

## CHAPTER 6

# Can Algorithmic Knowledge about the Self Be Critical?

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### The Algorithmic Episteme

In the last two decades or so, we have been witnessing the rise of a new episteme, a new way of knowing, involving the collection of big data and its analysis by means of algorithms. The algorithmic episteme is mobilized to produce knowledge not merely about the objective world, but also increasingly about the internal world of individuals, about the self. An ever-increasing number of digital tools are developed to know our subjectivity: our tastes, wants and weaknesses (Cheney-Lippold 2011; Lupton 2016). But what is the nature of this knowledge? More specifically, what assumptions does this knowledge make concerning human beings, and what are its political ramifications? I wish to think through these questions by asking whether algorithmic knowledge can be critical at all. I follow the critique of positivist knowledge developed by the Frankfurt School. The Frankfurt School launched a critique on the accepted model of knowledge production in the social sciences which it deemed ‘scientism’—an emphasis on the means of science rather than on its ends. I focus here on Habermas, who constructs most eloquently and systematically this critique. By comparing

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algorithmic knowledge about the self to psychoanalytic knowledge, I will argue that algorithmic knowledge cannot be critical by construction. I will end by reflecting on the political possibilities of the algorithmic self.

In this chapter, I offer a preliminary reflection on the knowledge about the self which emerges within the socio-technological paradigm of digital media, referred to here as the algorithmic episteme. This refers to an expanding assemblage of technologies, practices, sites and bodies of knowledge aimed at translating data—produced by ubiquitous monitoring devices—into knowledge about the self. This entails the incessant production and accumulation of data (big data) in digital sites (platforms and applications) designed to monitor user-generated data; the construction of technological tools which make sense of this data, rendering massive amounts of personal data into knowledge (algorithms); a body of knowledge concerning these practices (data science); and a plethora of professionals implementing the algorithmic episteme in varying fields, from the criminal justice system (Chan & Bennett Moses 2015; Mehozay & Fisher 2018) to health (Khoury & Ioannidis 2014).

The algorithmic episteme purports to overcome three obstacles in the ability of human beings to know themselves (see e.g. Mayer-Schönber & Cukier 2013):

1. **Metaphysics**—the knowledge that algorithms produce about human beings requires no metaphysical, or theological, assumptions about humans;
2. **Theory**—it requires no theory or hypotheses as a precondition for knowledge; instead, it produced knowledge without causality;
3. **Hermeneutics**—it bypasses human reason and subjective interpretation en route to understand human beings.

Overcoming these obstacles to self-understanding is based on Dataism, a theology of data which sees it as the basic building block for knowledge, and sees data—specifically the data produced by individuals while engaging with digital technology—as comprising the ‘source code’ of humanness (van Dijck 2014). Nicholas Rose conceptualizes the theology of neuro-science which sees neural activity similarly (Rose & Abi-rached 2013). In this case, however, the building blocks are not naturally occurring electrical transmissions, but rather digital data registered as indicators of action and behaviour, or performance (Zuboff 2015). Hence, I suggest we think about the algorithmic episteme as offering performative knowledge (Callon 1991).

Another reason to think about algorithmic knowledge as performative is that its underlying orientation is performative prediction (Mackenzie 2015; Aradau & Blanke 2017): an attempt to forecast our behaviours in order to interfere with them and reorient them. Recommendation engines, for example, monitor behavioural data of users in a platform (or across several platforms) and render them into personalized real-time recommendations. But how is the plethora of data—big data—collected from human behaviour rendered into knowledge

about human beings, such as their taste or desire? Data scientists and data practitioners insist that this is merely a matter of mathematics. But I would like to argue that such rendering—translating data into knowledge about humans—requires some conceptualization of what humans are (Cheney-Lippold 2011), or some theology, however implicit it may be (and in the data science discourse, there is no doubt that this human conception is left not merely implicit, but outright denied).

