



# JOURNAL<sup>OF</sup> DIGITAL SOCIAL RESEARCH

WHERE WE'RE GOING, WE DON'T NEED ROADS  
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SOCIOMATERIALITY IN DIGITAL TEXT SHARING OF  
BUSINESS COMMUNICATION**

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**“I DON’T KNOW IF I CAN SHARE THIS.”  
AGENCY AND SOCIOMATERIALITY IN  
DIGITAL TEXT SHARING OF BUSINESS  
COMMUNICATION**Mona Blåsjö<sup>a</sup>, Carla Jonsson<sup>ab</sup> and Sofia Johansson<sup>a</sup>**ABSTRACT**

In modern business organizations, digital practices are enacted daily, often when sharing texts, which is crucial for knowledge management. How professionals experience digital text sharing is an issue that is often overlooked. In this paper, we focus on a relatively new aspect of business digital literacy: the literacy practice of digital text sharing in workplaces. Our analysis was conducted on ethnographic data from business organizations. The results show that sociomaterial aspects are enacted by professionals by discussing 1) the protection of borders of their own and other organizations, and 2) the status and digital location of texts. The analysis highlights two means of expressing agency that indicate conflicting norms: joking and showing strong emotions. The study places the hitherto backgrounded literacy practice of digital text sharing in workplaces in the foreground, proposes methods for studying this phenomenon, and highlights issues concerning digital text sharing that should be addressed by organizations.

Keywords: professional communication; digital literacy; agency.

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## 1 INTRODUCTION

Modern business organizations rely heavily on knowledge management in digital media (Anders, 2016), as well as on information exchange through digital tools (Sharples, 2012; Uysal, 2016). On a daily basis, employees use numerous digital tools to share texts in an effort to keep processes running smoothly, to facilitate knowledge management, to maintain social relations (Karlsson, 2009; Cardon et al., 2019) and as part of their writing processes (Leijten et al., 2014). Different problems with digital text sharing may occur when changing digital tools, such as IT security flaws and obstacles. The implementation of and changes to IT systems can also challenge social roles and norms within and between organizations, for instance, when staff members have varying levels of digital literacy, or they have different degrees of motivation for adjusting to changes (Farrell, 2009; Amare, 2017). Conflicts between designers of digital systems and users can be observed in, for instance, divergent goals and norms (McCarthy et al., 2011).

Changes and conflicts in relation to these is a recurrent theme in *organizational studies* (e.g. Alas, 2007; Alvesson & Sveningsson, 2016), where conflicts and power relations have occasionally been conceptualized in terms of *resistance* (Corley & Gioia, 2004; Lamm & Gordon, 2010; Thomas & Hardy, 2011) to models and systems imposed by management (see also Ogbonna & Wilkinson, 2003). In recent years, power relations and organizational changes have been covered by theories on *sociomateriality* (Orlikowski, 2010; Moura & Bispo, 2020; Våland & Georg, 2014), some of the sociomaterial processes studied being technological or digital (all work processes in modern society can be seen as digital to some degree, as Orlikowski & Scott [2016] state). Although this is a growing field of interest, the research gaps concerning digital transformation of organizations include digital competencies, organizational changes, new digital business models and inter-organizational perspectives, as Jedynak et al. (2021:642) observe in a recent literature review of organizational studies.

Within the area of *communication and linguistic research*, where this study is positioned, issues of information exchange and other uses of digital tools have been studied with regard to IT professions (Eklund et al., 2010) with a specific tool (McCarthy et al., 2011) and/or within one distinct organization (Turnage & Goodboy, 2016). However, modern work life often has a much greater complexity than such scenarios account for, and it is relevant to ask how digital text sharing functions for users who perform core activities, handle several different digital tools in changing organizations, or cross organizational boundaries. Digital text sharing (defined further below) – including everyday practices such as putting texts into IT systems or sharing documents in Skype meetings – has often been disregarded as something “in between” the important practices of writing

a text collaboratively or building shared knowledge, when it has been regarded at all. In the literature, the ways in which texts are shared have often been in the background, with writing and contextual issues occupying the foreground (e.g. Bremner, 2006; Smith & Turner, 2014; see also Jakobs & Perrin, 2014). Alternatively, the actual digital tools used in text sharing have been foregrounded (McCarthy et al., 2011; Amare, 2017). In this study we wish to bring the activities of digital text sharing itself into the foreground.

