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Sörum, Niklas; Fuentes, Christian

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PO Box 117
221 00 Lund
+46 46-222 00 00



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How sociotechnical imaginaries shape consumers' experiences of and responses to commercial data collection practices

Niklas Sörum^{a,b} and Christian Fuentes  ^{a*}

^aFaculty of Textiles, Engineering and Business (including The Swedish School of Textiles), Department of Business Administration and Textile Management, University of Borås, Borås, Sweden; ^bGothenburg Research Institute, GRI, Centre for Consumer Research, CCR, University of Gothenburg, Gothenburg, Sweden

ABSTRACT

How is the ongoing “datafication” in society experienced by consumers? Critical discussions regarding the impact of datafication on consumers seldom study consumers’ actual experiences. Conversely, the studies that do exist of consumers and their experiences of datafication tend to take an individualistic approach, arguing that how consumers experience and respond to the ongoing datafication is the result of their individual psychological make-up or the result of processes of cost–benefit calculations. Against that background, this article will instead show that the ways in which consumers experience and respond to datafication is linked to a number of broader sociotechnical imaginaries. Based on in-depth user interviews and drawing on previous work on sociotechnical imaginaries, this article develops an analysis of consumers’ multiple imaginaries of data collection practices. Findings show that how consumers approach data collection operations is shaped by sociotechnical imaginaries that were both individually and collectively performed by consumers interacting with and using data-collecting devices.

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Digital data; dataveillance; imaginaries; datafication; personalization

Introduction

Through data collection practices users are monitored or surveilled in a broad range of ways. In this new digital landscape information is gathered from multiple sources combining and interconnecting different data-collecting devices (van Dijck 2013). People are tracked via product sensors, wearable devices that record physical activity, GPS location data tracking devices, social media traces, smart speakers and assistants, and shopping websites. The data collected is used to classify users and generate purchase predictions, product recommendations and suggestions, customized news-feeds and other forms of personalization. For example, Netflix puts together a large variety of user data (online behaviour, time of day a user watches a show, how long he/she watched for, users’ viewing histories, other members’ tastes, various third-party databases, the device he/she uses, etc.) in order to personalize the user experience via individualized viewing lists, customized ads and targeted recommendations (Wired 2021). Spotify uses similar strategies, including geo-location data and physical activity data (Spotify 2021). How is this ongoing “datafication” (van Dijck 2014) experienced by consumers?

CONTACT Niklas Sörum  niklas.sorum@hb.se  Tolvskillingsgatan 4C, 414 82, Gothenburg, Sweden

*Present address: Department of Service Management and Service Studies, University of Lund, Lund, Sweden.

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Surprisingly, given the importance attributed to this issue by industry and academics alike, this question has not been the subject of much empirical work. To be clear, there is no shortage of critical discussion regarding the impact of datafication for understanding identity (Cheney-Lippold 2011), subjectivity (Couldry and Mejias 2019), social relations (Zuboff 2019), and power and agency issues (Kennedy, Poell, and van Dijck 2015) and the role played by companies in making this possible by harvesting digital data, i.e. forms of “dataveillance” (Clarke and Greenleaf 2017). However, few seem to deem it necessary to study consumers’ actual experiences of and responses to this broad sociotechnical process supposedly changing their identity, social relations and agency. Moreover, studies that do exist of consumers and their experiences of datafication tend mainly to take an individualistic approach, drawing on micro-economic theory (cost–benefit analysis, privacy calculus theory) and psychological constructs to quantitatively measure users’ levels of awareness, attitudes and feelings (see Turow, McGuigan, and Maris 2015; Hargittai and Marwick 2016; Draper 2017; Plangger and Montecchi 2020; Puntoni et al. 2020). This research often shows that consumers feel helpless, overwhelmed by, or at risk from the complexities of datafication and the power of companies engaged in this form of dataveillance.

While this research is not without benefits, it takes an overly individualistic approach to consumers and consumption, failing to consider that consumption is shaped by broader sociocultural and sociotechnical processes. In this article we will argue that how consumers experience and respond to ongoing datafication is not entirely a result of their individual psychological make-up or merely the result of the process of cost–benefit calculations. Instead, we contend, the ways in which consumers experience and respond to datafication is linked to a number of broader sociotechnical imaginaries (Lupton 2020). By social imaginaries we refer to collectively or publicly held “constellations of speculation and narratives that draw on understandings, norms, values and experiences of the world” (Lupton 2020, 15). Previous studies within consumption research have applied social imaginary theory in order to provide insights into consumers’ sense making processes and experiences as attached to specific practices (see Bajde 2012). By applying the concept of imaginary we aim to theorize the sociocultural and contextual dimensions of specific practices through empirical accounts of imaginative conceptions as expressed and invoked by consumers (Lehtiniemi 2020). Imaginaries could be described as cultural resources for making sense and guiding people’s interpretation of a practice, an experience or a new technology. The aim of this article is to provide an analysis of how data collecting operations in contemporary consumer culture are experienced by consumers and socioculturally shaped by prevailing sociotechnical imaginaries.

Empirically, our study sets out to describe and understand how contemporary consumers imagine data collection practices and the ways that these imaginaries impact on consumers’ relationships with data collecting technologies. We explore how consumers come to know, feel, evaluate and imagine the workings of data collection operations in daily life. We are interested in understanding if/whether consumers develop positive expectations and dependence on data collecting practices; or conversely, oppose data collecting practices. If the latter is the case, we also want to know through what means and strategies they interacted with digital devices in order to negotiate, circumscribe or otherwise obstruct data collection practices. This research answers recent calls for more empirical studies of consumers’ everyday experiences of data collection by means of applying sociocultural scholarship in order to examine datafication and dataveillance (Puntoni et al. 2020). In what follows, we argue that the examination of sociotechnical imaginaries of data collection provides novel insights about users’ relationships to contemporary marketing practices as a field of struggle over the collective imagination. This struggle includes participants’ interpretation of dataveillance devices as well as the material practices that have evolved from consumers’ ongoing interactions with data-tracking devices. Analytically, we disclose the importance of understanding the politics and conflicts of existing data imaginaries shaping consumers interpretation and experience of data-collection practices. We offer a novel way of theorizing the power dynamics of multiple sociotechnical imaginaries of data collection practices not previously applied in consumer research. This is a theoretical contribution to sociocultural approaches to understanding consumers’ data

collection practices. Our approach provides conceptual tools for critical engagement with future visions of data collection and how these might be changed.

We begin the article by offering a literature overview of research on the roles of digital data collection in the data economy in general and especially in contemporary marketing practice. Then, we present previous research focusing on users' relationships with data collection for commercial purposes. Next, we present our framework conceptualizing consumers' data collection experiences as mediated through sociotechnical imaginaries. Following our analytical framework, we present the study, its methodological framing and data collection practices conducted. Last, we present our empirical case and findings, closing with a discussion that includes the theoretical and societal implications of our research.

Literature overview

Digital data collection and the data economy: mechanisms, discourse and openings

Data has been both highlighted as the “new gold” and, more critically, acclaimed as a new key economic “raw material” or “resource” (see König 2017). As datafication makes individual behaviours measurable, and affords a seemingly objective means of calculation, marketers no longer consider digital technologies purely as a new communication channel, but also as market devices for calculating consumers and developing new marketing techniques and strategies (Beauvisage and Mellet 2020; Lehtiniemi 2020). These methods are often referred to as forms of “predictive marketing” and contain the promises, visions and ideals of highly individualized objective consumer knowledge. Crain (2018) considers this commodification of personal data to be at the root of power imbalances, concluding that, as part of a dominant imaginary, the commodification of data is taken for granted. As data economy researcher Lehtiniemi puts it: “Supported by these beliefs of objectivity and neutrality, the promises of value and competitive advantage have turned datafication into business-as-usual mode of operation in the data economy” (2020, 30). These mechanisms and this discourse have been criticized by scholars working in fields of critical data studies and economic sociology who draw attention to the negative social, cultural and political implications of the data-based economy and practices (Iliadis and Russo 2016).

