

CHAPTER 11

Algorithmic Prosumers

Elisabetta Risi and Riccardo Pronzato

Introduction: Platforms Everywhere

Today social life is increasingly lived in a digitally saturated world in which everyday activities and consumption practices increasingly occur in and through digital platforms (van Dijck, Poell and de Waal 2018). Within this scenario, social life is not only mediated, but also co-produced and shaped by algorithmic platforms, which work as performative intermediaries and surveillance devices of our online experiences (Bucher 2018). Indeed, platforms ‘do not reflect the social: they produce the social structures we live in’ (van Dijck, Poell and de Waal 2018, 2), i.e. they intervene in the way social ties are defined through forms of connection that mix social and sociotechnical norms (van Dijck and Poell 2013).

Etymologically, the word ‘platform’ derives from the Middle French *plateforme*, i.e. ‘a flat form’. That is, a horizontal area that encourages individuals to remain and lean on its surface. According to Gillespie (2010; 2017), this metaphor came into use around ten years ago and has been extremely useful for companies, such as social media services, as it allowed these corporations to promise users a ‘open playing field’ for participation, to provide advertisers with a limitless and permanent space through which to target users, and to promise regulators a fair and neutral framework for operations: in other words, a flat environment that did not require further external interventions.

How to cite this book chapter:

Risi, E. and Pronzato, R. 2022. Algorithmic Prosumers. In: Armano, E., Briziarelli, M., and Risi, E. (eds.), *Digital Platforms and Algorithmic Subjectivities*. Pp. 149–165. London: University of Westminster Press. DOI: <https://doi.org/10.16997/book54.l>. License: CC-BY-NC-ND 4.0

Today the ‘platformization of the web’ (Helmond 2015) is evident, and inside and outside of academia it has become clear that this flatness is only superficial: social, cultural, economic and power relationships are continuously modelled and reproduced by these infrastructures (van Dijck and Poell 2013; Beer 2017), which have become a pervasive presence in everyday life, and indispensable tools for individuals, companies and public institutions (van Dijck, Poell and de Waal 2018; Couldry and Hepp 2017).

As already highlighted by several scholars, critics and activists, these computational architectures constantly monitor and collect data from users in order to produce behavioural predictions (see Couldry and Mejias 2019a; Zuboff 2019). The main inputs that feed these algorithmic procedures underpinning digital platforms are (prod)users’ digital traces (Cluley and Brown 2015), which are used with other data points to produce desired outputs that aim to stimulate user engagement, extend datafication processes, produce behavioural models and offer advertisers the opportunity to micro-target consumers ubiquitously and in fine-grained detail.

Everything we do online is datafied and fed into algorithmic procedures. On digital platforms we are ceaselessly exposed to practices of algorithmic identification and individuation (e.g. Prey 2018) whereby we become ‘data subjects’ (Ruppert 2011), i.e. ‘measurable types’ (Cheney-Lippold 2017) to recommend content to and from which to extract data. Algorithms *learn* from our digital footprint which content it is that we are most responsive to, and then predicts our future behaviours, thereby determining what we should watch and listen to (Pariser 2011; Seaver 2018a; Airoidi and Rokka 2019).

This process is recursive (Kitchin and Dodge 2011; Beer 2013; 2016). Users decode texts, photos, video, etc., i.e. the outputs of the machine; users react to these stimuli and also share cultural objects, such as pictures, posts and other items. All these activities produce data points that are reabsorbed by the platform to propose new content, which is in turn consumed by users. In other words, users’ responses to the outputs of the machine become themselves a new input for the algorithmic infrastructure and are in turn embedded in every new human-machine interaction. Thus, the ‘algorithmic culture’ (Striphas 2015) that is produced by the platform feeds back to shape new habits of thought and expression.

Given the recursive relationship between individuals and algorithmic recommendation systems, uses (and users) of platforms are encoded into the design and functioning of platforms, especially in the field of cultural consumption and production (Hallinan and Striphas 2016; Rieder et al. 2018). These data-based models have a dramatic impact on how people derive their sense of self (Cheney-Lippold 2011), as individuals are also subjectified by their relationships with algorithmic media and brought into being by computational processes (Ruppert 2011; Seaver 2017; Bucher 2018). Furthermore, commercial and media industries promote the activity of prod-users’ content (Bruns 2008),

a process that blurs the distinction between producers and users of content. Indeed, individuals share and create media content, which is then consumed by other users and datafied.

You Have the License, But How Does the Engine Work?

In several countries it is possible to obtain a driver's licence at around the age of 18. Drivers do not have in-depth knowledge of the functioning of the engine, but they are allowed to drive nonetheless. Indeed, most people acquire their driving skills by heuristically and practically learning on a daily basis until they are able to use their vehicles almost unconsciously and without knowing all the internal technical features. Generally, individuals become aware of their car engine in two different circumstances: when the car performs excellently, or when the vehicle malfunctions. In the latter case, the driver understands that there is a problem with the engine, although the issue is often unknown.