Digital text sharing in workplace settings is related to literacy, which in turn is related to social issues such as management, control and agency, e.g., who has the right to work with which category of documents, who is entitled to sign certain documents, and who has the right to read and share various bits of information (cf. Braun et al., 2019). In other words, literacy is related to social practices, things people do in somewhat typified manners within more or less delimited roles (Barton et al., 2000). When writing and text are involved in a social practice, it can be referred to as a *literacy practice* (Barton et al., 2000). Until now, studies have typically focused on literacy practices such as reading, writing and speaking about texts (Heath, 1983; Lillis, 2001), and literacy practices for everyday tasks such as documentation and planning (Karlsson, 2009). However, in the digital era, literacy practices such as searching for and sharing texts are also highly frequent practices and call for further research. Moreover, conceptualization of literacies has developed significantly from their being regarded as discrete and transferable skills to being viewed as intertwined with social issues such as norms, agency and roles, as well as material aspects such as place (Overmeyer & Carlson, 2019) and digital design (Lankshear & Knobel, 2006).

Digital literacy is often described as the ability to use digital media in everyday, goal-directed, activities in work, school, or leisure real-life situations (Martin, 2006; Jones & Hafner, 2012; Barton & Lee, 2016). Such situations often entail a high degree of complexity when it comes to social roles and agencies, as well as different material artefacts, and different places, i.e., *sociomaterial* aspects (Wilber, 2008; Kress, 2010; Björkqvall & Karlsson, 2011; Bhatt & de Roock, 2013; Jonsson & Blåsjö, 2020). This line of research is often in agreement that human actions and artefacts (e.g. digital tools and physical environment) are intimately intertwined with each other and, thus, need to be studied together, in the human practices of using and inhabiting materiality. Related to this, the open question of how *agency* is balanced between humans and artefacts (Hamilton, 2001; Latour, 2005) is highly relevant, as well as the authority and agency of individuals and groups in relation to digital tools (Amare, 2017; Cardon et al., 2019). The concepts of digital literacy, sociomateriality and agency will be developed in the following section.

This study focuses on digital text sharing, which is defined as acts of exchanging, submitting, searching or showing written information, which can be verbal or numeral, by means of a digital tool; the concept focuses on the actions and strategies of sharing as such, in a more narrow sense than the broader concept of digital communication. The study is based on ethnographic data constructed from business organizations in Sweden in the research project Professional Communication and Digital Media: Complexity, Mobility and Multilingualism in the Global Workplace. During the course of this project, we observed digital text sharing as a highly relevant concern for participants such as project managers and executives in their daily work. They often spoke of where to find the latest version of a document, with whom they should share a text, and to what extent they were allowed to share information. Generally, these concerns were related to material aspects, such as the uses of various digital tools, and to social aspects, such as who had access to certain documents. Based on these tentative observations, we focused on the issue of digital text sharing in one of several sub-studies from the project (see also Blåsjö & Jonsson 2021).

The aim of this study is to contribute to knowledge about digital literacy in modern business communication by analyzing and discussing aspects of agency (Lillis, 2013; Scollon, 2005; Sharp, 2019) and sociomateriality (Scollon & Scollon, 2003; Orlikowski, 2010; Hamilton, 2016). To this end, we explore the following research questions:

1. How and to what extent do professionals speak about digital text sharing?
2. How are sociomaterial aspects in modern business settings enacted in everyday literacy practices of digital text sharing?
3. How do professionals express experienced degrees of agency in relation to digital text sharing?

In a recent discussion on business knowledge sharing, Widén (2019) points to three dimensions: cultural, social, and tacit. For future research, she claims: “An understanding of the context is crucial: how the organizational information culture and social interactions support knowledge processes through values, attitudes, and norms” (132). Similarly, McCarthy et al. (2011, 392) point to the effects of tensions between norms and assumptions of a workplace, on one hand, and the nature of a CMS (Computer Mediated System) on the other hand. Although not mentioning digital media explicitly, Rogers et al. (2020) direct attention to the role of text genres that direct and report work activities in knowledge processes and their social agendas. Rogers et al. (2020, 147) conclude by pointing to the need for future

research to study how an organization's tools, including common values, influence knowledge work. Dimensions such as values, norms and assumptions are, however, quite abstract, and difficult to study. In this article, we study knowledge sharing as concrete practices observed through everyday interaction in business settings (cf. Tusting, 2015, Alvesson & Sveningsson, 2015). Thus, one contribution is to highlight methods of studying business communication 'on the floor.' More importantly, we bring literacy practices of digital text sharing itself into the foreground, exploring issues expressed as critical by business professionals themselves.