Central to many of these critical studies is the discourse of “dataveillance”; a term that originally describes ways in which digital personal information is used for monitoring people and positioning users or consumers as passive data providers (Clarke and Greenleaf 2017). These studies have focused on the practices of “data harvesting,” i.e. the creation of data scoring and profiling for specific marketing purposes such as targeted advertising, personalization, recommendation systems or other commercial applications (see, for example, Beer 2016; Lury and Day 2019; Kotras 2020). Previous research has also revealed how digital data-based, often algorithmic, processes of using and managing data (i.e. collecting user data and classifying data subjects via, for example, advertising, customized offerings, pricing) are often systematically biased towards specific groups (see Puntoni et al. 2020 for an overview of this research). Some authors even theorize these practices and relations in terms of “data colonialism” (Couldry and Mejias 2019), thus promoting the notion of the largescale exploitation of users and their personal information or data (see also Zuboff 2019).

These dystopian conceptualizations of living in the age of dataveillance, or datafication, share many aspects with Zuboff's book *The Age of Surveillance Capitalism* (2019), in which she argues that these technologies undermine user autonomy and agency. Similar dystopian concerns could be labelled as the “surveillance society narrative”; a narrative positioning the user as surveilled and trapped in a system (Ellis, Harper, and Tucker 2013, 2016). In these studies, there is little recognition of the fact that people might, for example, benefit from data practices, that they might develop different relationships, and have various forms of experiences from interacting with dataveillance technologies in their everyday lives. Nor does this research allow for the possibility that rather than passively accepting offers made by data technologies, they might actively incorporate

information and adjust their mundane practices accordingly (see, for example, Lupton 2017; Lehtiniemi 2020). Anthropologically inspired research argues that dataveillance infrastructures and practices have become normalized to the extent that they limit thought, feeling and experience, making it also difficult to imagine alternative ways of relating to datafication. In the age of dataveillance, this research argues, people are resigned to the present state of affairs. Draper and Turow (2019) suggest, on the basis of their studies, that people might share a pervasive feeling that corporate data arrangements are unfair while simultaneously feeling a sense of resignation over the matter (Turow, McGuigan, and Maris 2015). Hoffmann, Lutz, and Ranzini (2016) propose that even though recognition of privacy risks and uncertainty, mistrust and lack of power exist among users, the current data condition renders privacy protection behaviour subjectively futile (Hoffmann, Lutz, and Ranzini 2016).

In contrast to this bleak picture, Lehtiniemi and Ruckenstein (2019) draw on an economic sociological approach to show that current dataveillance practices are also being challenged by data activist movements articulating alternative visions and practices for both the social use of digital data and technological innovation. Such initiatives could thus provide novel understanding of both data collection and the role of participants in the data economy (Lehtiniemi and Ruckenstein 2019).

Users' relationships with commercial data collection

User studies focusing on data collection have mainly analysed individual user's experiences of being alienated from dataveillance technologies. Concepts like "digital resignation" (Draper and Turow 2019), "online apathy" (Hargittai and Marwick 2016) and "privacy calculus" (Plangger and Montecchi 2020) have been developed to make sense of the so called "privacy paradox" (Barnes 2006). Some studies in this field of research describe this tendency in terms of users losing their sense of agency and control over their own data (Kennedy, Poell, and van Dijck 2015). Far removed from the view of the techtopian goldrush versions of datafication, participants in user studies have been shown to experience unease, feel controlled and, on some occasions, be angered by the processes of data collection and data classification they were subjected to (Petty, Saba, and Lewis 2018).

However, studies also show that while many consumers express concerns, to varying degrees, regarding being profiled and targeted for commercial purposes, the majority continued to use online platforms and shopping facilities, because of the many benefits provided by these in the context of everyday life (see Pangrazio and Selwyn 2018; Ruckenstein and Granroth 2020). Similarly, Lomborg and Kapsch's show in their (2019) study of Danes and their "algorithmic imaginaries." that consumers were both aware of and positive towards "algorithmic operations" – i.e. data collection, recommendations, etc. – seeing these not as invasive threats to their privacy, as proposed in the dataveillance literature, but often as convenient operators efficiently working in the background. These studies thus contest the proposed passivity and powerlessness of consumers described in macro approaches to digital data markets.

In addition, there is a stream of research which shows that users experience datafication in multiple and often conflicting ways. Ruckenstein and Granroth's (2020) study of responses to targeted advertising on digital platforms is a good example of this multiplicity. Their study showed that, on the one hand, consumers expected advertising to be personalized, customized and explicitly based on their data, while on the other, the very same people were also highly critical of advertising impinging on their private lives and threatening their sense of intimacy. User studies within the marketing field report somewhat similar findings. For example, Plangger and Montecchi (2020) develop a model of consumer attitude archetypes consisting of four clusters of attitudes towards dataveillance based on levels of consumer privacy and consumer value concerns: pragmatists, protectionists, capitalists and apathists. These archetypes range from those positively inclined towards data collection as a benefit, to those showing more concern to protect themselves from data collection and to those customers who were relatively unconcerned and therefore apathetic about their data being collected.

In summary, although producing highly insightful and important results, previous user studies have taken mainly in individualistic approach seeing consumers experiences of and responses to data collection as the result of consumers individual psychological make-up or the result of processes of cost–benefit calculations. Although this approach is now being challenged by sociological (or sociologically inspired) research into consumers experiences of datafication, the broader processes shaping the ways that consumers make sense out of and interpret datafication and dataveillance remain a relatively less investigated area of research. In this paper, we aim to contribute to this nascent field of inquiry by applying the concept of sociotechnical imaginaries to bring to the fore the broader sociocultural processes shaping consumers various approaches to datafication.

A conceptual and analytical approach: imaginaries of datafication and data collection

In order to make sense analytically of datafication experiences, we build upon Lupton's (2020) approach and the concept of social imaginaries which direct our attention to the ways in which users conceptualize these opaque processes. Social imaginaries are defined as collectively or publicly held "constellations of speculations and narratives that draw on understandings, norms, values and experiences of the world" (Lupton 2020, 15). This "lived experiential perspective" (Lupton 2020) helps to shed light on the affective, cognitive, sociocultural and material aspects of technology consumption. Previous studies within consumption research have built explicitly on Taylor's work on modern social imaginaries (Taylor 2004) in order to provide insights into consumers' sense making processes and experiences as attached to specific practices (see Bajde 2012). Bajde (2012) for example maps the contesting imaginaries that give shape to gift giving practices in order to disclose how gift giving is shaped by sociocultural forces in specific historic circumstances. In these studies consumers' meanings are understood and interpreted as based on "the individual's broader conceptions of society and the needs, rights and obligations of its constituents" (Bajde 2012, 359).

The concept of social imaginaries is used to analyse individuals' meanings, imagination and experiences with the aim of extending the theorizing of sociocultural and contextual dimensions (see also Lehtiniemi 2020). The focus is set on disclosing the role(s) that imaginaries play when people construct meaning; thus, imaginaries could be described as cultural models (Bajde 2012) or cultural resources for making sense and to guide people's interpretation of a practice, experience or for example a new technology (Jasanoff and Kim 2013). The resulting analysis often generates empirical accounts of multiple and even contesting imaginative conceptions as expressed and invoked by consumers. As proposed by Taylor (2004) and Bajde (2012), social imaginaries incorporate conceptions of how we fit together and the expectations that we have of one another, but also factual (what is) and normative conceptions (what should be); i.e. current experience as well as conceptions of "good society" (and "bad society"). Importantly, theories of social imaginaries propose that imaginaries are both social and individual, embodied in institutions and practices, and expressed through individual thoughts, feelings and behaviour. Through exploring the concrete experiences and conceptualizations of individuals we can disclose the wider circulating collective imaginaries that individuals draw on for liberating meaning (Bajde 2012).

Outside of consumption research, literature applying the concept of *sociotechnical* imaginaries argues that these are 'powerful cultural resources' for making sense of and enacting new technologies (Jasanoff and Kim 2013, 190). The main difference between the concepts of social imaginaries and sociotechnical imaginaries is that sociotechnical imaginaries are concerned with science and technology and social imaginaries are not necessarily about science and technology but could be socially constructed, taken-for-granted meanings about events, places, and people in general. Consequently, sociotechnical imaginaries actively contribute towards shaping consumer or user responses and are materialized in practices related to for example digital data, data collection and innovation (Lehtiniemi 2020). Mager and Katzenbach (2020) addressed the role of future imaginaries in the making and governing of digital technology, arguing that self-descriptions of

technologies like Blockchain and self-driving cars illustrate how software developers and technology companies dig into a rich pool of cultural norms, visions and values to support digital tools and artefacts. There are always multiple imaginaries in circulation that are more or less powerful. One widely referenced study on visions of nuclear energy in the USA and South Korea indicated multiple imaginaries in each country that change and adapt (Jasanoff and Kim 2009). Scholars have also analysed sociotechnical imaginaries in EU digital policy and identified different imaginaries in the context of search engines (Mager 2017) and big data solutions (Rieder 2018). These studies show how imaginaries travel into and transform in national socio-political contexts and communities of practice (Mager 2018).