The use of algorithmic media in our everyday life often follows the same path. Individuals constantly use these artefacts without reflection or awareness regarding their functioning. Their presence becomes evident only when the opaque mechanisms underpinning these tools surface as errors, unexpected outcomes or disappointing results. When it comes to digital platforms, only developers are aware of the design and working principles of the software, while the general public use these infrastructures and feed them with electricity and personal data.

Several scholars in the field of critical algorithm studies have considered algorithmic media as 'black boxes' (Pasquale 2015b): tools that gather data from users, recommend content to them, predict their behaviours and impact their decision-making processes, but that are almost impossible to put under public scrutiny. Without entering the debate about the possibility of unpacking algorithmic media (e.g. Bucher 2016; Seaver 2017; Bonini and Gandini 2019), it should be noted that users have expectations regarding the functioning of digital platforms, i.e. 'what algorithms are, what they should be and how they function' (Bucher 2017, 30). Nagy and Neff (2015) define these presuppositions as 'imagined affordances', corresponding to expectations about how a platform works, what types of actions users believe are suggested and how these beliefs influence how users approach these technologies. This 'illusion of control' over the platform (Markham, Stavrover and Schlüter 2019) is then disrupted when those expectations are not met, for example when recommended content or an advertisement is considered as mistargeted, or a post does not get as much attention as a user expected (see Bucher 2017; 2018).

These encounters with algorithms highlight that digital platforms 'are not autonomous technical objects, but complex sociotechnical systems' (Seaver 2018b, 378), designed by humans and functioning with and through the data

collected from users. These are in turn recursively influenced in their behaviours and feelings by these computational assemblages.

Algorithmic operations appear opaque because the crucial role of the people involved is often obscured and concealed under claims of neutrality (Airoldi and Gambetta 2018) and an unspoken idea of a sort of ‘technological unconscious’ (Thrift 2005). However, algorithmic media are pervaded by human sensemaking at every point (Seaver 2017): there are people debating computational models, programming algorithmic processes, adjusting the parameters, deciding on which formula to rely on in which context, and so forth (Gillespie 2016). Algorithms are complex socio-technical assemblages, obscure – but not inaccessible – systems which are human ‘all the way down’ (Heath 2015).

Studying the Engine: An Empirical Contribution

Platforms are not neutral intermediaries, as there are specific norms and values encoded in their design (Airoldi and Gambetta 2018). The main goal of these digital architectures is to favour, organise and monitor interactions between users, in order ‘to amass a large and detailed [...] data pool that can then be mined for commercial use’ (Barreneche and Wilken 2015, 507). Those favoured interactions become symbolical and cultural practices, behavioural norms and rules, in other words, ‘shared cultural imaginaries’ (Caliandro and Gandini 2017, 4) that are directly oriented by computational processes. Platforms ‘regulate people, processes and places’ (Kitchin 2017, 18) and include certain actors in their results, while excluding others, thereby favouring the emergence of a public culture that can be considered the outcome of the intertwining between human practices and algorithmic procedures (Gillespie 2015; Noble 2018)

If algorithms are a ubiquitous, authoritative, and ideologically biased social presence, however, these infrastructures continue being mainly invisible to individuals, as well as being difficult for researchers to investigate (Beer 2017), given that they often appear to be almost (or actually) inaccessible (Pasquale 2015b; Geiger 2017; Bonini and Gandini 2019). Given this, this chapter focuses on the results of empirical research that aims to analyse media consumption, content production and sharing practices on digital platforms, carried out by Italian students. Thus, this research seeks to address the following research questions:

1. Which media usage practices emerge on digital platforms?
2. What are the practices through which young users share content online?
3. How do individuals relate to algorithmic procedures?

We adopted a qualitative method, specifically the critical pedagogical methods developed by Annette Markham (2019). This approach has a twofold goal: first, it allows the researcher to gather a vast amount of qualitative and first-

hand data; and second, by making informants ‘autoethnographers of their own digital lives’, it favours a proactive process that should empower individuals (Risi, Bonini and Pronzato 2020). Indeed, this critical pedagogical approach aims to increase individuals’ awareness regarding their activities that are carried out ‘in cultural environments of growing datafication and automated decision-making’ (Markham 2020, 227), thereby supporting a self-reflexive process and enhancing data literacy of the participants. In accordance with this research framework, 80 auto-ethnographic diaries of young Italian students were gathered.

The sample included 50 Bachelor of Arts (BA) communication studies students from the IULM University (in Milan, Italy) and 30 BA students from the University of Siena. All the participants were between 20–25 years old. The diaries were compiled in Milan between 27 March and 31 March 2019 and in Siena between the 13 February and 17 February 2020. The sample was gender balanced.

After lectures were held regarding digital platforms and datafication practices, the researchers prepared a narrative analysis sheet, which was then sent to the 80 participants, who were asked to report and reflect on their media consumption practices on a daily basis for five days (see Risi, Bonini and Pronzato 2020). The document included questions aimed at eliciting both reflexive thinking and a highly detailed and accurate description of their relationship with algorithmic media.

