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The social imaginaries of data activism

Original Research Article

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Tuukka Lehtiniemi[1] and Minna Ruckenstein[2]

Abstract

Data activism, promoting new forms of civic and political engagement, has emerged as a response to problematic aspects of datafication that include tensions between data openness and data ownership, and asymmetries in terms of data usage and distribution. In this article, we discuss MyData, a data activism initiative originating in Finland, which aims to shape a more sustainable citizen-centric data economy by means of increasing individuals' control of their personal data. Using data gathered during long-term participant-observation in collaborative projects with data activists, we explore the internal tensions of data activism by first outlining two different social imaginaries – technological and socio-critical – within MyData, and then merging them to open practical and analytical space for engaging with the socio-technical futures currently in the making. While the technological imaginary favours data infrastructures as corrective measures, the socio-critical imaginary questions the effectiveness of technological correction. Unpacking them clarifies the kinds of political and social alternatives that different social imaginaries ascribe to the notions underlying data activism, and highlights the need to consider the social structures in play. The more far-reaching goal of our exercise is to provide practical and analytical resources for critical engagement in the context of data activism. By merging technological and socio-critical imaginaries in the work of reimagining governing structures and knowledge practices alongside infrastructural arrangements, scholars can depart from the most obvious forms of critique, influence data activism practice, and formulate data ethics and data futures.

Keywords

Datafication, social imaginary, data activism, MyData, data ethics, socio-technical futures

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This article is a part of special theme on Health Data Ecosystem. To see a full list of all articles in this special theme, please click here: https://journals.sagepub.com/page/bds/collections/health_data_ecosystem.

Introduction

> It will not be enough, however, to gain control over the infrastructure of our communicative lives. [...] This is the critical challenge posed by the Big Data era and the new forms of control it ushers in: not simply to reimagine infrastructural arrangements, but also the knowledge practices with which they are associated. (Andrejevic, 2013: 165)

An expanding area of scholarly interest that could be loosely characterized as 'data activism research' explores the harnessing of the capacities of data technology to promote social justice, new forms of agency and political participation, meanwhile challenging accepted norms, practices and ideological projects (Baack, 2015; Delfanti and Iaconesi, 2016; Greenfield, 2016; Kennedy, 2018; Milan and Gutierrez, 2018; Milan and van der Velden, 2016; Pybus et al., 2015). Data activism research is closely linked with processes

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of datafication (Ruckenstein and Schüll, 2017; van Dijck, 2014) and the ways in which personal data – any data related to, or resulting from actions by, a person – is being utilized for economic and political aims in an increasingly systematic manner (van Dijck and Poell, 2016; Zuboff, 2015). While data activism research calls for attention to the exploitative forces inherent in processes of datafication, it does not merely detail problematic aspects of datafication; rather, it investigates and draws inspiration from new forms of civic and political engagement that respond to datafication, with the aim of instigating and strengthening more responsible data futures (Milan and van der Velden, 2016).

We build on research that explores how data activism develops 'alternative social imaginaries' and creates 'a new sense for the legitimacy of collective knowledge creation' (Baack, 2015: 8). The notion of the social imaginary, offered by Taylor (2002), aids in the exploration of how data activists make sense of society's practices, imagine their social existence, and deal with 'the expectations that are normally met, and the deeper normative notions and images that underlie these expectations' (p.106). Developing this idea, Jasanoff (2015) highlights the 'instrumental and transformative' role that technology developments play in generating imaginaries of social order, defining *socio-technical* imaginaries as collectively held notions of desirable futures, animated by shared understandings of social aims, and attainable through advances in technology. In terms of data activism, this provides a way to account for the interplay between the design of technologies and the social arrangements that inspire and sustain their production – in other words, how technology both embeds, and is embedded in, the social (Jasanoff, 2015: 2–3). Of particular interest here is how transformations in wider social imaginaries may occur through the development of new practices and associated imaginaries in groups or collectives (Taylor, 2002: 111).

While data activism retains and develops social imaginaries that promote new practices by employing data technology to fulfil aims of social justice or political participation, these capacities can also support opposing perspectives and values. For example, open government data can support liberal democratic values by providing mechanisms for more just governance, but also libertarian agendas by providing justification for privatization and deregulation (Schrock, 2016). It is thus crucial to acknowledge that multiple and conflicting social imaginaries are at work in terms of data activism.

In the following, we discuss tensions arising from alternative ways of 'framing, packaging, and presenting data' that 'have the potential to alter not only our vision of the world, but also our own theory of knowledge' (Milan and van der Velden, 2016: 63). Our approach is inspired by Jasanoff's argument that even if imaginaries are collectively held, 'multiple imaginaries can coexist within a society in tension or in a productive dialectical relationship' (2015: 4). We begin by identifying opposing social imaginaries in the context of a single data activist initiative, MyData, and then rework them into a shared dialogue. Our contribution is informed by our involvement in four years of research projects and participatory activities with data activists; it draws from a range of disciplinary sources including critical data studies, anthropology, economic sociology and science and technology studies, and also develops our previous work in the field (Janasik-Honkela and Ruckenstein 2016; Lehtiniemi, 2017; Ruckenstein and Pantzar, 2015).