Much research on sociotechnical imaginaries tends to focus on novel scientific and technological developments, as well as how these are discussed in news media and in corporate, government and policy documents, in addition to popular culture (Jasanoff and Kim 2013; Nagy and Neff 2015). We acknowledge that widely and publicly circulating imaginaries contribute towards imaginaries being applied and held by consumers as part of what shapes their experiences and understanding of and responses to digital technologies; but in our analyses we focus on imaginaries that consumers or users express and reveal in relation to their lived experiences specific to data collecting operations (cf. Lupton 2020). Our analytical approach takes its inspiration from previous studies using comparisons of imaginaries as an analytical tool (Jasanoff 2015; Lehtiniemi 2020). Comparisons in this study are made between the different data collection imaginaries that consumers express or invoke, and thus our approach is based on the notion of multiple imaginaries. According to Jasanoff (2015), multiple imaginaries can coexist in a society and be in a state of tension with one another. However, some imaginaries tend to become both dominant and embedded in how societal actors operate on a more general level (see Lehtiniemi 2020). Imaginaries criticizing or working against hegemonic ones could be considered “counter-imaginaries” or “alternative imaginaries”; i.e. imaginaries holding potential alternatives to the dominant ones.

Theoretically, the notion of counter- or alternative sociotechnical imaginaries is an expansion of previous work within consumption research, building on theories of imaginaries that allow us to analyse and discuss *the politics* of conflicting imaginaries in novel ways not supported by previous conceptualizations. In this sense, we both expand the theoretical discussion within consumption research based on social imaginary theories and enable a critical investigation of potential societal implications of existing sociotechnical imaginaries. Specifically, regarding digital processes like data collecting operations, often considered opaque and immaterial and therefore difficult for consumers to detect through direct experience, those consumers may respond to publicly-available imaginaries but may also draw on their lived experiences. According to Lupton (2020), this makes imaginaries a tool for recognizing user imaginaries as the “cultural resources” utilized for making sense of, and enacting, new technologies and thus shaping consumer responses that are also materialized in practice. This approach to consumers’ data collection experiences also includes paying attention to the role of objects in these experiences and arguing that they have propensities and insidencies – albeit not consciously intended – which encourage other actors to assemble with them in specific ways that may or may not be realized. Theoretically, this framework allows the analysis of consumer experiences in terms of being shaped by social-technical imaginaries and the outcome of human-technological assemblages.¹ Finally, while sociotechnical imaginaries share some characteristics with other social scientific concepts used in studying collective beliefs,

¹As Lupton (2020) argues, this approach represents imaginaries as generated with and through human-nonhuman assemblages. The researcher thus needs to pay attention to how different elements of such configurations do something and identify what they can do in order to shape consumer experiences. For example, the capacity of digital devices to shape user engagement, thus influencing the agency of the consumer, can be detected through devices’ ability to enable and constrain us to do specific things; connect to friends, extend our memory, provide us with feedback, and shape how we do things and enable us to achieve different goals with impacts on identity. For example, an app like *Runkeeper* affords users to become better runners and thus actively co-shape identity and experience. Another example could be smart assistants like *Google Home* that afford parents to enhance their parenting abilities through asking the device questions about homework, playing games together using the device, and to share funny social experiences together with their families.

such as master narratives, discourses or ideologies, there are important differences: A master narrative is often more uniform in nature and, importantly, seldom tied to a notion of specified goals; Discourse is often focused on text and language and might not explicitly include the normative and prescriptive element of sociotechnical imaginaries; The concept of ideology usually excludes material constructs and is often adapted to social structures and power more so than sociotechnical imaginaries. The concept of sociotechnical imaginary enables us to analyse the interplay of scientific and technological developments with dimensions of markets and social life. And sociotechnical imaginaries consider how visions of futures related to science and technology, including data-collecting technologies, necessarily imply wider visions of social life, risks, benefits and notions of “the good life” (Jasanoff 2011).

A qualitative interview study of consumers’ experiences of data collection

Research design and sample

This article presents findings from a research project in which Swedish adults were invited to consider personal data collection, data classification, data profiling and the related algorithmic processing of personal digitized information for commercial purposes. We sampled participants purposively in terms of their age, gender, education, work and digital platform experience to ensure a broad range of encounters. We recruited participants using the criterion that they were the engaged users of digital platforms widely used by commercial actors (see Fischer, Castilhos, and Jacques Fonseca 2014 for arguments about these sampling strategies for qualitative interview studies). Previous research on algorithmic awareness and knowledge supports this sampling strategy as previous experience of interaction with digital devices has been revealed as the most important variable explaining user relationships with dataveillance technologies.

Qualitative interviews and the walking through method

Analysis in this article is based on semi-structured in-depth interviews (Fischer, Castilhos, and Jacques Fonseca 2014) with fifteen participants (eight men and seven women), averaging 1.5–2.5 h duration, as well as on inspiration from the so called “walking through method” (Light, Burgess, and Duguay 2018; Fuentes and Sörum 2019). Interviews were conducted between February and July 2021 and fully transcribed. Interviewees were anonymized and agreed to the two researchers making use of the interview data as part of a participant agreement. In the article we use pseudonyms for each of our participants (see Table 1 for information about participants).

Table 1. Informant description – personal interviews and distribution of imaginaries.

Participant	Gender and age	Employment	Dominant imaginary (IES)
1 – Morgan	Male, born 1971	Business sector	“The good data”/Dystopian
2 – Louise	Female, born 1983	Business sector	“The good data”/Dystopian
3 – Fabian	Male, born 1977	Business sector	“The good data”/Dystopian
4 – Astrid	Female, born 1982	Public sector	“The good data”/Dystopian
5 – Filip	Male, born 1978	Business sector	Dystopian
6 – Magdalena	Female, born 1975	Public sector	“The good data”
7 – Oskar	Male, born 1984	Business sector	Dystopian/Activist
8 – Dennis	Male, born 1984	Public sector	“The good data”/Dystopian
9 – Jörgen	Male, born 1986	Business sector	Dystopian/Activist
10 – Daniela	Female, born 1976	Public sector	Dystopian
11 – Lotta	Female, born 1981	Business sector	“The good data”
12 – Mattias	Male, born 1980	Public sector	Dystopian/Activist
13 – Kasper	Male, born 1984	Business sector	Dystopian/Activist
14 – Inga	Female, born 1983	Business sector	“The good data”/Dystopian
15 – Mia	Female, born 1982	Business sector	Dystopian

Source: Authors’ work.

As part of our interviews, we used an unstructured “walking through method” (Light, Burgess, and Duguay 2018; Fuentes and Sörum 2019). Participants were asked to provide examples from their devices and to show the researcher, for example, a Facebook feed, an Instagram feed, a Spotify interface, their Netflix home page, examples of a web shop interface, or maybe a leisure/exercise app in support of the discussion. This allowed us to talk about what kind of content, functions and systems they usually interacted with, while thinking aloud about the content these platforms were presenting them with and talking about why these platforms would display these properties or activities. This methodological procedure was helpful in enabling participants to reflect on digital operations based on data collection, also providing opportunities to probe participants’ awareness, experiences, feelings and tactics while remaining close to the specifics of the different interfaces, and their software functions and technical affordances. Interviews were rounded off with a series of questions asking participants to reflect on how their data collection and classification experiences affected their attitudes, activities, interaction and engagement regarding personalization more generally, across platforms, apps, devices and interfaces.

Our aim was to collect data in order to study the meaning(s) of data collecting operations and data-driven marketing and to examine how participants came to know about, feel and evaluate such datafication practices in their daily lives. Also, we were interested in gaining insight into and understanding of users’ strategies and tactics during their encounters with data collecting technologies and operations. These analytical strategies were directly informed by the conceptual framework of sociotechnical imaginaries, which was used as a conceptual lens in the sense that its presuppositions about the relationship between individual narratives and broader sociotechnical imaginaries could be disclosed through examination of cultural categorization relevant to data collection practices. Thus, in line with our research and focus on data collection imaginaries, we were interested in participants’ representations of society as shaped by digital devices and data collection and the needs (benefits, risks, costs), roles, rights and obligations of users and market actors like companies or platforms.