After collecting the diaries, they were analysed using open coding techniques generally associated with a grounded theory approach (Corbin and Strauss 2008) in order to shed light on individual practices connected with digital platforms, as well as on the subjectivities of users who spent a significant part of their time on them. The analysis of this contribution also focused on social media platforms and those linked to cultural consumption, such as music and video streaming platforms. This choice was not *a priori* designed but surfaced in a grounded manner from the diaries.

This study aimed to make a contribution to the field of critical algorithm studies. Within this growing area of research, several researchers are focusing on the societal role of metric measurements (e.g. Lupton 2016), and the role of algorithmic platforms in shaping sense-making processes and in the production of subjectivity (e.g. Beer 2016; Bucher 2018). More recent attention has also considered the issue of ‘algorithms awareness’ (Hargittai et al. 2020; Gran, Booth and Bucher 2020) and the extent to which people are conscious of a life shaped by algorithmic selection mechanisms (Eslami et al. 2015).

At this point, it is necessary to clarify exactly what is meant by ‘algorithmic’. The term does not refer only to the algorithm per se, but to the role of algorithmic procedures in the construction and organisation of human knowledge and human experiences. In this case, therefore, ‘algorithm’ is a synecdoche. That is, we consider a social phenomenon that includes ‘not just algorithms themselves, but also the computational networks in which they function, the people who

design and operate them, the data (and users) on which they act, and the institutions that provide these services' (Gillespie 2016, 25).

Recently, Bucher (2018) suggested that algorithms should be framed as socio-material entities with dynamic and performative capabilities. This definition further emphasises the recursive relation between individuals and algorithms. Indeed, on the one hand, it recognises the role of computational logics and the people involved in their design; on the other hand, it also acknowledges the agency and sense-making processes of individuals that experience algorithmic operations in their daily life. Thus, this chapter argues that algorithms should be understood not only as the work of those who contribute to their design and implementation, but also as shaped 'through the way they become meaningful, helpful, problematic, opaque in and through what they do on a daily basis as part of the digital infrastructures of everyday life' (Lomborg and Kapsch 2020, 748). The following discussion will explore some of the results of this study, in alignment with this theoretical framework.

We Are the Fuel of the Engine: Looking Underneath Platforms

Cheney-Lippold (2017) claims that 'we are data'. On digital platforms, our complex social activities are transformed into a functional mathematical interaction of variables, steps, and indicators (Gillespie 2016; Zuboff 2019). Within this process, the social is transformed into 'a form that can be continuously tracked, captured, sorted, and counted for value as data' (Couldry and Mejias 2019a, 6). Our online activities are therefore the energy through which the algorithmic engine works. Without user activity, platforms would not function, as the engine (algorithmic procedures) would remain without fuel (data).

This chapter supports the view that platforms work to enact and support forms of datafied subjectivity, which allow a constant appropriation (e.g. Greene and Joseph 2015) and extraction (e.g. Mezzadra and Neilson 2017) of resources from human life in its entirety. However, within this process of datafication, users have expectations regarding platforms and may also actively interact with these algorithmic media (Nagy and Neff 2015; Bucher 2017; 2018).

In this empirical study, informants carried out thick descriptions (Geertz 1973) of their usage practices of algorithmic media. This rich material allowed us to examine not only the use of digital platforms in everyday life, but also the linkages of individuals with algorithmic logics and, more specifically, the role of the subject as an algorithmic prosumer.

Algorithmic Consumers: Platforms and User Agency

In the broadcast age, a typical usage practice connected with television viewing was channel surfing or zapping. This behaviour refers to the practice of viewers

switching channels continuously in order to find interesting content or to consume snippets of different programmes; content that had been commissioned and scheduled by cultural ‘gatekeepers’ within the television industry. Today the practice of *scrolling* not zapping has emerged as the most appropriate way to describe the use of digital devices. However, while the content through which viewers zap on TV was selected by traditional top-down gatekeepers, content on digital platforms is filtered by algorithmic procedures that configure users’ data feeds and determine what they see. Furthermore, when people use algorithmic media, their preferences are transformed into data inputs that power the algorithmic system, which, in turn, will adapt future outputs based on prior user behaviour. This ‘socio-technical recursion’ (Davies 2018) will enact the user’s algorithmic subjectivity, which is ceaselessly reified within the platform (Prey 2018).

I was travelling on the train, I scrolled down, paying scarce attention to the contents on my Facebook newsfeed. I stopped only to like two pictures: both posted by a friend of mine. (Milan, female)

Around 3.45 pm I took a break from studying and I went out in the garden to smoke a cigarette, I opened Instagram and I scrolled down my feed. (Milan, female)

During this episodic consumption, which fills interstitial moments during the day (a trip, a break, a pause), algorithms alleviate ‘the burden of choice’ (Cohn 2019). No need to think, you just need to scroll until you find something on which you can (briefly) linger. Here the subject is an *algorithmic consumer* who fills time with algorithmic media content. From this acritical acceptance of the proposed content emerges a sort of ‘pastoral’ power (Foucault 2007). Indeed, algorithms operate as a pastoral technique in the Foucaultian sense, a type of power that optimises its functioning by training the individual to think and behave in a certain way, until such training is accepted by the subject as an internalised and fluid form of self-government.

