undetectable ways, with certain tactics signaling popularity to the algorithms even in the absence of abundant strong ties. A preoccupation with authenticity and entrepreneurial logics suggests that influencers are reacting to Instagram’s algorithmic architecture, at least in part, by organizing tactics around preexisting discourses. While algorithms determine the viability of tactics, they do not determine which tactics influencers will adopt.

Instead, influencers' broader sense of what it means to be an influencer drives strategizing at this more granular level. In the next sections, I will describe *relational* and *simulation* tactics and demonstrate their connection to discourses on authenticity and entrepreneurship, respectively.

Relational influence

Relational influence entails broad, yet intimate, social relationships and expertise. Relational methods focus on personally engaging with followers and potential followers. Relational influencers believe in the "social" element of social media, which they maintain necessitates "real" or "human" relationships. Supporting this perspective, many relational influencers echo statements like the following: "Influencers will be rewarded by the algorithm if they can build close, human relationships with their followers" (Guthrie, 2016). Similarly, another influencer wrote, "I've been doing some research and testing and thinking in the last few weeks and this is the conclusion I've come to about the new algorithm: Instagram just wants us all to act like human beings" (Chris Loves Julia, 2018). In this way, relational influencers believe that Instagram's algorithms can accurately detect depth of relationships and, thus, influencers must seek *authentic* connectivity. They primarily advise active and open communication with current and potential followers through tactics like consistently replying to comments and proactively leaving comments on posts within one's niche. These tactics, they argue, encourages current and potential followers to feel more connected to them because it communicates that they are listening.

Relational influencers also emphasize creating "good" original content that will resonate with other users. Many relational influencers pride themselves on their creativity and use Instagram as a creative outlet and a means of connecting with other aesthetically-minded individuals. When relational influencers witness others succeeding with mediocre content, they often express indignation and frustration, for example, "I saw people with generic photos and boring captions get 800 likes and 300 + comments on every single post, a ratio that doesn't add up" (McPhillips, 2017). By contrast, relational influencers believe that good original content leads to engagement by "providing value" to followers. In response to a request for tips on growing an account, one influencer wrote, "When posting I always make sure I ask myself 'what am I giving back to my followers'—It has been a successful strategy for me in the past." As such, relational influencers emphasize a primary principle of authentic reciprocal relationships.

Relational influencers often position themselves in contrast to simulation influencers, whose methods they view as disingenuous, dishonest, and selfish. This positioning aligns with the idealization of authenticity within influencer communities. As one influencer argued on her blog, the simulation approach "reflects your intentions to only gain a number, not a friend or colleague or collaboration partner" (Telban, 2017). Another influencer wrote that using simulation tactics encourage influencers "to not be their authentic selves in their online presence. It's like everyone's trying to follow a one-size-fits-all recipe but don't realize that different ingredients result in different outcomes."

Relational influencers also labeled simulation methods unethical and even illegal. One influencer explained that those who use simulation methods defraud the brands they

work with because their followers and engagement are “fake”: “The second a brand sends you a product, takes you on a trip, or pays you for posts ... you’re essentially committing a crime” (Morello, 2017). Above all, relational influencers believe that focusing on relationship building results in a greater return on investment than simulation methods. They view the approach as more productive because they believe it prioritizes quality over quantity—that is, the depth of relationships with followers over the number of followers and engagement. Thus, they assert that the best way to be algorithmically perceived as having authentic connections is to simply build authentic connections.

Simulated influence

Simulation influencers argue that high degrees of visibility can be achieved by seeking engagement and followers beyond or without efforts to build authentic relationships. Simulators prioritize metrics over intimacy, treating comments, “likes,” and shares as “social currency” (Marwick, 2015). Similar to hackers, simulators identify possibilities based on their understanding of the logics of the underlying code (Galloway, 2004). Simulation tactics also resemble “cheesing” in the gaming world, or “tricks that exploit strategic technical possibilities” (Moeller et al., 2009: n.p.) of a system not envisioned or explicitly forbidden by game designers. In discussing the simulation approach, simulators echo the entrepreneurial ideal, emphasizing innovation, the ability to problem solve, independent achievement, and accumulating capital.