Arguably, there are several difficulties related to collecting empirical data about digital user behaviours and interaction between users and their devices. Users might not be overtly conscious of their conduct when using devices, or aware of the often complex operation of digital systems when working on their data. Further, conducting on-site participant observations could easily come across as somewhat intrusive due to the intimate relationships that users often develop towards their devices. This also touches upon issues of privacy regarding, for example, interaction with various services and products, e.g. the apps and software available on smartphones, laptops and tablets. Methods of direct observation or technical solutions for collecting empirical data unobtrusively would thus involve ethical dilemmas not easily solved. Conducting interviews gives the participant a certain amount of scope to include researchers in their online and digital lives, and as regards the extent to which they disclose information about their digital behaviour. A participant-led interview arrangement whereby participants actively played a guiding role throughout the procedure was thus selected, using both a practical and an ethical approach. The near impossibility of observing online behaviour in a “natural setting,” without the risk of intruding on participants’ private lives, caused us to make use of qualitative interviews combined with “walking through” operations to access close-up talk about experiences of data-collection operations. This also allowed researchers to have regard to digital usage activities otherwise often omitted from participants’ memories, or maybe neglected and treated as irrelevant and routine.

Lastly, the Covid-19 pandemic has considerably affected research. Face-to-face interviews were replaced by online interviews via Zoom, allowing screen sharing on laptops. Participation in the study was, in some sense, more convenient for some participants, eliminating travelling time and enabling participation from home. Another advantage was the possibility of making screen

recordings, providing detailed information of users' activities and tactics concerning data collection and classification, which might not have been so easy in person.

Data analysis

When analysing, we looked for themes and codes that could speak to current research on data collection and dataveillance in ways that opened up opportunities for critical and engaged analysis (see Spiggle 1994). Interviews were interpreted in an attempt to identify themes common throughout the interviews. These initial themes were then revised and refined through several readings of the interviews. The thematic analysis process was carried out in two main stages (Garrett, Spreitzer, and Bacevice 2017). During the first stage, the first author identified literature-based embryonic codes by rereading each interview. Afterwards, the two authors met and discussed the initial themes by means of a collective reading of the transcripts. This second stage began with an initial read-through of the transcripts by the two researchers to create a more holistic understanding of the entirety of the data collected (Fischer, Castilhos, and Jacques Fonseca 2014), and to discuss and rethink the embryonic codes created by the first researcher. This iterative process resulted in themes related to a number of the dimensions of data collecting experiences, especially focusing on user meaning-making processes, knowledge levels, emotional responses, mundane interactions and long-term relationships with dataveillance technologies. Interviews explored participants' overall mobile, digital, and online behaviour and their social media use, including the platforms and applications they used, their everyday routines, and their spatiotemporal and social contexts of use. For example, participants were asked to detail the time and place of use, how often they used a device, and for what purposes, as well as their thoughts about how various devices recommended, suggested, curated and communicated things back to them. These questions allowed us to understand the level of everyday embeddedness of digital technology and the sociocultural context of use, as well as the extent to which such technology consumption was also related to data collection measures, practices and normalization. Afterwards all the interviews were analysed and compared on the basis of the conceptual framework standpoint, and on the basis of the identification of relevant sociocultural discourses and imaginaries related to the data economy, dataveillance and data collection, as found in the academic research literature. The conceptual framework, in turn, was interpreted on the basis of which perspective the informants' understandings and meanings had.

Finally, the coding framework was revised until both researchers had reached consensus and gained knowledge of the relevant theoretical issues. This analytical approach resulted in three themes that collectively engage and present the multiple imaginaries of dataveillance and data collection emerging from the consumers' experiences and encounters with data-collection operations and digital devices. These themes were further developed on the basis of the identification of relevant imaginaries related to the data economy, dataveillance and data collection, as found in the academic research literature.

Coping with data-collecting experiences: multiple imaginaries of data-collection

Next we will explore the ways in which participants talked about their data collection experiences; i.e. their experiences of making individual data/personal information available to dataveillance technologies, as well as how this affected how they related to these practices. We present our findings using the three analytic themes: data collection as a benefit: "the good data" imaginary; data collection as entrapment: a dystopian imaginary; and data collection and resistance: an activist imaginary.

Data collection as a benefit: "the good data" imaginary

For many of our informants, companies' data collection practices were not something to be feared or avoided, but a normal practice often generating various benefits for consumers. The dominant imagery was that of "the good data." This imaginary seemed to be grounded in beliefs that serve

company interests, enabling the continuation of data extraction as well as perceived positive consumer benefits. This dominant economic imaginary positioned subjects as passive data supporters, with no reason to question the status quo and a willingness to exchange their data for valuable services. According to Lehtiniemi (2020), this imaginary permeates the current digital domain to such an extent that it is difficult to either imagine or practice alternatives to it, and our participants seemed, to a certain extent, to appreciate it and normalize it. Arguably, companies and other actors (public policymakers, the media, users etc.), knowingly or not, cultivate this discourse of data collection in order to maintain the taken-for-granted current shape of things and be a data subject/user.

For those in our sample interpreting datafication practices according to this sociotechnical imaginary, the transactional view, in which you trade personal data for access to free services or products, was used to legitimize data collection. This interpretation of data collection practices shaped several participants' understandings of data capture and the relationship these participants had with platforms, but also with the state as an actor involved in dataveillance:

F: I can accept providing and giving up my data. Even if that partly involves information about me. If it's so interesting that I can get free stuff in return. I get free apps which would otherwise have cost me money [...] If we're talking about, for example, apps like *Strava*, food diary apps, apps that help me. Apps that help and are fun. And I get them for free just for providing my information [...] As long as you have a decent level of trust in the state, then I think this surveillance society we live in is OK. You're more likely to see creepy stuff if you look at China. I think it's creepy the way they use surveillance. (Filip)

Another participant echoes the same discourse but includes the close relationship between data collection and classification:

A: But what am I supposed to say? It could also be the case that sometimes advertising is a good thing. If they manage to find out using all this data they've collected that they now know that I usually buy books, well, yes, then I'm happy if they give me some recommendations [...] Well, yes, it makes me consume more but it's still something that I'm interested in. Specific things that I buy [...] And then everything is like connected somehow. There's so much on the internet that's owned by the same people and it's so difficult to understand exactly what comes from who and where, what data they can buy or where my data is stored. (Astrid)

Arguably, it is not that these users are ignorant or apathetic regarding their data capture experiences, but rather that the situation has been normalized. In the examples included above we see our informants assuming the role of data provider and accepting the norm of being part of an economic exchange or transaction relationship based on giving up, or providing, personal data voluntarily. Participation in this exchange is thus framed as a relationship based on equal participation. The participants' use of specific imaginaries – as seen in the interview quotes above – sometimes portrayed datafication and dataveillance as ways of offering convenience, relevance and better services. Their understanding of data-collection practices thus confirmed the current configuration of technologies and economic practices as accepted, expected and even appreciated. In the extract that follows, one of the participants detailed, with a high level of technical expertise, her great appreciation and understanding of the (economic) value of her providing data in order to increase the relevance of interacting with online services:

Interviewer: Does this affect your way of using these platforms [Instagram and Facebook]?

L: I see it like this; the Facebook platform owns approximately 90 per cent of all the good user-generated data, compared to others. And others are pretty much trying to do what they (Facebook) are doing. It's a really efficient way of buying target groups and then using it for communication purposes [...] I think that if you have these apps on your smartphone, then you have to accept the consequences. A lot of people just don't get that. (Lotta)

Interviewer: If we talk about these consequences; what might they be?