I have lunch at 13.00 and I use YouTube once again. This time the algorithm recommends a stand-up comedy clip of Kevin Hart to me that I gladly accept. (Milan, male)

I don’t follow this channel, but the video was suggested to me in the home and, given that I’m interested in the topics, I decided to watch it. (Milan, male)

She is another YouTuber that I don’t follow but that the algorithm suggested to me, probably because in the past I watched the TV series Riverdale. (Milan, male)

Another view that surfaced from the diaries is that algorithmic logics are not only recognised, but also accepted. Indeed, participants appear pleased with the capacity of algorithmic recommendation procedures to identify relevant content for them because this automation relieved them of further decision making. A further key point emerges from the diaries. Algorithmic media undergo a process of *domestication* carried out by individuals. Originally, the term ‘domestication’ was used by Silverstone (1994) to highlight how television viewing practices were integrated within everyday life. Siles et al. (2019) readapted the concept to Netflix viewing practices and contend that, on the one hand, individuals try to domesticate the use of digital platforms in their daily routine (for example during interstitial moments, or lunch breaks); on the other hand – through datafication – *algorithms domesticate users*, within a process of ‘mutual domestication’.

The constant and pervasive datafication of everyday life highlights how platforms do not reveal the subject, nor its data-materialisation, but rather enact a form of algorithmic individuation that is profitable according to platform capitalist logics (Prey 2018; Lüders 2020). User subjectivity is brought into being by algorithmic systems that monitor users and fosters their engagement in order to favour practices of data extraction and exploitation (Couldry and Mejia 2019b).

This process is enabled through a constant categorisation of user behaviour. According to Cheney-Lippold (2011), algorithms do not construct user identities based on fixed demographic data, but rather apply shifting categories which are continuously redefined by statistical (and opaque) correlations, which foster predictive behavioural models. Within this scenario, users have multiple layers of algorithmic identities based on ‘statistically-related, largely market research driven’ categories (Cheney-Lippold 2011, 170), which are constantly remodulated by competing interpretive machines. The work of ‘profiling machines’ (Elmer 2004), in fact, is to produce detailed and endlessly shifting consumer profiles in order to anticipate future needs of individuals, whose lives are constantly surveilled (Fuchs et al. 2012) and appropriated (Zuboff 2019).

Algorithmic Producers. Building Algorithmic Selves

While I was making small talk with a colleague, I scrolled down my Instagram feed and I liked a post in which I had been tagged by a friend, and I commented on it with a heart emoji [...] I checked how many likes the picture in which I was tagged had obtained. (Milan, female)

At 9.10am I opened YouTube to see a ‘like’ that a user put on a comment I wrote under a Red Dead Redemption 2 video. (Milan, male)

Returning to agency, it should be noted that when individuals play the role of producers of content on social media, they show ‘specific senses of agency through the interaction with algorithms’ (Siles et. al. 2019, 4). For instance,

participants performed ‘micro-celebrity’ practices (Marwick and boyd 2010), that demonstrate their concern regarding the role of metrics. This result corroborates findings from different authors (Gillespie 2014; Bucher 2017), which highlight that individuals understand and follow, seize and re-modulate social media operational logics to be recognised by the algorithm, in order to be metrically efficient and, therefore, more visible on the platform.

I opened Instagram once to see two or three stories and check how many people had seen the story that I had uploaded the same morning. (Milan, female)

Then, I checked the new notifications: I had 6 new followers and 4 likes for the last picture I uploaded a few weeks ago. (Milan, female)

If individuals are translated into sets of data points and treated as such to feed the algorithm they, in turn, also treat other individuals and content as data subjects. Indeed, ‘many of the modern categories with which we think about people and their activities were put in place through the use of numbers’ (Lury and Day 2019, 19). This appears evident in our everyday life, for instance, when a restaurant is chosen because of the number of stars an online reservation platform has awarded it, or a product is purchased because of its ‘visibility’. In this context, individuals are increasingly called upon to negotiate their reputation and ‘to adopt an algorithmic self’ (Pasquale 2015a), which is necessarily computational. Indeed, the construction of micro-celebrities is linked to an endless quantification of self. This trend can be framed as the product of the ‘society of performance’ (Chicchi and Simone 2017; Chicchi 2020), in which measurable performances have become a social imperative. Furthermore, these results highlight how the algorithmic management of personal shared content enhances a neoliberal subjectivity: users publish stories to gain visibility, and then monitor the metrics – the performance of their content within a competitive framework, in which certain actors gain visibility at the expense of others.