For matters of simplicity and illustration—also acknowledging the complexity of algorithms and the problematics of suggesting a unifying discourse—I want to focus on one area where algorithms are heavily implemented: digital media. Digital media platforms are now regularly trying to characterize their audience in an effort to ‘seek their audience’ (Ang 1991) and offer real-time personalized suggestions, either advertisements, products or actual content (video clips, posts, articles and so forth).

### Seeking the Mass Media Audience

The media has a long history of trying to know the audience and characterize it. Because media institutions do not come in direct contact with their audience, they need to have some conceptualization of who they speak to. After a modest beginning of ‘imagining’ the audience (de Sola Pool & Schulman 1959), during the 20th century, a whole new body of knowledge developed among mass media organizations. It assumed that the audience should not be looked at *en bloc*, but rather as comprised of different categories. In order to characterize these categories, the mass media, in close conjunction with academia, adopted what we might call the scientific episteme (Ettema & Whitney 1994: 9; Buzzard 2012: 3, 13ff). The scientific episteme for knowing the audience is based on (1) social and cultural theories, (2) empirical research (such as questionnaires or focus groups) and (3) a representative sample of the population with a rather low N (Napoli 2010).

The scientific episteme assumed that the audience is comprised of groups differentiated on the basis of demographic, or sociological, categories: gender, class, income, education and so forth. Based on this knowledge, mass media outlets attempted to give each category the content it assumed it liked and wanted, or that was appropriate to it. For example, based on a theory that asserts a high correlation between class position and cultural taste (*à la* Bourdieu), media outlets created differential content and ads, or segmented the media; for example, publishing women’s and men’s magazines. The conception of human which underlies the scientific episteme is ascriptive, seeing each individual as an imprint of the social category to which it belongs. The audience, then, is divided into a few relatively homogenous categories.

This move of the media towards splitting and categorizing the audience was dialectical in terms of knowledge about the self. At the same time that

the scientific episteme characterized the audience, it also helped in shaping a conception of self: individuals understand themselves through the way in which others characterize them. This is particularly true when such knowledge is translated into practice habitually encountered by the audience. Women's and men's magazines also help constitute such gender categories. Such magazines interpellate, in Althusser's terms, individuals into a social position, thus validating and reaffirming specific social categories (Althusser 1970).

### Digitally Seeking Users

The media environment has been changing radically in the last few decades, with the rise of digital media. This sea change in the media environment is complex, comprised of multiple and at times contradicting, technologies, social actors and dynamics. As mentioned above, one of the most recent major transformations within digital media has been the rendering of immense quantities of data, registering mostly the behaviour of the audience, or users, as they came to be called, and rendering them into knowledge which is fed back into the media, mostly through personalized content provision. We cannot understand this huge effort and investment in the algorithmic translating of data into knowledge as a mere technical move, aimed at calculating more quickly and efficiently what we once calculated on a piece of paper. Rather, it offers a new epistemology and a new way to conceptualize individuals and think about the self.

What is the conception of humans which underlies the algorithmic episteme? What are the tenets of knowledge about the self-rendered from user-generated data? Three tenets can be discerned. First, the algorithmic episteme offers an a-essentialized conception of humans—what Rogers has called a post-demographic conception (Rogers 2009: ch. 7). Such conception is indifferent to ascriptive social categories (such as gender or income), and indifferent to the master narratives of modernity (such as nationalism and class). Instead, it upholds a subject that is characterized by the pattern of data it produces. Such conception about the self, then, presumably requires no theory of the self. The immense quantity and qualitative variety of data helps us make the leap from actual empirical phenomenon to knowledge without the need for abstraction and theory.

Second, under such assumptions, the algorithmic episteme's approach to data is what we might call omnivorous. Since there is no theory about the self, there is no a priori ability to know what kind of data might be relevant to knowledge about the self. Hence, algorithmic knowledge is inherently prone to collecting and processing as much data as possible. No type of data can be ruled out as too mundane or too esoteric as a means to understand the self.