L: I think of it like this. They know, in principle, more than you do, they know what you'll do, your next move, because it's possible to predict this if you look at the patterns. And that's what they're buying, behavioural patterns. There are algorithms that keep track of me, for example selling my house within three years. Just based on me thinking about it basically [...] I think

that's a positive thing if it's used the right way, and they use relevant communication. I mean, I'd rather have information about car insurance when I buy a car than, let's say, horse feed, which I'm totally uninterested in. I think relevant communication is a good thing and, in order to get it, I have to share my data. And sometimes, I might not expect to only get what they think I already like, but they need to step outside my preferences. (Lotta)

What this shows is that an uncritical approach to datafication is not necessarily the result of a lack of information or knowledge. As the extract illustrated, despite having a sophisticated understanding of how digitized datafication and dataveillance technologies operate, participants remained positive towards data collection. The dystopian cultural imaginaries dominating critical scholarly accounts were nowhere to be found in these accounts. Instead, their experiences were closer to what Ruckenstein and Granroth (2020) write about when noting that users want to be “seen by the market” and can appreciate the relevance of market encounters based on interactions using their devices. Interviewees experienced being recognized by data-collecting devices as pleasant (Ruckenstein and Granroth 2020), with a “good” data collection experience ensuring a smooth user experience that made the user feel he/she had been seen, and possibly even surprised. Importantly, this socio-technical imaginary informed not only how participants made sense of technologies for data collection but also, as evidenced in the interview quotes, users’ interactions with digital apps, social media platforms, and other interfaces. Those participants drawing on the “good data” imaginary also developed specific in-depth relationships with their devices, platforms and brands, which in turn enabled a close coexistence with these technologies, thereby normalizing their everyday use in terms of sharing their life goals. These framings of data collection positions prediction and recommendation technologies as part of a normal set-up for convenient and accurate exchange interactions with the market. Finally, as seen in these quotations in the “good data” imaginary category, these participants conveyed a sense of feeling empowered. From their perspective, datafication intentionally afforded them with capacities to extend their identity projects ([...] ‘apps like Strava, food diary apps, apps that help me. [...]’), experience fun or contribute to their efforts of developing their interests ([...] ‘something that I’m interested in. [...]’). In our view, these are not merely examples of consumers accepting surveillance and feeling rewarded for it. They expressed appreciation of these devices in the sense of (sometimes) assigning them empowering capacities.

Data collection as entrapment: a dystopian imaginary

Not all consumers were content with the current datafication and monitoring of their online and offline practices. Reproducing the dystopian imaginary also visible in critical works like that of Zuboff (2019), who frames data economies in terms of surveillance and exploitation, our informants expressed concerns regarding data collection and also experienced difficulties understanding data collection operations. However, rather than acting to learn more or take significant measures to protect their data, they resigned, feeling trapped by the digital platforms and their data collection practices. Thus, while they were often critical of data collection practices and in some cases also made small-scale efforts to protect their data, the dominant approach was to accept the current state of things. These findings dovetail with previous findings regarding data-collection experiences (Turow, McGuigan, and Maris 2015; see also Draper 2017). The “epistemic asymmetry” that Brunton and Nissenbaum (2015) identified in their research provides a way of understanding some of the negative responses to data collection that we detected during interviews. Issues like lack of ownership of personal information, increasing loss of control over data and the in-depth mass monitoring enabled by data collection (see Puntoni et al. 2020) all provide elements of technical imaginaries that shape dataveillance experiences in terms of a new system of oppression and a lack of privacy and control.

A number of participants explained that they did not know who owned the data, whether it would be sold and shared with others, or what their rights were in the data collected. Participants in our sample talked about how personal information collected about them could be used by data

profilers and other third parties for commercial purposes – principally targeted marketing or personalized recommendations. These participants often reported feeling somewhat troubled by issues such as data access and ownership. For them, there was a tendency to acquiesce to the market power of dataveillance technologies.

Drawing on this dystopian sociotechnical imaginary, consumers developed a specific set of strategies for interacting with dataveillance technologies:

- Interviewer: Do you read the terms and conditions before signing up to use a platform?
 FL: No, no. No, I don't. No, I don't read through them. I tend to just scroll down and then I hit OK. Cause you know, there's a lot to read really. You're there for a reason [signing an agreement with a service provider] and you just want to move on. I mean, there is how you've probably signed a lot of crap over the years. I definitely think so. (Filip)
- Interviewer: what kind of crap are you thinking about?
 FL: Well, who knows? You've just kinda accepted it. Everything you just tick off and agree to. I'd guess that I've kinda signed away my rights to a lot of things; like selling my personal information to others or stuff like that. (Filip)
- Interviewer: Do you read things like "the terms and conditions" or isn't that so interesting?
 FL: Well I think ... but it feels like that race is over. For example, if we take Facebook ... I don't know ... they must have changed their Ts and Cs over the years and I've probably automatically agreed to them. I don't know. It feels like I'm getting new questions about them all the time: "Accept this, these are our new terms and conditions." I've probably answered yes [...] Because you want to have access. What are you supposed to say? No? OK, then you won't have an account anymore. But we have it for workplace purposes and I don't want to lose Messenger so then I agree to everything. Otherwise, you'll be excluded [...] and you can see potential problems with that in the future. How far can they take things? [...] Not just Facebook, you tend to think of this content like it's your property. I wrote this, I took those photos, those videos. Have you just given up on your rights to them? Who owns them? Maybe you can't use them anymore. (Filip)

In the example above, we see how the participant expresses his concerns over being trapped in an impossible situation. He is concerned over the terms he has accepted but feels unable to opt out of using the platform. He also expressed concerns over how far Facebook will take the operations of dataveillance. He feels trapped and powerless in relation to the social media platform. In addition, the task of reading and understanding the existing terms and conditions, feels overwhelming. He describes how his work and private lives are deeply embedded in and entangled with the platform and its access to his personal data: "You have to agree to this now because it's embedded in so many parts of your life, all these apps [...] and I think about everything being transferred via these platforms." Arguably, these experiences had also shaped the everyday practices of interacting with data collecting devices in specific ways.

Leaving Facebook or stopping to use services like Messenger seems in relation to this like an impossibility given the number of everyday practices and social connections that the social media platform enables, thus affecting the agency of users.

Participants reproducing this imaginary of data-collecting experiences also framed it in terms of the impact data collection had on their identity and privacy; i.e. they made use of a users' rights discourse as they sometimes questioned both what and how much these platforms ought to know about them. A common way of representing this situation and their position within the data economy was to liken it to being caught in a "spider's web" with no escape. The notion of being caught in a web is similar to how anthropologist Seaver (2019) critically analysed the logic of commercial platforms, recommendation systems and algorithms in terms of being "traps," captivating machines, working to captivate the users' mental attention and to steer their behaviour in accordance with platforms' techno-cultural scripts. As such, these participants repeated the trope of an omnipresent all-seeing machine with implications for their online activities. They did not frame their experiences in a positive light, but did not stray into an activist or subversive position either. They were, rather, knowledgeable about the current situation, their roles as data providers and the potential impingements on their private lives via the web, but they did not act on this knowledge or

sentiment, by either leaving or breaking their current digital practices. Instead they developed a sense of apathy or resignation (cf. Plangger and Montecchi 2020).

Another participant described similar experiences regarding data capture, but elaborated to some extent on how these experiences had shaped her relationship with data collecting technologies. Although many participants shared a sense of losing control and agency, experienced a reduced capacity to manage their data, and felt troubled by issues such as data access and ownership, they took different approaches to managing these experiences.

- A: I've reviewed different settings quite a lot and I've read and checked them because I've been looking for other stuff that I haven't found. (Astrid)
- Interviewer: What kind of settings have you been looking for?
- A: The problem is that there are way too many. Different privacy settings, advertising settings, and it just goes on ... once you've entered it and started looking around. But it's so complicated that you almost can't understand it. (Astrid)
- Interviewer: Have you made any changes [regarding settings for data collection and privacy etc.]?
- A: Maybe, I don't remember. (Astrid) [...] It's really grown more and more I think [about data collection]. From the beginning, it wasn't that complicated. Facebook has been growing. It's like a spider's web all over the world that collects data and enters into different collaborations, buying up other companies and so on, so it's become really complicated. It's way too complicated for the average person to understand, what you can affect or should change [...] They don't need any more information than is necessary; those apps asking for your data, your position. (Astrid)
- Interviewer: What do you mean by any more information than is necessary?
- A: I don't know what their aims are as regards knowing exactly where I'm going. Where I live, predicting my movements in life, you know. Or who they might sell it to, or share this information with. It might be another company [...] I think about it like Big Brother and maybe it's not that particular app which is about to do something to you, but that everything ends up somewhere. (Astrid)

During the interview, this participant repeats some of the data collection experiences previously detailed, but also adds some important nuances to this relationship. Similar to others in our sample, this participant is not merely passively accepting things as they are but looking for settings in order to make small adjustments of the data-collection capacity while using online services. She also expressed critical views of how platforms and other dataveillance technologies, either explicitly or in more obscure ways, have been collecting her data for purposes that she might not be aware of.