As a form of data activism, the MyData initiative aims at a more sustainable, and simultaneously citizen-centric, digital economy; it is built on the understanding that people, companies, the public sector and society at large benefit when individuals become more active data citizens and consumers by controlling the gathering, sharing and analysis of personal data. MyData is politically and ideologically thought-provoking by virtue of its self-portrayal as an initiative driven by digital rights, an auto-designation which it introduces as a placeholder in an ambitious aim to provide society with 'parallel development of digital rights, innovation and business growth' (Poikola et al., 2015: 4). This translates into the concurrent advancement of processes and policies for protecting individuals' rights while accommodating the industry's demands to process personal data in the development of innovative services. MyData seeks to achieve systemic outcomes by rearranging the infrastructure underlying individual-level data practices. The new infrastructure being developed, here understood as technical forms that facilitate user-controlled exchange of personal data (Larkin, 2013), comprises of personal data storages, data schemas and standards, exchange protocols, digital identity frameworks, and permission management tools. The principle of individual data control is intended to be general and sector-independent; indeed, it can be embedded in field-specific initiatives ranging from health and mobility to retail and finances.

In what follows, we separate two social imaginaries: *a technological imaginary* that favours data infrastructure as a corrective measure, and *a socio-critical imaginary* that questions the effectiveness of technological correction. This exercise clarifies political and social alternatives ascribed by different social imaginaries to the data activist initiative, highlighting the need to consider the social structures in play. The more far-

reaching goal, however, is to reach beyond identifying tensions in imaginaries: our account of the unpacking of social imaginaries aims to offer a productive way forward. Towards this end, we finish by discussing how to merge technological and socio-critical imaginaries in the work of reimagining governing structures and knowledge practices alongside infrastructural arrangements.

Alternative social imaginaries

The perceived need to separate alternative imaginaries before bridging the gap between them was initially triggered by our personal involvement in the MyData initiative. Between 2014 and 2018 we have worked together with developers and data activists in three research projects in fields of health and knowledge work, focusing on personal data uses and emergent data infrastructures. We started our research collaboration with the goal of exploring the wide range of agencies and aims in play in terms of datafication. Initially, we intended to introduce collective aims and expectations in order to open a reflexive conversation about the political and ideological underpinnings of MyData, meanwhile offering ideas on how to promote what we considered societally 'more robust' data activism (see Kennedy, 2018). While our collaboration with data activists was motivated by a mutual understanding that both technology developers and social scientists have an important role in shaping data activism, the first joint meetings were characterized by a certain discomfort. We were viewing a stream of diagrams on PowerPoint slides depicting databases and data flows, in terms of which a more socio-critical imaginary remained oddly irrelevant. Witnessing how society is imagined as being built with information systems shaped our involvement with MyData, pushing us towards an outsider's position from where we had to work our way to a shared dialogue.

We learned first-hand that the socio-critical imaginary that we had internalized through our training in the social sciences, which we also associated with data activism, differed from the technology developers' view, sometimes in a profound sense. In order to explain our position to technology developers we had to clearly spell it out. The socio-critical imaginary is informed by the critical stance characterizing social scientific inquiry, which also questions the optimistic and future-oriented imaginary of technological advances. Drawing from critical political economy and neo-Foucauldian analyses, researchers have explored the effects of datafication on the economy, politics, social life and self-understanding, with particular attention to how technical innovation is outrunning both public understanding and regulation (Kennedy, 2018; Zuboff, 2015). Research highlights

how the introduction of technologies as corrective measures to address identified societal problems leads to new issues that, in turn, need to be corrected: for example, the data economy practices that initiatives like MyData are currently trying to fix were originally justified with a jubilant discourse of the political and societal benefits of online services (West, 2019).

In contrast, the technological imaginary that we encountered in data activism is fed by practical and future-oriented aims. As Fred Turner points out (Logic Magazine, 2017), the engineering attitude includes a tendency to do politics primarily by changing infrastructure. This mindset typically rests on a techno-libertarian ideology promoting notions of a free market and autonomous, free-spirited individuals benefiting from advances in information technology (Barbrook and Cameron, 1996; Turner 2006). It tends to take the stance that technology evolution is inevitable: since we cannot stop it, we must make technologies serve us. In this view, information technology, per se, does not generate the undesirable uses to which it is put; rather, they arise when technologies are harnessed to serve particular interests. For technology developers, then, the commitment to societal transformations encompasses ideas of both a more just society, and the correct role of technical means in achieving that transformation (Kelty, 2008). Applying this formulation, initiatives such as MyData treat infrastructural interventions as corrective measures for unsatisfactory societal developments that need to be reversed, or redirected towards fairer and more responsible practices by building new technology. Thus, where the engineering attitude favours infrastructural development, critical scholars, committed to a more socio-critical stance, question the reimagining of such arrangements, particularly if it fails to involve knowledge practices (Andrejevic, 2013).