Many influencers acknowledge that the easiest way to simulate connectivity is through using automation services, or “bots,” to engage with posts or follow accounts. While social media bots have received recent media attention (e.g. Confessore, 2018), many influencers I observed—even within the simulation perspective—had misgivings about them. These influencers acknowledged that Instagram forbids the use of bots in their Terms of Use and has subsequently banned many automated services and users who employ them. Influencers intimated that the use of bots was previously a more viable tactic, but Instagram had caught on and began “punishing” those who used bots. This led to what one influencer referred to as “The End of the Bot Era” (Decaillet, 2017). Thus, while simulation influencers were aware of this tactic and its utility, few enthusiastically recommended reliance on it.

Following the crack down on bots, influencers devised new tactics to boost engagement in ways that “looks legit” (to algorithms), as one influencer put it (Melotti, 2017). A popular method is the use of reciprocal engagement groups known as “pods.” Pods are private group messages where influencers assemble to share newly published posts so others in the pod can “like” or comment on them. Pods depend upon reciprocity: members are expected to engage with others’ posts before sharing their own with the group. As one influencer described it, the purpose of pods “is to accelerate the rate of engagement and growth of an account by going viral.” That is, influencers use pods to seed engagement, thereby increasing the odds that followers and others will see the post.

Most often, pods are comprised of strangers, although strangers may become friends or collaborators as time goes on (Melotti, 2017). Some pods begin with groups of friends and expand as network connections are added. Pods commonly have highly specific rules for participation. These rules not only help ensure the efficiency of pods, but also

reflect influencers' understanding of Instagram's algorithms. For example, pod rules often define the number of words that must be used in a comment so that comments appear "real" to algorithms. Indeed, much of the simulation approach revolves around devoting energy to designing inventive means of simulating connectivity. Speaking to this point, one influencer posted, "After lots of trial and error and many bans under multiple accounts, I've discovered the threshold between getting flagged and going viral by using pods."

Another prominent simulation method is to follow users to encourage reciprocal following, and then to unfollow those who did not follow back or who did not actively engage with one's account. This tactic, known as follow/unfollow (F/UF), relies on a transactional logic in which simulators follow others to get something in return (i.e. engagement or a follow-back). Strategic unfollowing helps maintain a high ratio of followers to following, which connotes status (Moss, 2014), and which influencers believe Instagram's algorithms considers when regulating visibility. By strategically unfollowing, simulators keep the number of accounts they follow low and composed only of users of potential value (e.g. active users, users with similar interests, and "smaller" accounts). As one influencer wrote after "cleaning" their account with strategic unfollows: "Now my number of followers is greater than my number of following and it's awesome! More people are seeing my posts and these are people I want and need to see my stuff." As this influencer also implies, F/UF requires soft market research to determine which connections will provide the greatest value.

With simulation tactics, entrepreneurial gumption is a driving force. Simulators do not negate the value of relationship building; they merely have different priorities. Simulators rationalized their tactics by pointing to the need to remain competitive, as well as conversant with the rules: "pods resulted from Instagram slashing the engagement people are used to seeing. Users have to 'pod-up' to get their engagement rates up and it isn't (to my knowledge) against any IG ToS ... yet." Of F/UF, another influencer wrote,

Just because people have strong opinions about how the algorithm SHOULD work doesn't mean it will change which methods work and which don't according to how IG coded their algo. People who say unfollowing ghost followers is bad for you have a superficial understanding of the algo.

In the same vein, another influencer pointed out that the game demands a significant time commitment and defended pods by comparing them to hiring a nanny: "You get an extra pair of hands to help you out. I don't have time (nor should anyone) to spend half my day on Instagram." With these views, simulators underscore to the importance of generating engagement as a visible form of social currency, a means of documenting one's status and success. Simulators also valorize the resourcefulness and industriousness of discovering the most efficient, compliant tactics. In doing so, they affirm individualistic narratives of personal prowess and taking the initiative to augment their influence on their own. Even with pods, where reciprocity is key, cooperation often resembled a business agreement, rather than friendly support. In short, decisions to adopt simulation tactics appear to be motivated by the entrepreneurial imperative of nurturing one's own financial or professional success.