And third, not only theory is bypassed en route to knowledge about the self, but also consciousness and reason. Under such conception, knowledge about the self is created by bypassing reason—the reflexive and critical component

of the self—and accessing its underlying ‘material,’ objective and performative facets. Such a positivist, objectivist perspective on knowledge rejects an interpretive and narrativist conception of the self and turns towards technological mechanisms of data and algorithms that bypass subjective ‘meaning’—or the hermeneutics of the self, constituted through a subjective and inter-subjective process—in order to reach the true core of humanness.

The algorithmic self, then, signals a rejection of a hermeneutic concept of the self that emerged with modernity, towards technological mechanisms that bypass conscious meaning. This represents a deep distrust in the ability of the conscious mind to help in the understanding of the self, and a technological route to bypass consciousness and understand the self on the basis of ‘lively data,’ construed to be a more authentic, unbiased and reliable representation of the self. ‘Lively data’ (Lupton 2016) refers both to the liveliness and dynamism of the data, the fact that it is incessantly created and flows, and to the fact that it is based on ‘life itself,’ every aspect of life— affective, communicative, relational and so forth—which is now registered digitally. The datafication of life means that our lives—from the mundane (like the time of day we order a product online) to the sublime (like the birth of our child)—are increasingly turned into data. Performative data is seen as more reliable foundations for the understanding of the self than subjective, narrativist and interpretive models of knowledge about the self (Bolin & Schwarz 2015).

### Knowledge and the Self: Algorithmic and Psychoanalytic

To think about the ramifications of the algorithmic conception of the self, I would like to make a little detour here, before returning to the central path of the argument which seeks to point out the political ramifications of the new way by which digital media characterizes its audience using algorithmic knowledge. This detour briefly examines the link between reason and self-understanding and the corollary possibilities of political subjectivity. To think through this link, I will situate the model of the self, which arises from the algorithmic episteme, with two historical models of the self (which are still very much with us today), stemming from divergent epistemologies.

It should be quite evident that the algorithmic self poses a direct challenge to the reasoned, or liberal self. The *liberal self* is a model of subjectivity that is able to articulate an authentic position of the self vis-à-vis the world. The most central institutions of modernity are premised on such a subject: democracy, the capitalist market, the legal system, to name a few, all assume that such a self can be formed through education, or *Bildung* (Sennet 1992).

With digital media, such decisions are increasingly, albeit obviously partially, delegated to algorithms that weave data into the position of the self vis-à-vis the world. Thus, for example, recommendation engines of music applications, such as Spotify, help us formulate our musical taste, revealing to us what it is actually

that we like to listen to. In light of increasing algorithmic authority, the objective, technical and scientific aura, our trust in the ability of algorithms and their practical applications to reflect a truer, more authentic self, gets stronger. As mentioned above, seeking the audience entails not merely a detached gaze of a knowing institution, but acts on subjects, moulds and creates them; ‘to collect, store, retrieve, analyze, and present data through various methods means to bring those objects and subjects that data speaks of into being’ (Ruppert, Isin & Bigo 2017: 1). To the extent that algorithmic knowledge about users is translated into practice, such as recommendations engines, it is also experienced by users (Bucher 2016).

But a comparison of the algorithmic self with another modernist model might be even more revealing to assess the ramifications of this new epistemology. The idea that reason might actually be problematic as a means for understanding the self and that humans need to bypass consciousness to achieve a more authentic perception of their self did not arise with algorithms: it is actually a highly modernist idea. One of the most important critiques of the liberal self has been articulated by Sigmund Freud, who was also suspicious, like dataists, about reason. He argued that we do not have a direct access to our whole self, and developed both a theory and practice (psychoanalysis) aimed at bypassing reason in order to reach a deeper human essence.