Our aim is not to paint a caricature of either technology developers or social scientists by separating these social imaginaries, or to claim that either would sufficiently represent any form of data activism. In practice, the two imaginaries are not neatly separable; individual data activists move between them when they explain their future aims. Rather, the two are fundamentally aligned: both recognize the far-reaching consequences of datafication, which enables new approaches for making sense of the world that in turn affect the production of knowledge, business practices and governance (Kitchin, 2014a). In fact, this alignment is what initiated our research collaborations in the first place, as we wanted to better our understanding of the critical potential of technology developers to rework processes related to datafication. The analytical separation between the two can, however, clarify how data activism contributes to 'alternative narratives of

our datafied social reality' (Milan and van der Velden, 2016: 69), and aid in formulation of data activism in terms of social and economic justice (Dencik, 2018). By exposing tensions between social imaginaries, we highlight the contested social aims and expectations of data activism, thereby assisting the evaluation of potential data futures. We argue that the imaginaries inform engagements with new forms of information and knowledge, and their production: that is, they represent dissimilar data futures. In particular, as we suggest below, the imaginaries promoting dissimilar data futures have different relations to the project of individual control of personal data.

Participant-observers of MyData

Studying an initiative such as MyData means dealing with a work-in-progress and uncertain futures in the making. In terms of the actual research process, the emergent nature of the phenomenon at hand has meant that our research has been ethnographically oriented in that we have engaged in ongoing observation and dialogue when interacting with data activists. The observations alerted us to the fact that, rather than being confronted with a uniform 'data activist public', what we face are alternative data futures. To get a better sense of desirable data futures, we started to explore data activists' social imaginaries. This required us to understand how data activists differ from one another, and the nature of their concerns and aims. In the process, however, data activists pushed us not only to study them, but also to offer 'our solution' to remedying the current ills of the data economy. Requests for constructive response echo demands for design input from social scientists in the fields of human–computer interaction and systems design (e.g. Anderson, 1994; Hughes et al., 1994). For us, this meant we needed to 'come up with ingenious solutions to the problem of how to become interesting enough' for data activists and find ways for 'exploring common futures with practices' (Jensen and Lauritsen, 2005: 72–73). Towards this end, we actively had to supply constructive feedback to maintain a productive conversation. In the process, we gained a role in shaping and mobilizing data activism. This has meant that, alongside our research, we have participated in attempts to steer MyData-related improvements constructively. Overall, our engagement with data activism has two aims: to influence data activism by means of our socio-critical imaginary, and to produce scholarly insights providing resources for re-articulating the aims and futures of such activism. Together, these lead to an attempt to synthesize data future visions in a manner that takes the criticism of datafication in the direction that Latour (2004: 247–248) advocates:

the critic should not be 'the one who debunks, but the one who assembles'.

Our empirical material stems from our long-term participation, but also referenced documents, formal and informal interviews, discussions at project meetings, and countless everyday interactions. Alongside the research project's activities, we have taken on participant-observer roles in a 450-member Facebook discussion group[1] consisting of civil servants, activists, technology developers and start-up entrepreneurs. The first author has also participated in the Finnish MyData industry alliance, where a national MyData model is being developed through pilot projects. Further, we have done fieldwork in our roles as organizers, presenters and observers at three annual international MyData conferences in Helsinki since 2016. These collaborations have placed us in the unique position of becoming part of assembling MyData into a socially more robust form of data activism. In the following, we first detail the technological imaginary of MyData activism, the activists' common understanding of relevant issues, and legitimate technological solutions, before moving into more socio-critical understandings of the initiative.

'Human-centric' personal data activism

The high-level MyData vision – described in a white paper[2] written primarily by researchers at the Helsinki Institute for Information Technology and the Tampere University of Technology (Poikola et al., 2015) – outlines a transformation of the 'organization-centric system' into a 'human-centric system' that treats personal data as a resource that the individual can access and control, benefit and learn from. Overall, the MyData vision and related documents suggest that, in the current situation, the collection and analysis of data are too heavily dictated by organizations. As a result, data may be diverted to unforeseen purposes, be combined and analysed in ways that cause people harm or, in another form of loss stressed by MyData developers, may not be used when beneficial to individuals due to the interpretation monopolies of the data-collecting organizations.