Discussion

Algorithms are said to affect social realities (Beer, 2009; Bucher, 2017; Gillespie, 2014). Yet, much of the discussion surrounding this point neglects the role of individuals' knowledge of algorithms and the ways *conscious* interaction with algorithms might moderate their capacity to determine behavior. I observed that influencers are acutely aware of algorithmic power and pursue visibility as if playing a game: by learning the rules established by platform owners and articulated by algorithms, and formulating tactics accordingly. Influencers do not violate the rules; rather, they play by the rules, recognizing this as the only means of succeeding in the game. As such, the game evidences platform owners' control over the technical structure underpinning pursuits of influence. Still, knowing the rules of the game does not mandate strategy; instead, it informs influencers' decisions in how best to instrumentalize the rules. While influencers may instrumentalize the rules in ways that seem to conflict with the interests of platforms owners, this does not necessarily mean they violate the rules. In other words, influencers play by the rules, but not always by the spirit of the rules.

In this article, I have provided new insight into how influencers and algorithms negotiate conceptualizations and pursuits of digital influence. The centrality of preexisting discourses on authenticity and entrepreneurship in influencers' interpretations of algorithms and the game suggests that culture shapes behavior as much as code. While the influencers I observed recognized that visibility depends upon generating engagement and followers, they diverged in their approaches to accomplishing this feat. Relational influencers believed that Instagram's algorithmic architecture can accurately discern "authentic" connectivity, and viewed authenticity as foundational to influence. These influencers prioritized proactive, personal interaction with current and potential followers. Simulation influencers believed that Instagram's algorithms could not effectively discern authentic connectivity and viewed influence as built, at least in part, on boosting algorithmically recognizable signals of popularity. These influencers characterized their tactics by targeting status markers and emphasizing individualistic narratives of ingenuity and personal prowess. Through divergent interpretations of Instagram's algorithms, this article demonstrates how knowledge of algorithms provides a space in which external motivations and choices affect platform behavior beyond algorithmic directives. At the same time, as external motivations and choices reenact discursive ideals, these ideals may be further reinforced through the feedback loop of Instagram's algorithmic architecture (Carah and Shaul, 2016).

The analogy of "playing the visibility game" has an empirical basis, but also holds analytical power in schematizing the relations underpinning pursuits of visibility in social media. "Playing the game" acknowledges the mutual influence of users, algorithms, and platform owners in shaping platform use. In doing so, the analogy recognizes all actors' roles in the outcomes that arise from platforms. It holds platform owners accountable for controlling the rules of the game and acknowledges algorithms' role in articulating and enforcing them. Yet, it also highlights users' role in identifying possibilities within the regulatory structure. Thus, it reorients conversations from a narrow focus on lone "bad actors"—human, technical, or corporate—to the game more broadly via a series of questions. In this article, I have focused primarily on questions pertaining to

algorithms' and influencers' roles in the game, such as, what are the rules? How are they operationalized via algorithms? How do players learn the rules? How do players develop strategies for winning? However, platform owners' role in the game provokes other important questions that future studies could address: How are the rules produced and reactively revised over time? How, and under what circumstances, are the rules communicated? What and whose interests do the rules serve? I suggest that both sets of questions may lead to more productive discussions of and responses to the perennial crises that emerge from this system of actors—for example, media manipulation (e.g. Marwick and Lewis, 2017) or harmful or unethical business practices (e.g. Cadwalladr and Graham-Harrison, 2018; Warzel, 2014). Beyond influencers, algorithms, and platform owners, the game appears to be impacted by the broader marketing industry, particularly third-party companies that provide tools, services, and technical and marketing insight to influencers. While influencers often referenced specific apps or services they used, the extent of third-party actors' impact on the game remains an open question. Future studies might further illuminate dynamics of the game by examining such actors and their software applications, services, and gray literature.