We went out for a coffee [...] my flat-mate asked me for a ‘photo session’ while she was drinking a coffee.’ (Milan, female)

While I’m studying, I upload a story on Instagram with the books placed on the table in the living room, in order to ‘inform’ my followers that I had started studying. (Milan, female)

Individuals expect to gain social visibility from their content (Bucher 2012), which is adapted and optimised to reach as many followers as possible. A performative predisposition for being continuously on display emerges from the diaries (Codeluppi 2014). Sharing information about themselves implies giving credit to the judgement of others, the very judgement required by those sharing practices (Bucher 2012; Marwick 2013). Thus, social media users expect

visibility as a reward and when they do not obtain it, the outcome is disappointing (Bucher 2012).

I published a new picture on my profile, and I spent the following hours checking how many likes and comments it got. I have to admit that every time I decide to update my Instagram profile, I'm almost obsessed with how many likes that picture will get. I cannot avoid it [...] my mood can vary according to the notifications I receive. (Siena, female)

Metric power manages us (Beer 2016) and convinces us that there are no alternatives. Receiving attention and visibility is a constant reward for scrolling, sharing and producing content. Content is optimised for digital platforms, performances measured with metrics, satisfaction expressed with 'likes' (Gillespie 2014). The subject is satisfied for an instant, for a post produced or consumed, then, it is immediately time to search for a new gratification, within a recursive feedback loop.

Algorithmic Prosumers

Given this scenario, we argue that users on digital platforms can be framed as *algorithmic prosumers*. Both consumption (e.g. scrolling) and production (sharing and producing content) practices are algorithmic as they both feed data extraction and content recommendation procedures. Thus, the relationship between individuals and algorithms is interdependent: on the one hand, users are fed personalised content by algorithms; on the other hand, users feed platforms by sharing and producing their own content.

I can confirm that all is algorithmic, nothing is casual. Liking a picture with 'a nice view' will result in at least three pictures with 'a nice view' appearing in your Instagram feed the next day. It's a never-ending loop, in which we users are the engine and the gears – we have a prosumer role. (Siena, female)

Although only social media platforms feature user-generated-content, individuals may also be framed as algorithmic prosumers even on platforms that do not allow sharing practices. When users consume content (consciously or not), they produce data that platforms collect, analyse and exploit to elaborate their predictively inspired content and assist in their placement and selling of advertisements (Zuboff 2019).

Since the 1970s, companies have involved consumers in productive processes (Codeluppi 2012), while the term 'prosumer' emerged in the 1980s (Toffler 1980) to indicate the idea of consumers working for free for companies and collaboratively participating in the design of goods and marketing strategies (Ritzer and Jurgenson 2010). Recent contributions, such as from Zuboff (2019)

and Couldry and Mejias (2019a), completely disprove the idea that there was any ‘inability of capitalists to control contemporary prosumers’ (Ritzer and Jurgenson 2010, 21) and they highlight what ‘the costs of connection’ are (Couldry and Mejias 2019b).

On the internet, data about user behaviour is modelled through predictive statistical analyses, which combine different data points to retain individuals within their data loops as much as they can. Search preferences, selected content, every click and second spent lingering on a post is tracked and combined to favour further interactions between users and content, as well as with other users. Not only social media, but every other subscription platform (video and music streaming services, booking apps, etc.) applies the same datafication and surveillance logics to offer personalised content. Thus, we argue that individuals can be framed as algorithmic prosumers as they ceaselessly participate in the improving and shaping of algorithmic processes. The selection of content by personalised media is based on prior user behaviour, which is combined with other data to produce algorithmic outputs, hence, individuals produce data while consuming, and these data inputs will be crucial for their future content consumption and production practices.

I realise that it's not possible to do without these devices that can ruin your life, but, at the same time, they make it better given their speed at connecting you with a public... (Milan, female)

In certain cases, individuals even seem aware of some of the surveillance logics underpinning algorithmic platforms. However, little is done to resist to them. In this scenario, algorithmic media are considered inevitable features of everyday life (Markham 2021) and they emerge as fundamental for the definition of individuals’ algorithmic subjectivity. Indeed, users circulate content, join networks in order to participate in collective conversations and to express their opinions and ideas, establish connections with other users, and so on. Users emerge as algorithmic prosumers who both consume and produce content to feed an algorithmic engine, that, in turn, continues working in order to keep them glued to the screen and exploit every possible minute of their everyday life.

Conclusions

Digital platforms have become a ubiquitous and infrastructural feature of everyday life. Today, the boundaries of platforms are merged technical and symbolic fields that delimit specific practices, ways of relating and preside over new processes of signification of ‘being together’. The construction and management of sociality that passes through platforms is not defined by a simple transfer of pre-existing dynamics into technological spaces, but it is shaped by the affordances of the platforms themselves, which circumscribe the possibilities and

forms of relationships between individuals. Within this framework, platforms emerge as intermediaries that are *not* neutral because their infrastructures embed specific values and ways of relating to the world.