The concept of MyData originated with an Open Knowledge Finland working group, where it was developed collaboratively. Open data activists argue that data produced by public authorities should be technically and legally free to use, distribute and reuse (Kitchin, 2014b). According to the MyData initiative, the right to decide on the uses of personal data collected by organizations – such as data on economic transactions, location, smart home appliances, occupational health check-ups or social media – should reside with the data subjects themselves, instead of being monopolized by the organizations. The MyData vision, then,

represents a transformation of the Open Data idea: both aim to release data from a proprietary, monopolistic regime for new uses, but in the case of MyData, both the scope of data, and the scope of benefits derived from data, are scaled down from the collective to the individual level. Jointly formulated MyData principles range from getting access to personal data held by organizations in a machine-readable format – recently also supported by the data portability rights provided in Article 12 of the EU General Data Protection Regulation – to using the data freely, sharing them with third parties, or deleting them. Personal data *become* MyData if they adhere to the spelled-out principles.

Despite the heated debate on 'who owns personal data', in the legal sense a logical answer to the question is 'no one' (Determann, 2018). In order to avoid the legal debate on data ownership and property rights, MyData activists consciously employ the concepts of data management and control, focusing on individuals' practical capacity to make use of their data. Figure 1 illustrates how MyData developers perceive their vision. They portray the individual as the 'operation centre', placed in the middle of the digital service ecosystem uniting data sources and data endpoints; flows of data pass (either permission-wise or in actual transfers) through the central point.

By aiming to make individuals 'empowered actors, not passive targets, in the management of their lives both online and offline' (Poikola et al., 2015: 2), MyData attempts to push the market, or the public sector, to design new services and operation models that allow citizens and consumers to gain personal value from their data. With the datasets thus created, MyData proponents argue, it is possible to create systems based on real-time feedback, allowing people and organizations to learn about themselves, or readjust their operations. The white paper offers examples of how individuals could utilize personal data for their own purposes, either directly or through sharing. Similar to many other data-driven initiatives, then, MyData promotes new forms of data gathering, sharing and analysis in order to enhance or challenge current practices. Services of this type already exist: for instance, self-tracking devices generate data that people can access. Typically, however, they are problematic as they also utilize personal data for purposes of which their users might not be aware, or knowingly endorse (Crawford el al., 2015; Ruckenstein and Schüll, 2017).

To advance towards its vision, MyData does not affix itself to a particular technological implementation, allowing considerable interpretive flexibility and thereby supporting incommensurable social imaginaries. Indeed, interactions around MyData are characterized by a shared understanding of much-needed technological intervention and, simultaneously, of the complex nature of the issues related to it. MyData is first and foremost an infrastructure-level intervention, focusing on the underlying technological systems needed to realize a 'human-centric' personal data ecosystem. Yet, the way it is discussed and promoted has attracted attention in other quarters,[3] from service-developers and tool-makers to policy advocates. Participants are interested in the kinds of information architecture, data exchange standards and
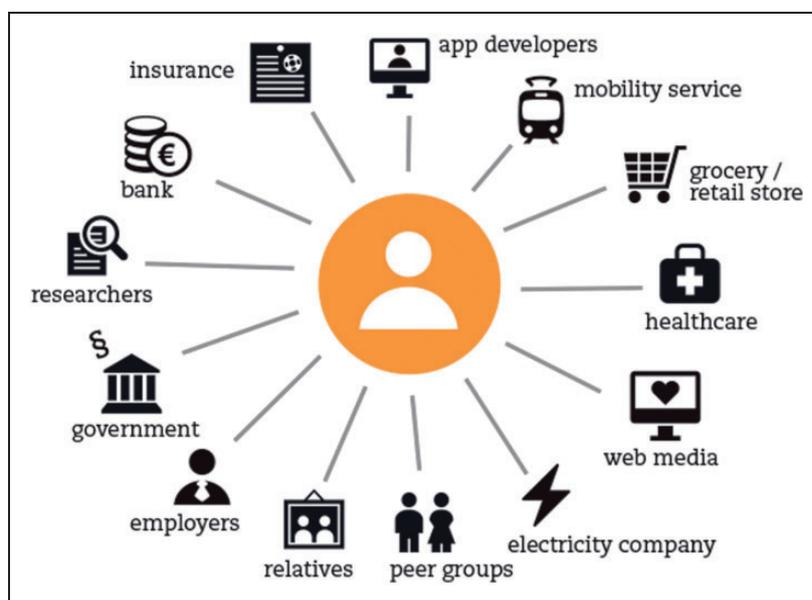

Figure 1. The MyData vision (Poikola et al., 2015).

organizational models needed to support MyData principles, but also the conceptual tools, research and policy required. This tends to attract individuals, companies, or other organizations interested in redefining and readjusting the current data economy by developing approaches giving users more control over their data, including startup companies like Meeco or Cozy Cloud (see Lehtiniemi, 2017), decentralized digital identity technologies such as Sovrin, Kantara Initiative's User-Managed Access protocol, or 'Vendor Relationship Management' systems (see Belli et al., 2017). The approach has some influential supporters in the public sector, as policy makers in Finland[4] and in the European Commission[5] have recognized the potential of the 'human-centric' data management vision. In the next section, we explicate analysis of the technological imaginary underlying MyData, and then discuss the initiative in light of the socio-critical imaginary.

