DIGITAL TRACES AND BOTTOM-UP DATA PRACTICES

Stefania Milan
University of Amsterdam & University of Oslo

Social media have changed the way individuals and groups mobilize and organize for collective action. They force users to give up data in order to participate, acting as agents of datafication of interpersonal connections and interactions and imposing their own "logic" made of specific norms, mechanisms and economies (van Dijck & Poell, 2013). Not surprisingly, this bears important consequences for the agency—both factual and perceived—of social actors. This theoretical paper understands datafication as a productive force in order to explore how activists largely reliant on social media for their activities *can* leverage datafication and mobilize social media data in their tactics and narratives. "Data" here refers to social-media data, that is to say the set of records produced by users in their actions and interactions on social networking services, including hashtag usage, "likes" and mentions. Combining social movement studies with critical media theory and platform studies, this theoretical contribution explores how activists largely reliant on social media for their sense-making and organizing activities exploit datafication in its own right. It plays with the notion of digital traces as a heuristic tool to understand the dynamics between platforms and their users. Defining digital traces as the "fragments of past interactions or activities" (Reigeluth, 2014, p. 250), it follows such traces as they are critically activated by political actors. Social media create subjectivities that orient themselves towards the algorithm—in other words, users are trained to think of themselves with (what they believe is) the logic of the subtending algorithms (Agre, 1994). As "tangible" hints at the functioning of social media, digital traces become primary sites of user intervention. I distinguish six agency-producing mechanisms supported by social media, which corresponds to six ways in which users can engage with digital traces to advance their goals. In so doing, the paper foregrounds human agency and the meaning-making activities of individuals and groups, and contributes to the study of "the variable ways in which power and participation are constructed and enacted" (Couldry & Powell, 2014, p. 1) in bottom-up data practices.

After reflecting on the materiality and discursiveness of digital traces, and on the notion of political agency vis-à-vis the datafied self, the paper explores data traces as agency machines contributing to produce visibility, arguing that digital traces can work as producers of political agency—both perceived and factual.

#1. Digital traces make the unseen visible. While they certainly do not make algorithms visible, they make explicit the materiality of social media and render somewhat evident (however not transparent) their mechanisms of meaning production. By allowing users to get a glimpse of the datafication they enable, digital traces offer unprecedented possibilities for users with a political agenda to directly engage with the medium. They contribute to mobilize social-media data, turning them into a contested terrain of imagination and practice. They empower users to produce their own data inscriptions to leverage such mechanisms (e.g., popularity by measurement) in view of supporting their goals. While the middlemen are not neutralized, users experience a renewed sense of self-sufficiency and empowerment—no matter how untruthful and misleading. In sum, by participating to make the possibilities visible, digital traces contribute to boost the perceived political agency.

#2. Digital traces activate the intimate and the mundane. Supporting and emphasizing emotional bonding, social media platforms prompt users to share private and ordinary aspects of their life that have traditionally been excluded from political action, facilitating the incorporation of the intimate and the mundane into the activists' narratives and action repertoire. The mediation of everyday technologies like smartphones eases the interpenetration of political activism and daily life, and the individualized temporality of engagement with digital traces transforms the process of meaning making into an intimate affair. These dynamics set in motion a process of co-production of meaning that approximates identity building, although it is centered on the private dimension.

#3. Digital traces are narrative builders. They engage users in conventions specific to each platform (e.g., hashtags), which identify distinct "grammars of action" that "formalize the interaction patterns" (Agre, 1994, p. 109). By productively interacting with these set grammars, activists can involve social-media data points in a process of interpretations and creation, turning "raw" information into collective narratives—no matter how scattered or simplified. Digital traces can be appropriated to foster a narrative form of agency, or "the capacity to create stories on social media … in a way that is collective and recognized by the public" (Yang, 2016, p. 14). These stories become collective, with two outcomes: digital traces might contribute to make meanings actionable, as they partake in creating a plot that resembles recognizable narrative forms, and can favor the connection amid the online storytelling and the offline co-presence.

#4. Digital traces allow for the live-historicizing of the activist experience. As experiential medium, social media give voice to the activists' subjective experience, meeting the needs of today's "experiential movements" (McDonald, 2004). By making possible the instant live reporting from protest actions, they allow for the live-historicizing of the activist experience, which equals narrating a story and rendering it

historical, and both bear the empowering effects that derive from live storytelling (Polletta, 2006). By emphasizing the performative component of activism, digital traces contribute to mythologize collective actions and emotions. Although altered by obscure algorithms, the mechanisms of mediated collective memory, including the dimensions of time and co-presence (or the lack thereof), represent an additional playground for activists.