From a broader perspective, the visibility game has implications for work on digital inequalities by bringing into focus “winners” and “losers.” Generally, “veteran” influencers view the game as the harbinger of a paradigm shift related to who can be an influencer. They view the platform prior to its algorithmic transition as an arena of equal opportunity in which anyone could build their influence from the ground up. By contrast, they view the post-algorithmic-ranking platform as a plutocracy in which a series of veiled and ever-shifting rules demand more time, energy, and money that not everyone can afford. One influencer lucidly summarized this point:

The new Instagram algorithm reminds me of the Republican tax reform plan. It benefits the uber-rich (those with upwards of hundreds of thousands of followers) and chokes out civilian users such as indie bloggers, casual dabblers in social media, and basically anyone without a bulletproof PR team (and budget) in place. It's also not unlike net neutrality, in that it's created this ladder of pay-to-play chaos in which an account that wants visibility has to play the game and pay up or risk getting buried in the fray of Instagram's hundreds of millions of accounts. (Certo-Ware, 2017)

The degree of technical knowledge and skill involved in the game may preclude participation among certain groups since digital inequalities have been linked to factors like socioeconomic background (Hargittai and Hinnant, 2008; Van Deursen and Van Dijk, 2014). Indeed, some users are not aware of algorithmic ranking on platforms (Eslami et al., 2015; Rader et al., 2018) and, thus, do not even know the game exists, let alone how to play it. This suggests that the game reinforces offline hierarchies of social privilege with “winners” being those with greater access to social, cultural, political, and economic resources. If the population of influencers does, indeed, represent a privileged few, their influence on social media culture—and culture more generally as it bleeds into “real” life—may perpetuate existing hegemonic ideologies and values. Future studies might investigate the question of digital inequalities embedded in the game and the resulting configurations of sociality on social media.

Acknowledgements

The author would like to extend her gratitude to the anonymous reviewers, Kjerstin Thorson, Casey O'Donnell, Steven Gold, and Janine Slaker for their helpful comments on earlier versions of this article. She also thank Stephanie Steinhardt and Julia DeCook for engaging in thoughtful conversation about this work.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

ORCID iD

Kelley Cotter  <https://orcid.org/0000-0003-1243-0131>

References

- Abidin C (2015) Communicative intimacies: influencers and perceived interconnectedness. *Ada* 8: 1–16.
- Americanya Mel (2017) Instagram statistics on the algorithm you need to know. Available at: <https://www.youtube.com/watch?v=EXLU1G8Vd8M&t=40s> (accessed 2 October 2017).
- Andrejevic M (2014) The big data divide. *International Journal of Communication* 8: 1673–1689.
- Banet-Weiser S (2012) *Authentic™ the Politics of Ambivalence in a Brand Culture*. New York: New York University Press.
- Beer D (2009) Power through the algorithm? Participatory web cultures and the technological unconscious. *New Media & Society* 11(6): 985–1002.
- Bourdieu P (1996) *The Rules of Art*. Stanford, CA: Stanford University Press.
- Brown E (2018) How to tackle influencer fraud. Available at: <http://www.zdnet.com/article/how-to-tackle-influencer-fraud/> (accessed 27 March 2018).
- Bucher T (2012) Want to be on the top? Algorithmic power and the threat of invisibility on Facebook. *New Media & Society* 14(7): 1164–1180.
- Bucher T (2017) The algorithmic imaginary: exploring the ordinary affects of Facebook algorithms. *Information, Communication & Society* 20(1): 30–44.
- Burgess JE and Green JB (2008) Agency and controversy in the YouTube community. In: *Internet research 9.0: rethinking communities, rethinking place*, Copenhagen, 15–18 October. Available at: <https://eprints.qut.edu.au/15383/>
- Cadwalladr C and Graham-Harrison E (2018) Revealed: 50 million Facebook profiles harvested for Cambridge Analytica in major data breach. Available at: <http://www.theguardian.com/news/2018/mar/17/cambridge-analytica-facebook-influence-us-election> (accessed 27 March 2018).
- Caliandro A and Gandini A (2017) *Qualitative Research in Digital Environments*. New York: Routledge and Taylor & Francis Group.
- Carah N (2017) Algorithmic brands: a decade of brand experiments with mobile and social media. *New Media & Society* 19(3): 384–400.
- Carah N and Shaul M (2016) Brands and Instagram: point, tap, swipe, glance. *Mobile Media & Communication* 4(1): 69–84.
- Certo-Ware R (2017) Instagram's new algorithm is a disaster for indie bloggers. In: Untouchable. Available at: <http://www.untouchableblog.com/blog/new-instagram-algorithm-sucks> (accessed 6 December 2017).