## 2 LITERATURE

In this section, we summarize literature on, firstly, the concept of digital literacy, which is the focus of the study, and secondly, research and theoretical concepts related to the research questions, respectively. Theoretical concepts are drawn from two interrelated fields that take sociomateriality into account: New Literacy Studies (Barton et al., 2005; Lankshear & Knobel, 2006) and Mediated Discourse Analysis (Scollon & Scollon, 2003; Scollon & Scollon, 2004; Norris & Jones, 2005).

### 2.1 Digital literacy

The notion that literacy entails more than reading and writing has been acknowledged in the sense that literacy is connected to wider social contexts and activities (Barton, 2007; Brandt, 2005). Today, these activities are integrated with different digital devices and functions, as for instance smartphones, document sharing systems such as Box and Sharepoint, and the option of sharing a document on a screen e.g., in a virtual meeting.

In problematizing and developing the concept of *digital literacy*, researchers are more or less in agreement that digital literacy 1) is more than just being able to use a computer (Jones & Hafner, 2012); 2) consists of several literacies (rather than just one literacy) connected to different social activities (Knutsson et al., 2012); 3) is intertwined or layered with other literacies such as reading, writing, information literacy and visual literacy (cf. Nell et al., 2018); and 4) often comprises several levels, including one of self-reflection and agency to change digital practices (Martin, 2006; Knutsson et al., 2012; Jones & Hafner, 2012; Hsieh & Friederici, 2013).

The type of conceptualization having several levels mentioned above has been disseminated through the EU project DigEuLit (Martin, 2006) in order to reach employers, among others. The DigEuLit model includes a layer described as *digital transformation*, which includes self-reflection and creativity, and is aimed to "stimulate significant change within the professional or knowledge domain" (Martin, 2006:156). Such change can



take place at the individual, group or organizational level. Building partly on Martin (2006), Knutsson et al. (2012) has suggested an equivalent concept for this type of digital literacy: a *reflexive digital literacy* that entails the competencies and roles required to challenge given digital practices (cf. Jones & Hafner, 2012:13). The transformational or reflexive layer of digital literacy is also highlighted within New Literacy Studies (Lankshear & Knobel, 2006; Barton & Lee, 2013). Reflexive digital literacy includes users' resistance towards roles and assumptions related to digital practices.<sup>1</sup>

## 2.2 RQ 1: How and to what extent do professionals speak about digital text sharing?

As mentioned above, previous research has not highlighted digital text sharing per se, but has instead dealt with digital text sharing as something in between other practices such as reading and writing. From the field of information literacy, however, there are few studies that focus on how professionals speak about digital text sharing, and in the relevant studies employees report on searching for information as being strongly related to social issues and technology (Hepworth & Smith, 2008; Lloyd, 2010; Tuominen et al., 2005). Moreover, research points to the risk for employers to assume a general information literacy to be transferred from education to work life (Abram, 2013; Lloyd, 2010). Viewing information literacy as “a constellation of social, physical and textual practices” rather than skills (p. 90), Lloyd (2010) observes “an emphasis on reflexivity (reflection on action in practice)” (p. 103) among staff members.

To address the first research question, we need theoretical concepts to capture phenomena such as writing, reading and text sharing. These types of action are here regarded as recurrent *literacy practices*, i.e., things people do with texts and writing in more or less typified manners. Literacy practices are defined by New Literacy Studies as “the general cultural ways of utilizing written language which people draw upon in their lives” (Barton et al., 2000:7). This indicates that literacy practices have cultural and social aspects, related to agency, power and control (Tusting, 2005). Examples of literacy practices are writing emails (Dawley & Anthony, 2003; Braun et al., 2019), conducting meetings based on written agendas (Svennevig, 2012), and negotiating contracts (Blåsjö, 2013) in somehow typified manners. Literacy practices are enacted by people within their social networks (Lillis, 2013) by using material tools such as digital text

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<sup>1</sup> The different layers of digital literacies are not necessarily developmental stages, but rather parallel domains that actors can show signs of in different situations (Martin, 2006; Knutsson et al., 2012).

sharing systems, whiteboards and meeting rooms (Björkvall & Karlsson, 2011), which leads us to our next research question.