Making explicit reference to concepts like Big Brother suggests participants imagined data-collection being part of a larger version of how society and its different actors are supposed to act towards each other and whether or not such normalized and normative stances had been overturned or not. These perceptions of how devices have collected and managed her data have had an impact on the material practices of using platforms, and avoiding being tracked. Even though participants seldom explicitly mentioned intentional obfuscation on the part of companies collecting personal data, there is still an implicit tendency for participants to acquiesce to both the power of dataveillance technologies and the many attempts on the part of data collecting platforms to convey their commitment to the need for data transfer and privacy and security measures, as commonly advocated by companies. This participant's discussion includes aspects relevant to the impact of data collection on identity and privacy when she questions what these platforms ought to know, and whether or not she, as a user, actually has the power to control or change data capture practices due to the growth of a platform like, for example, Facebook.

Arguably, several participants in our study did interpret the capacities of dataveillance technologies in accordance with what Lomborg and Kapsch (2019) termed *negotiated types of relationships* whereby they actively, but critically, accepted data collection in the way we have shown in the interview quotes above. Feelings of apathy and resignation, as well as difficulties understanding the breadth of the activities and actors involved in, or even the purpose of, collecting their data, dovetail with previous findings regarding data-collection experiences (Turow, McGuigan, and Maris 2015). To some extent, participants made small scale-changes in terms of their data-collection settings

while interacting with digital devices and services. These findings converge with the few existing empirical studies that have developed an explanation of users' inaction, limited or circumscribed actions and inconsistencies, regarding how users experience data collection in relation to, for example, privacy concerns vis-à-vis resignation (Draper and Turow 2019). The argument is that, even though consumers feel dissatisfied, badly treated, misinformed, or at risk of constantly being monitored, something that we explained above in terms of characterizing contemporary data-veillance and datafication, they are more or less convinced that dataveillance is inescapable. These responses, we argue, are shaped by the way that the dystopian imaginary positions them and their interpretation of data-collecting devices. To some extent, these framings of the experience of data collection function as the negative mirror image of the early days of the internet, dominated by equal participation, democracy and transparency; i.e. images of a (spider's) web and Big Brother watching you, as well as passively acquiescing to the omnipotent power which shaped interpretations of data collection as malign and which positioned the user as blindfolded and with tied hands. Thus, despite data collecting devices' abilities to, for example, predict and satisfy consumer preferences, as discussed in the previous section, participants sharing this framing of their data collection experience felt somewhat exploited in their data capture experiences, mainly due to difficulties in understanding dataveillance operations and the increasingly intrusive difficulties involved in avoiding datafication.

As a result, such experiences might threaten users' sense of ownership of their data, and challenge their personal control. Events might come across as if determined by anonymous external forces (i.e. data brokers) rather than themselves. In a wider sociocultural and popular culture context, this lack of ownership of personal information is sometimes related to a loss of personal control, with digital technologies enabling the constant monitoring of human online and offline behaviour (see Puntoni et al. 2020). These kinds of technical imaginaries shape dataveillance experiences in terms of being both the effects of systems of oppression and a lack of privacy or control. This dystopian imaginary is reflected in, for example, sociological work like that of Zuboff (2019) and normalized by Google's imperative to make personal consumer data an economic asset. As the participants represented companies in terms of being actors constantly pushing the boundaries as regards what data users ought to share and how, dataveillance experiences can construct consumers as subjects who are complicit in their commercial exploitation, including their own personal experience, in doing so intentionally or not, co-shaping data collecting experiences, as coloured by an imaginary based on the concentration of knowledge and power in the eyes and hands of a few of who own access to that data. Obviously, such a futuristic technical imaginary has to some extent already been shaping, and would necessarily continue to shape, relationships into platforms in a negative way, thus impacting and circumscribing the agential capacities of users, reducing it to meticulous shifts in settings. The important thing here, from an analytical point of view, is to observe how the two first different imaginaries have, in this sense, either limited or enabled the ways in which consumers make sense of their agential capacities. It is important to notice that we are not arguing that imaginaries, such as the "good data" imaginary, unproblematically liberates consumers, make away with oppression or extend their agency. After all, the world is not solely the result of consumer imaginaries. What we do argue however, is that different imaginaries shape consumers' feelings and thoughts about datafication, and that these feelings and thoughts, in turn, impacted on how they concretely interact with digital devices. Therefore, a consumer reproducing the "good data" imaginary will not only feel empowered but will also act a certain way in relation to commercial data collection practices, offering data freely for example. Conversely, a consumer reproducing an entrapment imaginary behaved in a withdrawn or resigned manner against dataveillance technologies and in that sense such an imaginary had consequences that shaped their agential capacities for action in terms of circumventing their lived lifeworld as shared with dataveillance technologies. Thus, our point is that socio-technical imaginaries are enacted and these enactments in turn have consequences for how consumers (practically and materially) respond to commercial data collection practices.

In a sense, the two first imaginaries result in quite similar relationships towards dataveillance in terms of user subject positioning as passive data providers but differ in terms of responsibilities, benefits and costs. While the first (the “good data”) imaginary liberates the consumer subject to become empowered through data-collection, the second imaginary (the entrapment) limits and circumscribes, reduces the consumer’s rights and agency. The cultural and political conflict between these two imaginaries fighting for dominance is important to recognize since they support very different outcomes for consumers, their everyday digital practices and their outlook on society and markets.

Data collection and resistance: an activist imaginary

Drawing on an activist imaginary, participants also explicitly rejected, resisted and circumvented dataveillance practices. This “activist” strategy could take different forms including changing digital technology set-ups, installing anti data collecting software, using privacy plug-ins and even, in some cases, abandoning platforms or avoiding to use them in the first place. The activist strategy could also, more positively, include supporting specific technology developers or innovations. Counter-imaginaries questioned whether or not users are supposed to be dominant or subordinate to dataveillance devices; i.e. not just what users can derive from their use of data-collecting / data-dependent tools, but the subject position consumers are ascribed in the data-collecting assemblages in which both they and the technologies are embedded.

With the increasing level of awareness of the political and cultural effects of dataveillance in society, we have also seen the emergency of data activism as a specific category of user engagement with data-collection and related technologies. Heuristically, we can define data activism as a response and imaginary conception to the uneven distribution of data access, its use for surveillance purposes, its economic benefit, but also its exploitation (group bias etc.), control and justice issues (Lehtiniemi 2020). As previous research shows, data activism, as a practice, discourse and collective futuristic imaginary, interferes with, contests and reappropriates both existing and future data-collecting assemblages with the dual aim of preventing the use of data for the benefit of others and making use of data collecting devices to improve users’ circumstances (cf. Plangger and Montecchi 2020). New or emergent data collecting assemblages, as developed within data activism imaginaries, are reconsidering relationships between dataveillance technologies and consumers, and knowledge of data usage; i.e. they are acting as alternative data imaginaries and articulating users as future online or digital citizens rather than as passive consumers or data subjects. In this way, a data activism imaginary informs new norms, values and ideas considering data-collection and can represent a potential challenge to existing data power relations, knowledge asymmetries, and digital resignation. As Lehtiniemi (2020) argues:

In relation to dominant modes of datafication, data activism aims to create novel and alternative data arrangements and new responses to Zuboff’s (2019) questions about who can learn based on data, and who decides about this. Data activism develops innovative ways of relating to datafication, the production of knowledge, and their consequences. (Lehtiniemi 2020, 42)

An example of this position, as an oppositional (re-)evaluation of acting as a data subject, comes from one of our participants, an experienced gamer who had also, through his work, undergone training focused on the General Data Protection Regulation (GDPR) legal framework and who was thus quite knowledgeable in terms of the technical details regarding data collecting and user rights:

J: Now I’m a member of LinkedIn, where I kind of exist. I don’t really do much there. I chose to leave the other networks about five years ago, when I deregistered myself from my social media accounts. I still have some minor accounts, where I don’t spend so much time, like Steam. But I’ve actively chosen not to have a presence on the major ones like Instagram and Facebook [...] Then, before the GDPR, I left the account sort of latent for a while. Then, when the GDPR came into force, I logged in and actively erased all the data they had on me. (Jörgen)

After detailing how he had deregistered himself, and also actively erased his personal data as a kind of small-scale attempt at resisting the storage of this data somewhere, both by major commercial companies and by services that he no longer enjoyed, this participant discussed other issues related to data collection. These issues included platforms like Google and its search functions, feelings of being monitored by smartphones, and how the profiling practices of commercial data collecting companies had all affected his relationship with issues like anonymity and the way in which he acted with regard to dataveillance technologies:

So, I do actively choose not to register information about myself [...] With other browsers, you can choose to be more anonymous. It's about me not wanting them to collect everything, so I try as hard as I can to stop it. One part of this is always saying no to those kinds of functions and services. (Jörgen)

Interviewer:

When you speak about being anonymous, what does that mean?:

I'm thinking that major companies have more details about me than necessary [...] And I can't say that they have the need, or that they need to know how I act. I remember, about ten years ago, you could go into Google and see what kind of profile they had on you [...] There wasn't really anything strange about the data in itself, but then I thought, why should they have it? Can I somehow choose another way? (Jörgen)

This interviewee stressed the importance of being an active subject, rationally doing his or her own searches, and contesting the ways in which dataveillance operations (recommendations, curation, etc.) worked to actively promote and make decisions regarding users' content, products and services. The participants' (re)imagining of dataveillance by means of articulating an "activist discourse" appropriated meanings like citizenship, freedom, self-control, agency and privacy – elements reminiscent of common modern imaginaries (Taylor 2004) – and had not accepted the current state of affairs regarding how data collecting services, technologies and platforms work. They have thus been experiencing and enjoying a sense of control and agency over their personal data while negotiating their position as active data subjects or citizens, in addition to experimenting with different technical solutions in order to support their data practices.