Notwithstanding these similarities, in order to highlight the novelty of the algorithmic self, I wish to focus on what sets the *psychoanalytic self* apart. The key distinction pertains to a theory of the self. The performative knowledge about the self, created through big data and algorithms, is a-theoretical, almost intently anti-theoretical. It is a regime of truth that does not purport to offer a causal theory of *why* individuals behave in a certain way, but rather offers an algorithmic discovery of *how* they behave, their data patterns. Amazon might notice, for example, that people skimming through Ernest Hemmingway novels on late summer nights are more likely to also be interested in buying carpentry tools. We might be tempted—as social, cultural or psychological theorists—to offer positivist or interpretive theories unravelling the nature of that observed link, but such theories do not stem from the algorithmic episteme. It is in this sense that algorithmic knowledge has been infamous for being a ‘black box’, opaque system that is almost impossible to review and critique (Pasquale 2015). An example of the neglect of theory in the algorithmic episteme can be found in the central means of validating algorithmic knowledge: A/B testing. Within the algorithmic episteme, algorithms are considered to give a valid knowledge to the extent that algorithm A predicts observed behaviour better than algorithm B or no algorithm at all.

This is a key difference pertaining to the link between knowledge and practice, or between theory of the self and the actually existing self. Psychoanalysis offers critical knowledge about the self by creating a space between the actually existing self and the abstract, theoretical, even utopian self. Hence, psychoanalysis could point to observed, behavioural aspects of the self as belonging to different

components of that self. For example, when an individual says ‘I behaved in manner X towards a person Y’, she may proceed to discover that such a behaviour is an anxious reaction to reality, find out the root cause of that anxiety and through therapy change her behaviour the next time such anxiety appears.

Such a progressive move requires two important elements missing from the algorithmic episteme. The first is theory. And not just any theory, but *critical theory*. Psychoanalysis sees in the knowledge about the self a means to uncover that which hinders human freedom, and thus a means to point towards a quasi-transcendental move towards emancipation. Psychoanalytic knowledge about the self, therefore, opens up a space for facets of the self that do not yet show themselves in the actually existing, performing self. Such a self can demarcate a utopian horizon towards which it can be oriented.

To accomplish such a goal requires a second component missing from the algorithmic episteme: natural language. Language allows reflexivity, it allows reason to reflect and examine the self, and in turn transform the conditions of possibility of observed behaviour. Reflexivity allows us, for example, to behave anxiously and at the same time identify this behaviour as anxiety and as hurtful to self or others. In other words, a self, which does not yet exist, can outline a path for the actual self to walk in and become that. This can only be done through language, interpretation and reflexivity. It is precisely in that sense that Habermas insisted that psychoanalysis is not a positivist science like the natural science, but actually an exemplar of critical theory which has an interest in (and a capacity to create) knowledge which at one and the same time describes reality (theory) and allows the subject to move towards a desired reality (praxis) with the aid of reason (Habermas 1972: ch. 10).

The algorithmic episteme represents a collapse of that constructive space between theory of the self and the performative, actually existing self, as well as an impossibility to communicate in natural language. Algorithms paint a much more monolithic self: an acting or behaving self. It is a self devoid of leverage for critique, anchored much more firmly in the reality principle, in that which exists in a given time in the form of performative data. It is knowledge that relegates any other facts from the perception of the self, facets which can only be manifested through language.

### Self and Political Horizons

The algorithmic self might be seen as another manifestation of a post-modernist critique of modernist selves such as the liberal self or the psychoanalytic self. And many are celebrating the withering of the ideal of reason and critique from the knowledge of the self, seeing that as opening new horizons for the construction of a less essentialist, more flexible and emancipated identity. This position is perhaps mostly upheld by post-humanists who see the algorithmic self as a technological embodiment of post-modern ideas (Barron 2003; Shilling 2005:

ch. 4; Fuller 2012). But in yielding the space between who we are and who we might become emerges a vacuum which allows systemic forces to penetrate the self with the purpose of moulding subjects who are more accommodating and lenient to these systems.