By drawing on 80 auto-ethnographic diaries of Italian students regarding their use of algorithmic media, this study analysed media consumption, content production and sharing practices on digital platforms. Specifically, we argued that the users of digital platforms can be framed as algorithmic prosumers. First, algorithmic consumption was analysed. From the diaries, it emerged that individuals continuously scroll through recommendations on their smartphones which are algorithmically personalised. Here the algorithm alleviates the burden of choice and helps individuals fill daily moments with a never-ending feed of content. In this scenario, individuals entrust their time to recursive algorithmic logics, which exert a pastoral power (Foucault 2007) on users, by which people are individuated and subjectified. Algorithms seem to proffer benevolent guidance and to be capable of guiding individuals in their decision making, always able to offer the ideal choice.

Next, we focused on algorithmic production. It emerged that on social media users perform micro-celebrity practices (Marwick and boyd 2010), and use a form of computational thinking to make sense of their behaviour. On social media it is necessary to be on display (Codeluppi 2012); measured performances are the rule, and metrics appear as an unavoidable feature of social reality (Beer 2016). Thus, it emerged that individuals think about themselves and their relationships via tracked metrics within a neoliberal logic that is encoded into the platform.

Finally, we argued for the merits of understanding users as algorithmic prosumers. On digital platforms, consumption, as well as production, are algorithmic practices that foster datafication and capitalist surveillance logics: users feed algorithmic media and are continuously fed by them within a recursive loop. Moreover, we make the case that individuals are also prosumers on platforms that do not overtly highlight sharing activities. Indeed, data is produced and then used for the exploitation of behavioural predictions (e.g. Zuboff 2019) on every subscription platform, not only social media. If in the 1980s prosumers used to participate in corporate initiatives to collaborate with companies, today individuals constantly participate (often unconsciously) in the remodelling, adjustment and calibration of algorithmic procedures, thereby becoming algorithmic prosumers.

What emerges in this context is an individual whose subjectivity is strictly connected to and enacted by computational processes. Platforms offer content that encourages certain processes of subjectification (see Bucher 2018). In turn, a user's subjectivity becomes highly affected by the content offered by platforms and, at the same time, it remains at the service of these platforms. Given these findings, we suggest that future and cross-cultural research continues focusing on the practices of users to get a better understanding of the relationships

between subjects and algorithmic media. Platforms have become a pervasive and often unavoidable feature of our everyday life. To comprehend how they affect social life not only tells us something important about platforms, but also about ourselves.

References

- Airoldi, M. and Gambetta, D. 2018. Sul mito della neutralità algoritmica. *The Lab's Quarterly*, 20(4), 25–46.
- Airoldi, M. and Rokka, J. 2019. *Algorithmic Consumer Cultures*. Paper presented at Interpretive Consumer Research Workshop, 9–10 May 2019, Lyon.
- Barreneche, C. and Wilken, R. 2015. Platform Specificity and the Politics of Location Data Extraction. *European Journal of Cultural Studies*, 18(4–5), 497–513.
- Beer, D. 2013. *Popular Culture and New Media: The Politics of Circulation*. Palgrave Macmillan.
- Beer, D. 2016. *Metric Power*. Palgrave Macmillan.
- Beer, D. 2017. The Social Power of Algorithms. *Information, Communication & Society*, 20(1), 1–13.
- Bonini, T. and Gandini, A. 2019. ‘First Week is Editorial, Second Week is Algorithmic’: Platform Gatekeepers and the Platformization of Music Curation. *Social Media + Society*, 5(4). <https://doi.org/10.1177/2056305119880006>.
- Bruns, A. 2008. *Blogs, Wikipedia, Second Life and Beyond: From Production to Producership*. Peter Lang.
- 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. 2016. Neither Black Nor Box: Ways of Knowing Algorithms. In S. Kubitschko and A. Kaun (Eds.), *Innovative Methods in Media and Communication Research* (pp. 81–98). Palgrave Macmillan.
- Bucher, T. 2017. The Algorithmic Imaginary: Exploring the Ordinary Affects of Facebook Algorithms. *Information, Communication & Society*, 20(1), 30–44.
- Bucher, T. 2018. *If... Then. Algorithmic Power and Politics*. Oxford University Press.
- Caliandro, A. and Gandini, A. 2017. *Qualitative Research in Digital Environments: A Research Toolkit*. Routledge.
- Cheney-Lippold, J. 2011. A New Algorithmic Identity: Soft Biopolitics and the Modulation of Control. *Theory, Culture & Society*, 28(6), 164–181.
- Cheney-Lippold, J. 2017. *We Are Data: Algorithms and the Making of Our Digital Selves*. New York University Press.
- Chicchi, F. 2020. Beyond the ‘Salary Institution’: On the ‘Society of Performance’ and the Platformisation of the Employment Relationship. *Work Organisation, Labour & Globalisation*, 14(1), 15–31.