#5. Digital traces allow for the recognition and involvement of like-minded others. They contribute to promote and show(case) collectivity, by drawing attention to (and making tangible) the participation, networking practices and clustering together of activists and bystanders. Digital traces intervene in three ways: they facilitate the discovery of popular meanings and activities, by emphasizing lower-common denominator storylines; they appeal to others, summoning potential activists, by means of, e.g., underscoring affective involvement (Papacharissi, 2015), and positive emotions above all; they invite these others to participate in the co-production of the collective narrative, rapidly including them into the public of a given page, group or list (cf. Yang, 2016). This "function" of digital traces shows distributed agency in action, where the task of "calling in" is equally divided between humans, actively pursuing new audiences, and material actors, algorithmically contributing to the challenge.

#6. Digital traces promote self-reflexivity by curation. Agency is linked to reflection (Couldry, 2014), and self-reflection empowers individuals to become a movement, freeing them from constraining social norms and roles (Touraine, 1995). Social media, hosting much of today's socio-cultural production, enhance self-reflexivity by inviting, through engagement with digital traces, the curation of social-media data, or the selecting filtering and redistribution of relevant content. Activists have the chance to iteratively "look inwards and to experience their own existence" (Touraine, 1995, p. 282) through the lenses of the platform and its publics. Stretching Kelty's concept beyond its original context, these exercises of self-reflexivity approach those "recursive publics" busy "maintaining the means of association through which they come together as a public" (2008, p. 28).

The rise of temporary data publics
This article reflected on how datafication may support users' agency, asking whether and how activists can appropriate social media data to "meet their own ends" (Couldry, 2014, p. 892). It placed collective action in the material of social media platforms, foregrounding their discursiveness and materiality, and focused on bottom-up data practices in view of understanding how social media data are mobilized in tactics and narratives. It explored how digital traces contribute to "rematerialize" the meanings produced by social actors, rendering partially visible the meaning-making mechanics inscribed in social media. But while making visible does not equal real power over those dynamics, social actors can reappropriate digital traces and the mechanisms of their creation to try to recuperate their perceived agency. As Marres (2012) noted, users are "transformed from ordinary actors, caught up in habitual ways of doing, into participants—or at the very least, 'implicants'—in problematic assemblages" (p. 48). These interventions by "participant-implicants" contribute to the creation of "new rationalities and alternative social imaginaries around datafication" that "connect system and experience in new ways" (Baack, 2015, p. 8).

These six ways in which digital traces act as agency machines contribute to create *temporary data publics*. "Data publics" typically emerge with data-analytic practices and the related data infrastructure, which act as mediators and contribute to the reconfiguration of expertise and social knowledge (Ruppert, 2015). These publics are brought to life by social media data because they depend on the data to render visible (and popular) tenuous identities and transient viewpoints for which visibility is a necessary condition for existence. They are performed as they are articulated in relation to and hinge on the mechanisms of social media platforms for their own survival. But they are also inherently performative—that is, they aim to change the reality they are describing. In other words, they are bearers of perceived agency that comes into being through everyday devices. They are temporary because they are continuously assembled and reassembled by contingent action, both human and algorithmic. Yet, no matter how evanescent and transitory, these temporary data publics activate some form of political agency and enhance in particular the subjective interpretation of that agency—very often with real-world consequences.

References

Agre, P. E. (1994). Surveillance and Capture: Two Models of Privacy. *The Information Society*, *10*, 101–127.

Baack, S. (2015). Datafication and empowerment: How the open data movement re-articulates notion of democracy, participation, and journalism. *Big Data & Society*, *July-December*, 1–11.

Couldry, N. (2014). A necessary disenchantment: Myth, agency and injustice in a digital world. *The Sociological Review*, *62*(4), 880–897.

Couldry, N., & Powell, A. (2014). Big data from the bottom up. *Big Data & Society*, *1*(2), 1–5.

Kelty, C. M. (2008). *Two Bits: The Cultural Significance of Free Software*. Durham and London: Duke University Press.

Marres, N. (2012). *Material participation. Technology, the environment and everyday publics*. Basingstoke, UK: Palgrave Macmillan.

McDonald, K. (2004). One as Another: From Social Movement to Experience Movement. *Current Sociology*, *52*(4), 575–593.

Papacharissi, Z. (2015). *Affective Publics Sentiment, Technology, and Politics*. Oxford: Oxford University Press.

Polletta, F. (2006). *It Was Like a Fever: Storytelling in Protest and Politics*. Chicago: University of Chicago Press.

Reigeluth, T. (2014). Why data is not enough: Digital traces as control of self and self-control. *Surveillance & Society*, *12*(2), 243–254.

Ruppert, E. (2015). Doing the Transparent State: open government data as performance indicators. In R. Rottenburg, S. E. Merry, S.-J. Park, & J. Mugler (Eds.), *A World of Indicators: The making of governmental knowledge through quantification* (pp. 127–150). Cambridge: Cambridge University Press.

Touraine, A. (1995). *Critique of Modernity.* Oxford: Basil Blackwell.

van Dijck, J., & Poell, T. (2013). Understanding Social Media Logic. *Media and Communication*, *1*(1), 2–14.

Yang, G. (2016). Narrative Agency in Hashtag Activism: The Case of #BlackLivesMatter. *Media and Communication*, *4*(4), 13–17.