Reversing the reverse adaptation

By advancing individual empowerment through the control of data collection and data sharing, the MyData vision relies on the ethical principle of 'human self-determination', treating the individual as an autonomous subject with inalienable rights and liberties. The concept of human autonomy, deeply rooted in modern philosophical thinking and embedded in this ethical principle, provided us with one of the first entry points to the ideological underpinnings of the MyData approach (Janasik-Honkela and Ruckenstein, 2016). In essence, MyData can be treated as a practical version of an established philosophical tradition, providing a tool to assess and observe the exploitation of data subjects by a 'system' or 'organizations'. As Taylor (1989) suggests, our perceptions of autonomy and dependency are defined by the notion of free will, according to which an independent agent autonomously sets goals for action. A dependent agent, on the other hand, is someone whose actions are influenced by an external force detached from the individual.

A classic text that resonates with the notion of lost autonomy inhering in the MyData initiative is the treatment of autonomous technology by Winner (1978). Winner perceives the human–technology relationship in terms of Kantian autonomy: via analysis of interrelations of independence and dependence. The core ideas of the MyData vision have particular resonance with Winner's formulation of 'reverse adaptation', wherein the human adapts to the power of the system and not vice versa. Winner presents five methods of action that contribute to reverse adaptation:

- Firstly, the autonomous system, consisting of 'socio-technical aggregates with human beings fully present, acting and thinking' (Winner, 1978: 242), can take over markets relevant for its operations. According to Winner, markets rarely control the operations of technological systems.

- The second feature of reverse adaptation is that the system strongly influences the political processes that ostensibly regulate its outputs and the prerequisites for its operation. The regulation of markets is so general and non-specific that in reality it is ineffectual.

- The third possible manifestation of reverse adaptation entails the system's finding a 'mission' that fits its technological capabilities. For instance, innovation politics is employed to recognize new objectives or areas of operation to support the market.

- Fourthly, the system might propagate and/or manipulate the needs it serves. As Winner puts it, why wait for public opinion to be shaped when there are numerous ways to influence the formation of social needs?

- Finally, the system might 'run into' a crisis to justify the need for its growth or change; typically, this might be a recognized threat or an alleged deficiency.

Read through a Winnerian lens, MyData is concerned with a gradual loss of control over technological arrangements. Individuals do not have the power to control the system through markets, and the regulatory controls provided, for instance, by data protection and antitrust are insufficient. How MyData frames the problem thus aligns with Winner's classic text, even if the technology developers may not be familiar with the author. The literature that builds the imaginary of technology developers in a more overt manner is typically polemical rather than academic, with close ties to technology circles. For example, Jaron Lanier, a Silicon Valley entrepreneur and pioneer, asks in *Who Owns the Future?* (2013) how to remain human in a society wherein machines appear to be independent agents functioning separately from us:

> Popular digital designs do not treat people as being 'special enough'. People are treated as small elements in a bigger information machine, when in fact people are the *only* sources or destinations of information, or indeed of any meaning to the machine at all. (2013: 4, original emphasis)

Lanier associates the current data economy with exploitation and loss of human dignity, as data-gathering entities he calls 'siren servers' control us. He offers monetization of personal data as a solution: 'In a world of digital dignity, each individual will be the commercial owner of any data that can be measured from that person's state or behavior' (2013: 16). In other

words, Lanier promotes commercial symmetry between users and siren servers (p.236) to compensate for the loss of 'digital dignity'. According to this logic, when commercial agents profit from digital traces, a portion should be distributed to the data subjects as 'instant remunerations' in return for data use. A later iteration of the idea refers to 'data labor unions' (Arrieta Ibarra et al., 2018) through which users collectively bargain with the data giants.

Like Lanier, the MyData white paper suggests monetization of data as one of the model's potential benefits (Poikola et al., 2015: 3–4), and we have witnessed discussion of numerous business ideas based on that principle. In this imaginary, more efficient and better-targeted distribution of data generates personal and social advantages by way of economic transactions. Supporting the expansion of the personal data market links MyData principles to value-generating models. Thus MyData is not seen as settling into the existing technology market, but as giving rise to new business models, with economically more balanced use of personal data as their driving force.