- Chicchi, F. and Simone, A. 2017. *La società della prestazione*. Ediesse.
- Cluley, R. and Brown, S. D. 2015. The Dividualised Consumer: Sketching the New Mask of the Consumer. *Journal of Marketing Management*, 31(1–2), 107–122.
- Codeluppi, V. 2012. *Ipermondo. Dieci chiavi per capire il presente*. Laterza.
- Codeluppi, V. 2014. *Tutti divi: vivere in vetrina*. Laterza.
- Cohn, J. 2019. *The Burden of Choice: Recommendations, Subversion, and Algorithmic Culture*. Rutgers University Press.
- Corbin, J. and Strauss, A. 2008. *Basics of Qualitative Research*. Sage.
- Couldry, N. and Hepp, A. 2017. *The Mediated Construction of Reality*. Polity Press.
- Couldry, N. and Mejias, U. A. 2019a. Data Colonialism: Rethinking Big Data's Relation to the Contemporary Subject. *Television & New Media*, 20(4), 336–349.
- Couldry, N. and Mejias, U. A. 2019b. *The Costs of Connection: How Data is Colonizing Human Life and Appropriating it for Capitalism*. Stanford University Press.
- Davies, H. C. 2018. Redefining Filter Bubbles as (Escapable) Socio-Technical Recursion. *Sociological Research Online*, 23(3), 637–654.
- Elmer, G. 2004. *Profiling Machines: Mapping the Personal Information Economy*. MIT Press.
- Esлами, M. et al. 2015. 'I Always Assumed That I Wasn't Really That Close to [Her]': Reasoning about Invisible Algorithms in News Feeds. *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems*, April 2015 (pp. 153–162). Association for Computer Machinery.
- Foucault, M. 2007. *Security, Territory, Population: Lectures at the Collège de France, 1977–1978*. Palgrave Macmillan.
- Fuchs, C., Boersma, K., Albrechtslund, A., and Sandoval, M. 2012. Introduction: Internet and Surveillance. In C. Fuchs, K. Boersma, A. Albrechtslund, and M. Sandoval (Eds.), *Internet and Surveillance: The Challenges of Web 2.0 and Social Media* (pp. 1–28). Routledge.
- Geiger, R. S. 2017. Beyond Opening up the Black Box: Investigating the Role of Algorithmic Systems in Wikipedian Organizational Culture. *Big Data & Society*, 4(2), 1–14.
- Geertz, C. 1973. *The Interpretation of Culture: Selected Essays*. Basic Books.
- Gillespie, T. 2010. The Politics of 'Platforms'. *New Media & Society*, 12(3), 347–364.
- Gillespie, T. 2014. The Relevance of Algorithms. In T. Gillespie, P. Boczkowski, and K. Foot (Eds.), *Media Technologies: Essays on Communication, Materiality, and Society* (pp. 167–194). MIT Press.
- Gillespie, T. 2015. Platforms Intervene. In *Social Media + Society*, 1(1), 1–2.
- Gillespie, T. 2016. Algorithm. In B. Peters (Eds.), *Digital Keywords: A Vocabulary of Information Society and Culture* (pp. 18–30). Princeton University Press.
- Gillespie, T. 2017. The Platform Metaphor, Revisited. *Culture Digitally*, 24 August. Retrieved from: <http://culturedigitally.org/2017/08/platform-metaphor>.

- Gran, A.-B., Booth, P., and Bucher, T. 2020. To Be or Not To Be Algorithm Aware: A Question of a New Digital Divide? *Information, Communication & Society*, 24(12), 1779–1796. <https://doi.org/10.1080/1369118X.2020.1736124>.
- Greene, D. and Joseph, D. 2015. The Digital Spatial Fix. *tripleC: Communication, Capitalism and Critique*, 13(2), 223–247. <https://doi.org/10.31269/triplec.v13i2.659>.
- Hallinan, B. and Striphas, T. 2016. Recommended for You: The Netflix Prize and the Production of Algorithmic Culture. *New Media & Society*, 18(1), 117–137.
- Hargittai, E. et al. 2020. Black Box Measures? How to Study People’s Algorithm Skills. *Information, Communication & Society*, 23(5), 764–775.
- Heath, A. 2015. Spotify is Getting Unbelievably Good at Picking Music—Here’s an Inside Look at How. *Business Insider*, 3 September. Retrieved from: <http://www.businessinsider.com/insidespotify-and-the-future-of-music-streaming>.
- Helmond, A. 2015. The Platformization of the Web: Making Web Data Platform Ready. *Social Media + Society*, 1(2). <https://doi.org/10.1177/2056305115603080>
- Kitchin, R. and Dodge, M. 2011. *Code/Space: Software and Everyday Life*. MIT Press.
- Kitchin, R. 2017. Thinking Critically About and Researching Algorithms. *Information, Communication & Society*, 20(1), 14–29.
- Lomborg, S. and Kapsch, P. H. 2020. Decoding Algorithms. *Media, Culture & Society*, 42(5), 745–761.
- Lüders, M. 2020. Ubiquitous Tunes, Virtuous Archiving and Catering for Algorithms: The Tethered Affairs of People and Music Streaming Services. *Information, Communication & Society*, 24(15), 2342–2358.
- Lupton, D. 2016. The Diverse Domains of Quantified Selves: Self-Tracking Modes and Dataveillance. *Economy and Society*, 45(1), 101–122.
- Lury, C. and Day, S. 2019. Algorithmic Personalization as a Mode of Individuation. *Theory, Culture & Society*, 36(2), 17–37.
- Markham, A. N. 2019. Critical Pedagogy as a Response to Datafication. *Qualitative Inquiry*, 25(8), 754–760.
- Markham, A. N. 2020. Taking Data Literacy to the Streets: Critical Pedagogy in the Public Sphere. *Qualitative Inquiry*, 26(2), 227–237.
- Markham, A. N. 2021. The Limits of the Imaginary: Challenges to Intervening in Future Speculations of Memory, Data, and Algorithms. *New Media & Society*, 23(2), 382–405.
- Markham, A. N., Stavrova, S., and Schlüter, M. 2019. Netflix, Imagined Affordances, and the Illusion of Control. In T. Plothe and A. M. Buck (Eds.), *Netflix at the Nexus. Content, Practice, and Production in the Age of Streaming Television* (pp. 29–46). Peter Lang.
- Marwick, A. E. 2013. *Status Update: Celebrity, Publicity, and Branding in the Social Media Age*. Yale University Press.