That is certainly now new. We can think of how industrial capitalism moulded a subjectivity that realizes itself by means of hard work, obedience, diligence and frugality (Gramsci 1971). Or how consumer capitalism moulded a subjectivity that realizes itself by means of consumption, hedonism and individualism (Bell 1976). We might now ask how informational, digital, network capitalism moulds a subjectivity that realizes itself through publicity, exposure, communication, sharing and surveillance (Fuchs 2011; van Dijck 2013; John 2016) (practices that create the raw material to produce algorithmic knowledge: data), and through delegating the understanding of the self to technological systems, the underlying rationale of which remains completely opaque and inaccessible for auditing through natural language.

This new conceptualization of the self as algorithmic is consequential not merely for the operation of digital media, but might also have political ramifications. If the algorithmic episteme conceptualizes individuals in terms of the data patterns they create, then what makes different individuals similar (or what might put them in the same category) is a similarity in data patterns. The algorithmic episteme suggests that we cannot say what is similar between individuals except that they show a similar data pattern in a given context. Two people showing similar data patterns on Amazon, for example, might be sociologically very different.

### Algorithmic Self as Post-Political Identity

This shift from a demographic to a post-demographic identification of individuals, from identification based on natural language to one based on data patterns discovered by algorithmic processing of big data, is politically dangerous. Identity, in the sense of how individuals perceive and identify themselves, was based during modernity on ascription to categories of people who are identical among them. Thus, during the 20th century, a person might feel that she is part of the working class, or part of a gender group. Such ascription to a social category did not imply that everyone belonging to that group is identical in every way, but rather that anyone belonging to that group perceives herself as identical in aspects that are *politically significant*, for example, suffering from similar forms of discrimination, or sharing economic interests. Since their similarity to others in the group was understood in political terms, their individual identity was political as well. To be 'a worker' or 'a woman' during the 20th century carried an inherent political significance, regardless of whether or not one acted upon it.

The notion and practice promoted by the algorithmic episteme that we have no way of knowing ourselves by ascription to a social category threatens to undermine and deconstruct the foundations of political action. However



oppressive and totalistic they may seem, the mass media created categories of identity that could be spoken of with natural language, understood theoretically, be subjected to critique and resisted through political action. Digital media, in contrast, categorizes individuals based on data patterns which cannot be understood with natural language, spoken about or critiqued.

Under such conditions, the very ontology of identity is transformed: from a subjective construction of the self which identifies herself, and an inter-subjective construction of others who identify each other through an interpretive and critical process with a political horizon towards an objective construction of the self (Rouvroy 2013). According to Rouvroy, algorithmic knowledge about the self signifies a new governmentality which undermines the liberal self from ‘above’ (undercutting socio-political categories) and from ‘below’ (undercutting subjective interpretation, inter-subjectivity and language). ‘Algorithmic governmentality’, as she calls it, ‘does not allow for subjectivation processes, and this for recalcitrance, but rather bypass and avoids any encounter with human reflexive subjects. Algorithmic governmentality is without subject’ (Rouvroy 2013). The algorithmic episteme, then, undercuts the critical faculties inherent in narrative, speech and inter-subjectivity: ‘calling each other into account through language, create occasions for individual and collective individuations which are always deviations from known patterns and profiles’ (Rouvroy 2013).

As Habermas insists, the reflexive experience is the core of the practice which emancipates individuals from being an object and allows them to develop a subjectivity (Habermas 1972; see also Kellner & Pierce 2011: 106ff). Hence, this practice has to be controlled and done by the subject. In that sense, even if recommendation engines are able to characterize our taste and correctly predict what we would like to watch before we even think about that—and it is very likely they can, at least to some degree, as our taste *can* indeed also be thought of in objective terms—they already undermine the idea of taste as a project of subjectivation, and the practice needed to construct it. Under such conditions, even interpellation is undermined, and with it the possibility to be critical of that interpellation and resist it.

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