When Winner's 'autonomous system', Lanier's 'information machine', or MyData's 'organization' treats humans as mere means to an end, humans are instrumentalized as sources of information instead of being treated as ends in themselves, and what ultimately comes under threat is human dignity. Where Lanier suggests remuneration for personal data as a practical solution for tackling Winnerian reverse adaptation, the promoters of MyData aim at protecting human dignity through advocating MyData principles. Both approaches suggest that people need digital dignity to be capable of self-determination, and argue that dignity can be protected with correctly positioned technology.

Socio-critical engagement with individual control

From the socio-critical stance, the articulation of citizen and consumer agency in terms of individual-centric data infrastructure is deeply problematic, raising the question of whether MyData actually leads, as its advocates hope, away from reverse adaptation into a more human-centric direction. Or does it, through expanding datafication, encouraging further reliance on data utilization, and opening data to monetization and competition, actually end up *strengthening* the system? Socio-critical engagement with MyData forces us to ask whether it is simply another iteration of Winner's reverse adaptation. While MyData proposes new data practices based on individual control, it remains ambiguous in how it treats information and knowledge flows. Perceived too simplistically, MyData's corrective measures could become a force co-opting rather than countering control of individuals, as with privacy and its protection (Coll, 2014).

Even if MyData activists promote monetization of personal data as only one of many possible technical solutions, the proposition is symptomatic of a belief that individuals can control the market. Promoting the personal data market assumes that people are competent to make informed choices concerning their data (Lehtiniemi and Kortesniemi, 2017), and that economic rights to data are straightforward determinants of market agency. The notion of a personal data market appeals to the technologically oriented data activists due to the rationale that, since data brokers can successfully monetize personal data for their economic benefit, an intermediary technology could also open the data market to individuals (Belli et al., 2017; Lehtiniemi, 2017). Here, an obvious risk of reverse adaptation lies in the belief that markets ostensibly harnessed to serve individuals would control the system. In other words, a critical imaginary orients us to treat the expanding commodification of personal data as a precarious effort to protect human dignity, but failing to take unpredictable consequences into account. Monetization could potentially lead to further inequalities and discrimination; for instance, privacy might become a prerogative to which only the wealthy can aspire, while the less financially endowed must either trade their personal data, or become data contributors in exchange for basic services such as internet access, housing or electricity. The dividing line could also run along other societal divisions such as technical capability or financial literacy. If new intermediaries start brokering data on behalf of individuals, unprecedented forms of commodifying everyday life might appear: for instance, diseases might become a source of income through data sale. We might face a new class of people responding to the demand by generating data traces and practices that have a market. Moreover, individually optimal data transactions can be socially or societally harmful. The socio-critical imaginary emphasizes contextual aspects of privacy that go beyond the individual: if we consider privacy as a commons (Regan, 2002), individual decisions can erode that commons and harm everyone collectively.

In the MyData 2016 conference,[6] presenters underlined the individual-centricity of the initiative with inventive terms: 'the Internet of me', 'the person as the platform', 'the API of me', 'the mecosystem', or the 'self wide web'. They shared the foundational idea that individuals are interested in controlling personal data. In this respect, the Quantified Self (QS), which took form in 2008, offers an instructive parallel development. The motors of QS are self-trackers, crafting their personal data stories. Individuals are at the

centre of the movement, yet it is not entirely individual-centric. Personal data charts and visualizations trigger collective narration and critical reflection, offering a common language to which people can relate (Nafus and Sherman, 2014). QS has offered support for enquiry into questions of self-knowledge in relation to data practices and the emerging politics of data. As Nafus and Sherman (p. 1877) argue, 'QS is one of the few places where the question of why data matters is asked in ways that go beyond advertising or controlling the behaviors of others.' Due to its infrastructural rather than human-level aims, MyData lacks this kind of collective data work.

We were particularly ready to see MyData in light of critical technology studies, critique of the data economy, and calls for agency (Kennedy et al., 2015), but, in general, our experience with MyData was that while activists are enthusiastic about new perspectives, to be effective they should involve possibilities for technology development or clearly enunciated policy guidance. Where we tended to see a community that would benefit from a more nuanced understanding of its ideological underpinnings, potentially leading to reconsideration of the ways concrete technology projects are envisioned, community members rather considered themselves as practical enablers of technology development. The divide between the social imaginaries concretizes at the point where developers value rapid action and iterations, and social scientists want to take a step back and lean on their concepts and literary sources, resorting to discursive rather than technical intervention in material practices.