A number of participants used technical objects like adblockers and search engines to secure user data because these made promises of anonymity and security as regards being monitored and tracked using the information collected about them. Another oppositional participant, who had also deregistered from some of the major social media platforms, due to issues regarding how they collect personal data, described his use of a specific search engine in order to protect his online identity:

Interviewer: Could you tell me about *DuckGoGo* and why you used it?

M: I read about it somewhere. I don't remember where, but it was quite new and I thought I'd better download it and check it out [...] What it doesn't do is save your search history. And it doesn't sell that to anyone else. And you can clear it all out. Nothing is saved, tracked or traced or anything like that. And that's important [...] I mean, not that long ago, you could download an application to Google and it sort of drew a map of where your information had been distributed. For example, if you'd visited *Aftonbladet* (Swedish red top), you could see they'd sent your data to specific companies. That this information had been spread. And by visualizing it, you could see how much information there was and then on to third parties, partners that got your information. Then I just thought, OK, it's not just *Aftonbladet* sharing in this, there are ten other companies. And those companies might sell it on to another ten companies [...] Then I also have the new *Signal* app. That's a texting service. It doesn't distribute any information. And then I have another one called *Lockdown*. (Mattias)

In this extract, the participant also reveals his previous efforts to become more knowledgeable about how his data, using technical innovation visualizing how commercial applications tracked him via online traces, had been transferred to third party actors without his knowledge. The applications mentioned by this participant, *DuckGoGo*, *Signal* and *Lockdown*, are marketed as applications that enable consumers to protect and control their digital information, thus being part of this participant's arsenal of data protection tools used to strategically counter different forms of data-collecting practices. This user repeats the familiar tropes of an active data citizenship missing from the

previous two data imaginaries that we discussed. This theme is further discussed in the interview quoted below, where a participant first describes his aversion to being trapped in a relationship with a specific data collecting tech company, and its devices, and then develops his view of the risks of control and being profiled via data collection.

- K: It wasn't enough to have their phone or a laptop. You had to have an iCloud account and connect your phone and it was all really controlled. They could control the whole experience. So, I've changed to other products to feel that I have more control over what kind of data I share. And I use an app called *Signal*. It's a free app that's encrypted [...] And I use adblocking services and a browser that doesn't send any of my personal data to their servers. No data to help improve their services, or anything about my online surfing. I had that one recommended to me by friends in the IT sector. It blocks everything, ads on websites, social media like Facebook, etc. [...] You never know, in a future with a lot of profiling of people [...] you never know how that kind of data could be used if society changes. Think in terms of a change of government, or insurance companies buying this data and then denying you specific services or figuring out that you're developing a serious disease, or stuff like that using this data [...] It bothers me that they might know who I am and I don't want it to go on for several years so that they have a real profile of me. I want to feel that I can get rid of them [...] It's almost like *Minority Report*, you know, like "pre-crime". (Kasper)

A number of participants made use of specific tools for protecting their data from being collected, developing various strategies and relationships regarding some of the major commercial data collecting platforms, e.g. Facebook and Google, which we saw mentioned in these quotes. In their study of how users engage with algorithmic systems in everyday life, Lomborg and Kapsch (2019) suggest the analytical category of an "oppositional position of decoding algorithms" for the kinds of relationships with the dataveillance technologies revealed in our study. This consumer position basically constitutes a clear contrast with the dominant position, or what we have analysed as the preferred types of relationships with datafication. Naturally, this oppositional position is based on activities or engagement with data-collecting systems grounded in negative and critical evaluations and practices on the part of our participants. Dataveillance technologies and their data collecting practices were not only experienced as problematic technologies but also as surveillance technologies threatening their personal control of data, personal security and online safety. These technologies and services needed to be escaped from; their operations needed to be avoided and their power or capacity had to be weakened and sidestepped. This emphasis on "taking back control" was indicative of the struggle for autonomy emerging between web users and personalization systems as a result of platforms' efforts to track and identify users in the name of providing a "personalized" web experience. This could be interpreted as a way of reasserting their autonomy as individuals and citizens with little say in how they are monitored and categorized by data-driven algorithms. Participants revealing these activities and experiences had activist intentions, with some of them refraining totally from using data collecting devices, platforms and web services. They talked about these dataveillance systems as unethical and problematic, as well as being undemocratic and a potential threat to their freedom as data subjects, because of the way in which they collected data for commercial purposes.

These tactics and discourses are similar to those found in research on data activism (Lehtiniemi and Ruckenstein 2019), sometimes including subversive activities aimed at circumventing or disrupting datafication (Brunton and Nissenbaum 2015; Lomborg and Kapsch 2019). The activist imaginary guided a reconfiguration of material practices aimed at regaining a sense of agency. This reorganization of data practices was made possible through the use of a number of "critical" innovations that expanded their agential capacities to circumvent dataveillance.

Discussion

Results from this study point out the ways in which consumers experience and respond to datafication and how these experiences are linked to three broader sociotechnical imaginaries. The first category of data collection experience (the good data imaginary) represented participants who seemed

to cultivate a dominant data imaginary that currently legitimizes data collection. In contrast, the second category (the dystopian imaginary) represented reaction to the capacities of dataveillance technologies in terms of sentiments like user apathy, resignation and difficulties understanding data-collection operations. The third category (the activist imaginary) represented participants explicitly rejecting and resisting dataveillance practices by abandoning platforms, using anti data-collecting software, and supporting technological innovation that resists the dataveillance “status quo.” These findings suggest the existence of multiple imaginaries influencing how data collection practices are understood to work, for whom, and for what purpose, as well as how a future data economy based on data-collection might look in terms of positioning consumers as specific types of data subjects.

In comparison to what we called the “good data” imaginary that liberated and enabled the consumer subject to become empowered through data collection, the second imaginary (the entrapment) limited and circumscribed users’ conceptions of their rights and agency. The third (activist) imaginary, similarly to the first, liberated the subject but not through passively subsuming users to data collection but from actively allowing users to escape data collection. And while the second dystopian imaginary reduced and limited a sense of agency and provided the passivity of a dominating and totalizing system of oppression, the activist imaginary envisioned another future, a more hopeful horizon for people living with liberating technical innovation, justice and (self-)control. The activist imaginary informed a variety of shifts in terms of everyday practices and interaction with data-collecting devices, especially regarding how users regained a sense of agency and became practically enabled using innovation that expanded their agential capacities to circumvent dataveillance. Cultural and political conflicts between the three imaginaries arguably support different outcomes for consumers and their outlook on markets, with the activist imaginary displaying novel normative arrangements between markets, people and society based on a radically emancipatory vision of data-collecting technologies in the service of people rather than dominating or surveilling them.

It is important to note that we are not suggesting that conflicts between imaginaries or current power imbalances in any way can be resolved by consumers starting to simply “re-imagine” for example surveillance or oppression in positive terms. Nor do we argue that agential capacities would be increased if consumers shifted from a dystopian to a “good data” imaginary. That would be to misinterpret the message of the concept of sociotechnical imaginaries in this study. What we argue is that sociotechnical imaginaries frame how consumers interpret, know, feel, act and make sense out of dataveillance and datafication as well as shape their current and future views on and digital practices with digital devices. In that sense, imaginaries shape practices and practices in turn shape, reproduce and possibly change specific imaginaries (see Mager and Katzenbach 2020).