- Marwick, A. E. and boyd, d. 2010. I Tweet Honestly, I Tweet Passionately: Twitter Users, Context Collapse, and the Imagined Audience. *New Media & Society*, 13(1), 114–133.
- Mezzadra, S. and Neilson, B. 2017. On the Multiple Frontiers of Extraction: Excavating Contemporary Capitalism. *Cultural Studies*, 31(2–3), 85–204.
- Nagy, P. and Neff, G. 2015. Imagined Affordance: Reconstructing a Keyword for Communication Theory. *Social Media + Society*, 1(2). <https://doi.org/10.1177/2056305115603385>.
- Noble, S. U. 2018. *Algorithms of Oppression: How Search Engines Reinforce Racism*. New York University Press.
- Pariser, E. 2011. *The Filter Bubble: What the Internet is Hiding From You*. Penguin Books.
- Pasquale, F. 2015a. The Algorithmic Self. *The Hedgehog Review*, 17(1), 30–45.
- Pasquale, F. 2015b. *The Black Box Society: The Secret Algorithms That Control Money and Information*. Harvard University Press.
- Prey, R. 2018. Nothing Personal: Algorithmic Individuation on Music Streaming Platforms. *Media, Culture & Society*, 40(7), 1086–1100.
- Rieder, B., Matamoros-Fernández, A., and Coromina, Ò. 2018. From Ranking Algorithms to ‘Ranking Cultures’: Investigating the Modulation of Visibility in YouTube Search Results. *Convergence*, 24(1), 50–68.
- Risi, E., Bonini, T., and Pronzato, R. 2020. Algorithmic Media in Everyday Life: An Experience with Auto-Ethnographic Student Diaries. *Etnografia e ricerca qualitativa*, 3, 407–422.
- Ritzer, G. and Jurgenson, N. 2010. Production, Consumption, Prosumption: The Nature of Capitalism in the Age of the Digital ‘Prosumer’. *Journal of Consumer Culture*, 10(1), 13–36.
- Ruppert, E. 2013. Population Objects: Interpassive Subjects. *Sociology*, 45(2), 218–233.
- Seaver, N. 2017. Algorithms as Culture: Some Tactics for the Ethnography of Algorithmic Systems. *Big Data & Society*, 4(2), 1–12.
- Seaver, N. 2018a. Captivating Algorithms: Recommender Systems as Traps. *Journal of Material Culture*, 24(4), 421–436. <https://doi.org/10.1177/1359183518820366>.
- Seaver, N. 2018b. What Should an Anthropology of Algorithms Do? *Cultural Anthropology*, 33(3), 375–385.
- Siles, I., Espinoza-Rojas, J., Naranjo, A., and Tristán, M. F. 2019. The Mutual Domestication of Users and Algorithmic Recommendations on Netflix. *Communication, Culture & Critique*, 12(4), 499–518.
- Silverstone, R. 1994. *Television and Everyday Life*. Routledge.
- Srnicek, N. 2016. *Platform Capitalism*. Polity Press.
- Striphas, T. 2015. Algorithmic Culture. *European Journal of Cultural Studies*, 18(4–5), 395–412.
- Thrift, N. 2005. *Knowing Capitalism*. Sage.
- Toffler, A. 1980. *The Third Wave*. William Morrow.

- van Dijck, J. and Poell, T. 2013. Understanding Social Media Logic. *Media and Communication*, 1(1), 2–14.
- van Dijck, J., Poell, T., and de Waal, M. 2018. *The Platform Society: Public Values in a Connective World*. Oxford University Press.
- Zuboff, S. 2019. *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*. Public Affairs.