- Cheney-Lippold J (2011) A new algorithmic identity: soft biopolitics and the modulation of control. *Theory, Culture & Society* 28(6): 164–181.
- Chris Loves Julia (2018) 6 Questions to ask yourself if the Instagram algorithm has you down. Available at: <https://www.chrislovesjulia.com/2018/01/6-questions-ask-instagram-algorithm.html> (accessed 21 January 2018).
- Confessore N (2018) The follower factory. *The New York Times*, 27 January. Available at: <https://www.nytimes.com/interactive/2018/01/27/technology/social-media-bots.html> (accessed 15 February 2018).
- De Laat PB (2017) Big data and algorithmic decision-making. *ACM SIGCAS Computers and Society* 47(3): 39–53.
- Decaillet Q (2017) Mass planner shut down by Instagram: the end of the bot era. In: Fstoppers. Available at: <https://fstoppers.com/social-media/mass-planner-shut-down-instagram-end-bot-era-176654> (accessed 29 November 2017).
- Dimson T (2017) Measurement and analysis of predictive feed ranking models on Instagram. New York. Available at: <https://atscaleconference.com/videos/measurement-and-analysis-of-predictive-feed-ranking-models-on-instagram/> (accessed 25 November 2017).
- Duffy BE (2017) *(Not) Getting Paid to Do What You Love*. New Haven, CT: Yale University Press.
- Duffy BE and Hund E (2015) “Having it all” on social media: entrepreneurial femininity and self-branding among fashion bloggers. *Social Media + Society* 1(2): 1–11.
- 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: *CHI ‘15 proceedings of the 33rd annual ACM conference on human factors in computing systems*, Seoul, Republic of Korea, 18–23 April, pp. 153–162. New York: ACM.
- Flyverbom M (2016) Transparency: mediation and the management of visibilities. *International Journal of Communication* 10: 110–122.
- Galloway AR (2004) *Protocol: How Control Exists after Decentralization*. Cambridge, MA: MIT Press.
- Galloway AR (2006) *Gaming: Essays on Algorithmic Culture*. Minneapolis, MN: University of Minnesota Press.
- Geertz C (1980) Blurred genres: the refiguration of social thought. *The American Scholar* 49(2): 165–179.
- Gillespie T (2010) The politics of “platforms.” *New Media & Society* 12(3): 347–364.
- Gillespie T (2014) The relevance of algorithms. In: Gillespie T, Boczkowski PJ, and Foot KA (eds) *Media Technologies*. Cambridge, MA: MIT Press, pp. 167–194.
- Guthrie S (2016) How influencers gain from Instagram’s changes to feed display. Available at: <https://sabguthrie.info/how-influencers-gain-from-instagrams-changes-to-feed-display/>
- Hallinan B and Striphas T (2016) Recommended for you. *New Media & Society* 18(1): 117–137.
- Hargittai E and Hinnant A (2008) Digital inequality: differences in young adults’ use of the Internet. *Communication Research* 35(5): 602–621.
- Hearn A (2008) “Meat, mask, burden”: probing the contours of the branded “self.” *Journal of Consumer Culture* 8(2): 197–217.
- Hearn A (2010) Structuring feeling: web 2.0, online ranking and rating, and the digital “reputation” economy. *Ephemera: Theory and Politics in Organization* 10(3–4): 421–438.
- Hearn A and Schoenhoff S (2015) From celebrity to influencer. In: Marshall PD, and Redmond S (eds) *A Companion to Celebrity*. Hoboken, NJ: John Wiley & Sons, pp. 194–212.
- Instagram (2016) See the moments you care about first. Available at: <https://instagram-press.com/blog/2016/03/15/see-the-moments-you-care-about-first/> (accessed 20 November 2017).