Findings from this study point out a number of positive values, benefits and relationships among users regarding their evaluation of living with data-collecting operations as an integrated part of their lives. These findings tend to agree with Puntoni et al. (2020) regarding consumer benefits that acknowledge how the value of datafication and dataveillance includes advantages like efficient advice from recommender systems (Netflix, Spotify, web shops), peace of mind stemming from the Internet of Things and smart household devices (Google Home devices), and the convenience of a number of voice-activated assistants, social media networks for connection, and automatic data feedback from a variety of Smartphone apps (see also Pangrazio and Selwyn 2018; Ruckenstein and Granroth 2020). However, arguably, any scenarios that were too optimistic were effectively counter-narrated by those explicitly rejecting and manipulating encounters with data-collecting operations by means of a resistant relationship with these devices. Our results reveal how consumers actively negotiated their sense of agency, freedom, control and identity while being positioned as data subjects: Not everyone submitted to the role of being passively exploited or “trapped” by these devices, instead actively negotiating his/her agential capacity. In that sense, our results dovetail with those of, for example, Lupton (2020), who reveals the agential capacities

of consumers being circumscribed but not totalized (see also Plangger and Montecchi 2020). And, importantly, our work extends previous research by introducing the emergent category shaped by an activist imaginary not previously found or theorized within consumption studies. We do not suggest that these findings reveal empowered consumers who are free to enjoy any relationship they want while interacting with dataveillance operations, but argue that macro-analytic conceptualization and abstract theorization of dataveillance omnipotence and powerless (or, conversely, agentic and empowered) consumers might benefit from some empirical examinations based on consumers' emic point of view. For example, Turow, McGuigan, and Maris (2015), in their study of customer surveillance in retail spaces, have argued that technology companies are constructing a new imaginary for shopping that reshapes the role of the customer, the nature of the store and the make-up of the deal so that these revolve around the extraction and implementation of huge amounts of data about the individual moving through the retail environment (2015, 470). Other studies in this area present findings that partly disagree with these interpretations of a dataveillance-dominated experience field populated by resigned and conditioned data subjects due to data collecting practices being undergirded by normalizing discourses and a new imaginary enabling understanding of the current state of datafication (see Plangger and Montecchi 2020). Our research points to how being resigned does not necessarily mean the complete abdication of efforts to shelter oneself from dataveillance technologies or imperatives. Also, the seemingly dominant experience of being surveilled need not exclude feelings of pleasure, fun or efficiency related to data collecting experiences or the transaction-of-data-for-access-to-service (see Pangrazio and Selwyn 2018). This study might be a step towards a more nuanced understanding of the role of the user or consumer in this relationship.

Participants in our study were found, similar to what Bajde (2012) and Lupton (2020) have shown, to draw from multiple and sometimes conflicting imaginaries or cultural models. Thus, not only were imaginaries contextual (participants could slide somewhat between imaginaries depending on for example different platforms, personal experience and associated practices) but also situational. For instance, in contexts such as participants shifting between leisure activities of playing games and using platforms that were highly rated, the "good data" imaginary could be found to temporarily prevail over the otherwise "activist" imaginary dominating the invoked conceptions of a participant. Nevertheless, individual participants in our study displayed propensities towards specific categories informed by particular imaginaries; i.e. across situations participants seemed to more or less persistently orient towards "good data" – the dystopian – or the activist imaginary. Future research would benefit from extending this initial identification of data-collection imaginaries and segment participants strategically to include for example age, gender, socioeconomic background, digital literacy skills and other dimensions based on their data collection orientations.

Conclusion

In this article we initially posed the question of how the ongoing "datafication" in society is experienced by consumers. Drawing on previous work on sociotechnical imaginaries, our theoretical approach has allowed us to conceptualize three data collection imaginaries as socioculturally mediated assemblages of imaginary conceptions that were both individually and collectively performed by consumers interacting with and using data-collecting devices. This work answers Puntoni et al.'s (2020) call for more work on data-collection and classification from a sociocultural approach. It also responds to Bajde's (2012) and Lehtiniemi's (2020) critiques of uniform, disembodied imaginaries, instead highlighting their contested and contextual nature by developing an understanding of the complexity and multiplicity of the meanings ascribed to data-collecting operations among consumers in this sample. We show how consumers' experience of and response to ongoing datafication is not the result of their individual psychological make-up or cost-benefit calculations but instead linked to and shaped by three broader sociotechnical imaginaries.

Examining sociotechnical imaginaries of data collection provided a view of both the data economy [the social order as represented and imagined] and contemporary marketing practices as a field of struggle over the collective imagination. This analytical approach helped us to reveal the importance of and the opportunities arising from understanding the (micro-)politics and sociocultural conflicts of the currently existing data imaginaries shaping consumers' data collection experiences. This way of theorizing the power dynamics of the politics of multiple sociotechnical imaginaries of data collection practices has not previously been developed or applied within consumption research and is a theoretical extension of and contribution to sociocultural approaches to understanding consumers' data collection practices as shaped by multiple and sometimes conflicting imaginaries. It thus opens up the means of critical engagement regarding potential futures of data collection and how these might be changed or informed by specific sociotechnical imaginaries.

Theoretically, this analysis advanced current theorization of dataveillance and datafication by contributing a "bottom-up" user perspective and interpretative approach to datafied consumer experiences (cf. Lupton 2020). Most conceptualizations of dataveillance, thus far, build their currency on macro-power approaches or micro-economic theory, sidestepping the importance of including consumers' everyday experiences, agency and capacity for co-shaping data-collecting operations theorized using a sociocultural approach (cf. Puntoni et al. 2020). By means of analysing the circulation of sociotechnical imaginaries, we argue that the contemporary condition of dataveillance and data-collection is one of increasingly normalizing dataveillance technologies as part of the experience of everyday life, with datafication coming to colonize the domains of emotion, cognition and culture (cf. Wood and Webster 2009, 264). In order to increase our understanding of the socio-cultural and technical forces shaping consumers' data collection experiences, we theorized these responses not only on the individual level, but also as collectively held imaginaries, embodied and situated in the lives of consumers and their material practices.

The findings from this study are helpful for actors working with various commercial (but also public) applications that integrate data-collecting operations since these need to recognize both the negative and positive evaluations made by consumers as they interact with these digital marketing systems. On the one hand, there is an impending risk that operations which are too creepy, or breaches of prevailing norms of intimacy and privacy, might backfire, with consumers withdrawing from future engagement. Arguably, being a data subject brings certain benefits to consumers, making them feel served and seen by dataveillance technologies, marketing actors and companies (i.e. the transfer of data translates into personalized services, product and content suggestion, entertainment, etc. for free). However, as seen in this study, and despite the abilities of data-based forms of commerce and marketing, consumers may experience being exploited, feeling unaware of how their data is being handled and by whom, and may thus start asking for more transparency, regulation and accountability on the part of data-collecting companies and marketing actors. Instead of normalizing, promoting and accepting a dominant dataveillance society narrative, market and government actors could use dataveillance technologies more in line with, for example, privacy advocates and data activism movements in order to criticize dominant beliefs and rearrange established structures. Our findings suggest that one important aspect of this kind of work could be done on the level of circulating sociotechnical imaginaries of data collection.

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Notes on contributors

Niklas Sörum holds a PhD in Ethnology, is the Director of Center for Consumer Research at University of Gothenburg and is an Associate Professor (Business Administration) at the University of Borås. Niklas does research on the digitalization of consumer culture, digital consumer data, marketing practices and sustainability. In his research Niklas applies actor-network theory, practice theory and consumer culture theory and make use of qualitative research methods. His research has been published in scientific journals such as *Consumption, Markets & Culture*, *Journal of Consumer Policy*, *Journal of Cultural Economy* and *Journal of Fashion Marketing & Management*. Niklas has published books at publishers such as Ashgate and Routledge focusing on consumer culture.

Christian Fuentes is a Professor at the Department of Service Management and Service Studies, University of Lund. He has written on the topics of mobile shopping, e-tailing, the digitalization of ethical consumption, and the development of digital food platforms. He has also conducted research on sustainable retail, green marketing, sustainable consumption, and alternative markets. To explore these issues he draws on theories of practice and makes use of ethnographic methods.

ORCID

Christian Fuentes  <http://orcid.org/0000-0001-6687-274X>

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