Still, there is no doubt that well-executed MyData principles could aid in promoting collective engagement and public culture: for instance, MyData-based approaches encourage the rethinking of governance in companies, as well as advancing new forms of activism. By means of data activism, personal health can be redefined as a collective and political matter; people suffering from serious illnesses can contribute their health data to enhance medical research, or, alternatively, share information about themselves online for everyone to see. The Italian artist Salvatore Iaconesi set up a website featuring medical data related to his brain tumour, alongside a request for 'cures'. By opening a public space within which to experience his illness, he resisted being reduced to the category of a cancer patient constituted by a set of medical data (Delfanti and Iaconesi, 2016). Such examples demonstrate the possibility of re-appropriating personal data and harnessing technological and communicative powers for constructing collective spaces that can call into question existing social and political imbalances. With these observations and experiences, we began to synthesize a more productive relationship between the two social imaginaries.

Beyond data solutionism

After the publication of the MyData white paper in 2015, the Finnish MyData promoters were contacted by developers, activists and policy-makers in Europe and beyond. Supported by the appeal of the concept, the first MyData conference was held in Helsinki in August 2016. The event brought together 700 participants, differing in interests and objectives, and in the terms and concepts they employed to talk about MyData and similar initiatives. Presentations from various parts of the world and different sectors of society showcased services and tools that either explicitly follow MyData principles or, without committing to any form of data activism, shared its political aims. According to a key promoter, the conference was an occasion where the 'MyData community started to become self-aware' (MyData.org, 2017: 16). In a summary speech for the conference, Valerie Peugeot (2016) from Orange Labs pushed the audience to widen their imaginary by introducing MyData as a social movement and expanding the activist stance beyond technological and regulatory issues. In light of the imaginaries we have outlined, Peugeot's summary indicated that, when viewed through the technological imaginary, MyData is an ambitious political project advancing human-centricity, but in terms of the socio-critical imaginary it is not ideological enough to reach its aims of digital dignity, empowerment and citizen-centricity. Building on this idea, in order to become sufficiently ideological, MyData should more explicitly outline intended aims for technology development, including desired and undesired objectives of data usage. The infrastructure-level vision should be combined with actual knowledge practices and clearly enunciated outcomes. At the least, it should propose how to move beyond defining personal data within an individual property paradigm, and take into account the relations and politics that uses of personal data bring into being. As argued above, with its ambiguous stance towards information and knowledge production, as long as it conforms to individual data control, MyData can merely introduce new forms of exploitation. In order to avoid this, more clearly stated societal aims are needed.

In August 2017, the authors teamed up with Peugeot and co-hosted a track called 'Our Data' at the MyData conference to promote the reimagining of knowledge practices alongside infrastructural data arrangements. By talking, somewhat provocatively, about 'our' instead of 'my' data, we promoted collective engagement through data activism with the intent of combining technology-oriented MyData activism with a socio-critical stance on the individual-centricity of the initiative. We argued that developing data technologies for the individual and leaving it up to the market to

correct the economic imbalances will hardly work alone (Lehtiniemi, 2017). Technologically savvy data activists are urgently needed for clarifying and mediating the work that data practices and infrastructures require. Therefore, in order for the socio-critical imaginaries to be realized, technological designs and repositionings of the data infrastructure are required to strengthen forms of activism not centred on the individual or on data, but on people collectively as the sources and distributors of data. The presentations and subsequent conversations focusing on 'Our Data' in the MyData conference and beyond suggest several possibilities for combining the technological and socio-critical imaginaries, thereby bringing back together the imaginaries that we initially separated for analytical purposes. However, rather than merely traveling a full circle back to Jasanoff's notion of socio-technical imaginary, the analytic separation and ensuing merging of the social imaginaries has allowed us to open practical and analytical space for the exploration of the socio-technical future currently in the making. From that space we can influence data activism practice and see more clearly what is timely in terms of data activism research and data ethics.

The following outcomes of combining technological and socio-critical imaginaries operate on different scales and registers, and are provided here as examples of future data activist work. Together they indicate growing interest among the MyData participants in working towards consciously building a socio-technical future and thinking beyond data solutionism. First, services abiding by MyData principles could exercise notions of desired and undesired data use by means of collective data governance. The concept of governance is already built into the MyData vision; the developers are cognizant that a functioning digital service environment requires that interoperability is assured by rules that govern both technical and operational aspects of data flows. These rules could be coupled with explicit governance of data usage and exploitation, aligning MyData principles with collectively agreed notions of acceptable data use. At one end, personal data that is acknowledged as a constitutive part of personal identity (Floridi, 2017: 95–96) could be considered strictly off limits in terms of trading or processing. At the other end, it could be agreed that some data may be safely shared with almost anyone. In practice, activist work is needed to explore how to reach decisions collectively about these extremes and the space in between.

A second combination takes advantage of infrastructural technologies' relying on MyData principles in producing data commons, which can be formed of proprietary personal data, but can also bring together other kinds of open data sources benefiting collective aims. In this way, MyData can aid specific collectives in reclaiming personal data to benefit the community at large instead of the individual, adding a societally oriented layer to technological infrastructure. Various projects working towards the creation of data commons already exist: for instance, for platform cooperatives (Carballa Smichowski, 2016), in the context of the smart city (Morozov and Bria, 2018), in the health research realm (Evans, 2017), and through data sharing platforms such as Open Humans (Ball, 2018).