- Just N and Latzer M (2017) Governance by algorithms: reality construction by algorithmic selection on the Internet. *Media, Culture & Society* 39(2): 238–258.
- Kitchin R and Dodge M (2011) *Code/Space: Software Studies*. Cambridge, MA: MIT Press.
- McPhillips L (2017) When social influencers stop being influential. In: This Renegade Love. Available at: <http://www.thisrenegadelove.com/when-influencers-stop-being-influential/> (accessed 29 November 2017).
- Markham A and Buchanan E (2012) Ethical decision-making and internet research (version 2.0). Available at: <http://aoir.org/ethics/>
- Marwick A (2013) *Status Update*. New Haven, CT: Yale University Press.
- Marwick A (2015) Instafame: luxury selfies in the attention economy. *Public Culture* 27(75): 137–160.
- Marwick A and Lewis R (2017) Media manipulation and disinformation online. Data & Society, 15 May. Available at: <https://datasociety.net/output/media-manipulation-and-disinfo-online/> (accessed 27 February 2018).
- Melotti S (2017) Instagram created a monster. Available at: <http://behindthequest.com/instagram-created-a-monster/> (accessed 13 January 2018).
- Moeller RM, Esplin B and Conway S (2009) Cheesers, pullers, and glitchers: the rhetoric of sportsmanship and the discourse of online sports gamers. *Game Studies* 9(2).
- Morello C (2017) Exposed: beauty bloggers committing fraud! 16 November. Available at: <https://youtu.be/M0aNjpaN5cE> (accessed 30 January 2018).
- Moss C (2014) *I tried using Instagram like a teenager — and it completely changed the way I see the app*. Available at: <http://www.businessinsider.com/how-teens-use-instagram-2014-6> (accessed 29 November 2017).
- Neff G, Foot KA and Nardi BA (2014) *Venture Labor*. Cambridge, MA: MIT Press.
- Pasquale F (2015) *The Black Box Society*. Cambridge, MA: Harvard University Press.
- Rader E, Cotter K and Cho J (2018) Explanations as mechanisms for supporting algorithmic transparency. In: *CHI '18 proceedings of the 2018 CHI conference on human factors in computing systems*, Montreal, QC, Canada, 21–26 April, pp. 1–13. New York: ACM.
- Richterich A (2018) Tracing controversies in hacker communities: ethical considerations for internet research. *Information, Communication & Society*. Epub ahead of print 5 July. DOI: 10.1080/1369118X.2018.1486867.
- Senft TM (2008) *Camgirls* (Digital Formations), vol. 4. New York: Peter Lang.
- Sharma G (2017) The explosion of influencer marketing over the past 24 months. In: *Smart Insights*. Available at: <https://www.smartinsights.com/online-pr/influencer-marketing/explosion-influencer-marketing-past-24-months/>
- Telban S (2017) 5 key reasons to stop follow/unfollow. In: *Coffee with Summer*. Available at: <https://www.coffeewithsummer.com/blogging-social/stop-follow-unfollow/> (accessed 29 November 2017).
- Townsend L and Wallace C (2016) Social media research. Available at: www.dotrural.ac.uk/socialmediaresearchethics.pdf (accessed 15 November 2017).
- Van der Nagel E (2018) Networks that work too well. *Media International Australia* 168(1): 81–92.
- Van Deursen AJ and Van Dijk JA (2014) The digital divide shifts to differences in usage. *New Media & Society* 16(3): 507–526.
- Van Dijck J (2013) *The Culture of Connectivity*. Oxford: Oxford University Press.
- Warzel C (2014) Facebook's two-way mirror. Available at: <http://www.buzzfeed.com/charliewarzel/facebook-two-way-mirror> (accessed 20 October 2016).
- Whiteman N (2012) *Undoing Ethics: Rethinking Practice in Online Research*. New York: Springer.
- Willson M (2017) Algorithms (and the) everyday. *Information, Communication & Society* 20(1): 137–150.

Zuckerberg M (2018) One of our big focus areas. Available at: <https://www.facebook.com/zuck/posts/10104413015393571> (accessed 28 February 2018).

Author biography

Kelley Cotter is a doctoral student in the Department of Media & Information at Michigan State University. Her research focuses on how users become aware of and knowledgeable about algorithms applied in sociotechnical systems and resultant implications for the accumulation of different forms of capital. She also explores the intersection between algorithmic (il)literacy and digital inequalities.