### **2.3 RQ 2: How are sociomaterial aspects in modern business settings enacted in everyday literacy practices of digital text sharing?**

Social issues of workplace communication have been thoroughly investigated; in relation to literacy, research has shown, for instance, the role of individuals as being shaped partly by their writing, how workplace writing is related to ‘business culture’ and type of industry, and how management can be practiced through new writing demands (Bremner, 2006; Gunnarsson, 2009; Tusting, 2015). Results from research on material issues, often integrated with social ones, show how employees make use of different materialities in processes (Björkvall & Karlsson, 2011) and how digital tools designed for enhancing social relationships can also bring negative effects (Verheyden & Cardon, 2018). In a commentary on material-oriented research, Andrews (2017) points to several important aspects of place and space in business communication, but does not cover digital places or areas, only physical. None of these studies highlights digital text sharing as such, but in some cases digital text sharing can be seen as something ‘in between’ other activities, pointing to the connections between social and material/technological aspects (Smart, 2006; McCarthy et al, 2011; Nikolaidou & Karlsson, 2012; Smith & Turner, 2014).

For analyzing the issues discussed above and focused on in the second research question, we need concepts that describe social and material aspects. A sociomaterial view (Latour, 2005; Orlikowski, 2010; cf. Clarke, 2002) on literacy and digital literacy implies that discursive practices such as reading and writing are inseparably intertwined with social issues such as people’s identity in groups.<sup>2</sup> In such negotiations, material aspects are also relevant, such as technical access to digital media (Farrell, 2009). The types of materiality previously studied and relevant to our study are physical and digital places (Björkvall & Karlsson, 2011; Farrell, 2009; Andrews, 2017), artefacts such as digital devices and software (Smart, 2006; Orlikowski, 2010) and linguistic means such as written text (Scollon & Scollon, 2003; Björkvall & Karlsson, 2011).

Social relations can be described as *interaction orders* (Goffman, 1983), i.e., “social arrangements by which we form relationships in social interactions” (Scollon & Scollon, 2004:13). Interaction orders can be relatively stable, such as a manager-employee relation, but the concept is mostly used for temporary aspects; in a meeting, for instance, the interaction order can

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<sup>2</sup> As Moura and Bispo (2020) state, sociomateriality is not *one* theory.

switch when a person shows more knowledge than others, thus taking on a superior role. Concerning digital literacy practices, interaction orders can influence, for instance, which person in a work group is responsible for digital areas and thereby controls who has access to documents. Each member of a work group can be said to have a different *historical body* (Scollon & Scollon, 2004), i.e., individual knowledge, competencies, habits, literacy practices, etc. that people carry with them. A person's historical body can be transformed, for instance, by getting an account in a specific digital sharing system of the workplace (Blåsjö et al., 2019). The digital system in itself, and other artefacts, can be conceptualized as *discourses in place* (Scollon & Scollon, 2004), i.e., material and linguistic entities used or made relevant in certain situations. These three concepts – interaction order, historical body and discourses in place – form a coherent theoretical framework for studying how social, individual and material aspects are always intertwined, according to Mediated Discourse Analysis, from where these concepts originated.

More specifically, sociomaterial networks of activity concerning writing have been covered in a framework developed by Lillis and Curry (2010; see also Lillis, 2013). The framework includes the roles of gatekeepers, suppliers, mediators and pivots of text, among others. *Pivot* here refers to “Key people and resources in any specific writing activity” (Lillis, 2013:112). Pivotal nodes are especially central in a given network, be it a specific person with great influence or material resources particularly important to an activity. As such, the concept of pivot can capture both social and material aspects. Resources of different types are also most important for the range of agency that each individual has in a workplace setting. A person who does not have access to specific digital resources is restricted in her/his array of possible actions. This leads us to the third research question.