Third, the tradition of cooperative-based governance can function as a basis for shared data ownership and citizen-led initiatives by promoting digital rights. In Europe, Nordic countries in particular, sharing the goal of advancing a more responsive and responsible digital society can provide a rich cultural breeding ground for MyData principles (Janasik-Honkela and Ruckenstein, 2016), preventing society being subordinated to proprietary and monopolistic data infrastructures. Cooperative ownership models are undergoing experimentation in initiatives such as Healthbank and MIDATA.coop. Overall, MyData technology developers could collaborate with social movements aiming to solve societal problems in order to demonstrate, in practice, how data can shape knowledge practices and generate advocacy and public benefits (Milan and Gutierrez, 2018).

Finally, refusals to share personal data can also become political acts and corrective measures. Despite our focus on proactive (Milan and van der Velden, 2016) data activism that sees the beneficial potential of datafication, there is a need for continued questioning of the naturalization of relentless data gathering and storing, and to insist that less data are gathered for unknown future uses. The very collection of data, and not only subsequent uses of it, may have negative implications. In line with our reasoning, reactive data activism – for instance, refusing certain forms of sharing personal data with corporations or the state (Moore and Robinson, 2016) – can also be technologically mediated, engaged in collectively, and leveraged for the collective good.

Conclusion

An important consideration for data activism is how to ensure a robust enough conceptual grounding for advancing the public good, as concepts such as political participation, privacy, autonomy, or health are taken up, enacted, and altered through interactions with data processing technologies, and become enmeshed with engineering and design. This calls for rigorous analyses of the production of data infrastructures, how they are imagined, and of what kinds of ideological and everyday data relations they consist. In this article, we have

contributed to this debate by separating two social imaginaries at stake in terms of data activism – the technological and the socio-critical – and highlighting their discrepancies. Then we brought the two together in order to open practical and analytical space for engaging with socio-technical futures and promoting dialogue across professional and scholarly fields.

In becoming a part of the data activist scene that we are studying, we are participants in a widening scholarly trend. In order to understand the aims and tensions of data activism in an empirically grounded manner, researchers have begun to explore applied perspectives, often by collaborating with data activists and data-driven initiatives outside their academic spheres. Applied research perspectives can deepen understandings of datafication by revealing how data technologies are taken up, valued, and repurposed in ways that either do not comply with imposed data regimes, or that mobilize data in alternative or inventive ways. For instance, health-related initiatives have strong ties with the academic community in addressing the tension between data openness and data ownership and asymmetries in terms of data usage and distribution (Kish and Topol, 2015; Nafus, 2016), and the inadequacy of informed consent and existing privacy protections (Sharon, 2016a). A shared aim is also the re-articulation of ethically motivated concepts, such as sharing, solidarity, commons and the public good (Prainsack and Buyx, 2017; Sharon, 2016b).

All along we have argued that the rapidly changing technology landscape calls for taking Latour's (2004) view on critique seriously: we need to keep asking what productive 'critical engagement' means in the context of data activism and developing data infrastructures. Based on our experience with MyData, it seems that in order to succeed in cross-professional dialogue, social scientists need to exercise disciplinary self-awareness; they need to understand how their socio-critical imaginary differs from the imaginary of technology developers and be ready to depart from the most obvious forms of critique associated with the exploitative forces of datafication. By offering critique that is pieced together in a constructive manner, data activism research can focus on collectively sustainable socio-technical data futures. As we have demonstrated, by uncovering the aims and contestations around data activism, socio-critical imaginaries can aid in promoting progressive 'public good agendas', offering support for navigating policy-crafting, technology companies' proprietary software, and data platforms that have become participants in deciding what counts in people's lives. Linking knowledge production to data activism practice, we can strengthen the understanding of how data technologies become part of everyday practices with societally comprehensive goals.

Notes

1. Critique of the data economy is indeed discussed on Facebook, even though some activists refuse to use the platform.
2. The 'white paper' is a summary of a more comprehensive Finnish-language study commissioned by the Ministry of Transport and Communication (Poikola et al., 2014).
3. See http://www.mydata.org (accessed 13 December 2018).
4. In 2015, the Finnish government programme included the following aim: 'People's right to decide about and monitor their personal information will be enhanced, while ensuring the smooth transfer of data between the authorities' (see Prime Minister's Office, 2015: 27).
5. The European Commission organized a roundtable for personal information management service developers: https://ec.europa.eu/digital-single-market/en/news/emerging-offer-personal-information-management-services-current-state-service-offers-and (accessed 13 December 2018).
6. http://www.mydata2016.org (accessed 13 December 2018).

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