## **2.4 RQ 3: How do professionals express experienced degrees of agency in relation to digital text sharing?**

Agency generally refers to the possibilities people have of “acting independently and making one's own choices” (Irwin, 2011:100). Personal agency is often seen in relation to overarching social structures and hegemonic control (cf. Giddens, 1984; Deumert, 2014; Sharp, 2019). Concerning literacy, individuals may experience a sense of agency when they have possibilities to know about texts, understand texts, produce texts and get their texts taken up by others, combined with a sense of individual choice (cf. Lillis, 2001). In a situation of low agency, people may feel excluded from reading and writing certain text genres, or enforced to read and write, and respond with an attitude of non-compliance, opposition or

resistance towards the controlling part (Croucher et al., 2019; Thelander & Åkerström, 2019; cf. Thomas & Hardy, 2011; Corely & Gioia 2004). Compliance or non-compliance is always performed in relation to norms; in a workplace, this may concern issues such as who is supposed to invite whom to meetings (Blåsjö et al., 2019) or whether it is acceptable to write instant messages to a colleague who is marked as unavailable at the moment (Darics, 2014). The relation between management and staff, and hence the scope of agency, is influenced by texts that employees are obliged to use (Nikolaidou & Karlsson, 2012; Ledin & Machin, 2016) and by digital tools making it more or less possible for employees to make their voices heard at management level (Cardon et al., 2019).

To address the third research question, we need concepts for capturing issues related to agency. The notion that employees express alternative voices in relation to their management we refer to as *resistance* (Wertsch, 1998; Scollon, 2001:106). Concerning digital text sharing, professionals can enact resisting attitudes and strategies that do not comply to certain norms for what is acceptable behavior in their work setting. Norms can be described as a dialogue between *centripetal* and *centrifugal* forces (Bakhtin, 1981; Lillis, 2013:133-134). Centripetal forces pull persons' utterings and actions towards a common norm, while centrifugal forces pull them in differing, or non-compliant, directions. Bakhtin (1981:272) stresses that all utterings are performed in relation to centripetal and centrifugal forces simultaneously. If all utterings and actions were made exactly according to the norm, no development could occur. Specific actions are always performed in this field of competing forces, and thus they influence the individual sense of agency.<sup>3</sup>

Much of the literature mentioned above focuses on how people use reading and writing to fulfil their goals and solve problems. In our study, we focus on how professionals, in trying to fulfil goals and solve problems, speak about and act in relation to digital text sharing.

### 3 DATA AND METHODOLOGY

The data stem from a three-year research project, Professional Communication and Digital Media: Complexity, Mobility and Multilingualism in the Global Workplace, where we collaborated with three private-sector organizations located in Sweden. The methods from linguistic ethnography that were used in the project include observations of meetings and work-related activities, shadowing of key participants, interviews with

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<sup>3</sup> Bakhtin (1981) wrote about language and literature; however, as stated by Morson and Emerson (1990:130–171) and Holquist (2002), his work on dialogue is often interpreted as also being a philosophy or epistemology on general human circumstances.

professionals and collection of texts. The organizations and the data included in this study are more specifically described below.

During the project, our research interest in digital media guided us to a recurring impression that the participants often dealt with sharing and accessing texts through digital tools. We therefore decided to examine this issue more closely. First, we wished to investigate if it was possible to confirm this impression as being a frequently occurring theme and, if so, to locate interesting parts of data to analyze more in detail. To this end, we searched for instances of such words as *share*, *access*, *document* and *area*, in both English and Swedish, in all of the transcribed data (for a full list of search strings, see Appendix 1). If identified as related to digital practices, the instances were coded as *digital text sharing* using the analysis tool NVivo. Figure 1 displays an example of the coding procedure.

| Search string | First match                                                 | Coded / not coded                            |
|---------------|-------------------------------------------------------------|----------------------------------------------|
| "Find"        | so there are two prices that is possible to find on the web | Coded (related to digital practices)         |
|               | then we can find ways to collaborate                        | Not coded (not related to digital practices) |

Figure 1. Example of coding procedure

The list of search strings was gradually developed through close reading of the data. After the search, done by one of the authors (Johansson), the coding was checked by another author (Blåsjö). Figure 2 shows the types and amounts of coded data.

A rough quantification was performed in NVivo to answer the research question about the extent to which digital text sharing was made relevant by the participants. Instances of data with a locally higher density of coding were examined more closely, and two instances out of these were chosen for detailed analysis regarding the other research questions; for this analysis, we applied the theoretical concepts described in the Literature section. The two instances were chosen based on 1) density of coding, 2) situations of changing organization or crossing organizational boundaries (which were identified as being part of a research gap in the Introduction). The instances stem from two different organizations and consist of meetings, one video recorded and transcribed, and the other documented by field notes and controlled by participant feedback.

| Type of data     | Amount of data items |
|------------------|----------------------|
| Shadowing        | 10                   |
| Transcriptions   | 5                    |
| Fieldnotes       | 5                    |
| Meetings         | 19                   |
| Recorded         | 12                   |
| Fieldnotes       | 7                    |
| Interviews       | 24                   |
| Recorded         | 24                   |
| Fieldnotes       | -                    |
| Texts            | 17                   |
| Total data items | 70                   |

*Figure 2. Data searched for digital text sharing*

The project was performed in close collaboration with the organizations, and the project was approved by the regional ethics committee (ID 2017/954-31/5). All organizational and personal names were replaced. The interpretations and results were communicated with the organizations. Moreover, to increase confidentiality, we have excluded information about the lines of business.

### 3.1 Research sites

Both organizations, here called VBF and H&H, are part of the private sector and have offices in the Stockholm area. The details of the analyzed data are described in the Results section, but here we provide some general information about the organizations.

VBF is a Swedish trade association for a certain branch of business. The association has member organizations that are active in Sweden. It works with general national as well as international issues related to that specific area of business and deals with government actors, both in terms of commercial interests and the interests of customers. The local administrator is Harald, who holds a PhD in natural sciences and is employed part time by one of the member organizations. The representatives of the member organizations have positions mostly in support functions, such as Public Affairs or Communication and Regulatory Affairs, of their organizations.

H&H is a Swedish company with many international contacts and collaborative projects with other organizations. It is a knowledge-dependent business, where project applications and reports on finished projects are central texts. At the time of our data construction, the firm was in the midst of a major reorganization, the second reorganization in four years.



The participants in our data construction generally held positions such as project managers and other managers.

## 4 RESULTS

The results are presented, first, according to the quantitative findings answering the research question regarding the extent of digital text sharing in the total project data. Thereafter, the other research questions are covered in a section with qualitative findings from the two empirical cases of meeting observations.

### 4.1 Quantitative findings

*Digital text sharing* was used as a thematic code throughout the project data, and we can claim confidently that this was quite a frequent issue for the participants: 50 out of 70 data items described in Figure 2 include this coding. Moreover, 9% of the coding for the data on average was for digital text sharing. This volume, i.e., *the density of coding*, ranged from under 1% to over 30%. The data with over 30% density included a virtual meeting, a meeting on how to update lists on a website, and an observation of work at the computer, including an email. The data with 20-29% density included more computer work and emails, and observations of two days of work in a specific work unit, as well as a meeting at VBF (analyzed below in section “We can take a shot”). The data with 10-19% density included, e.g., more observations of computer work, a virtual meeting on writing an agreement, and a virtual meeting on internal information at H&H (analyzed below in the section “What am I supposed to do when I’ve written an application”). These results also indicate that digital text sharing is integrated with many everyday activities in modern organizations.

### 4.2 Qualitative findings

Here we first analyze the observed meeting at VBF, and then part of a meeting at H&H. Each empirical case is first described in the order of which it unfolds and is then analyzed using theoretical concepts.

#### 4.2.1 “We can take a shot”

The first empirical case stems from a meeting of the trade association called VBF, when representatives from different companies met. The meeting took place on a cold winter afternoon in central Stockholm and lasted for three hours. Nine persons participated on-site: Harald (responsible for the organization office), three other men and five women, of whom Ruth and Linnea are active in the description below. Three other persons participated via

WebEx, a virtual meeting system: two men – Ragnar, chair of the board, and another person who got disconnected during the meeting – and one woman, Ursula. The on-site participants were seated around a rectangular table in a rather small room with a big screen on one of the walls, which was connected to Harald's computer. The remote participants were not visible on the screen; only texts and images were shown there. All participants were speakers of Swedish; the meeting was performed in Swedish, and most of the documents that were handled were written in English. The researcher (Blåsjö) sat against a wall, taking field notes. Below, field notes have been transformed into running, indented descriptive text.

### **Field notes 1**

Starting the meeting, Harald, who acts as a chairperson, clicks on a WebEx link in an Outlook meeting invitation to contact the remote participants. He tells the participants that he has not distributed the documents for the meeting by WebEX, but that these are available at a password-protected section of the web site VBF.se.

About an hour into the meeting, Harald places a page of this protected area of VBF.se onto the screen. There, he opens an Excel document. One of the remote participants, Ragnar, asks 'For us who don't see this, is it the Excel spreadsheet you are showing now?' Harald confirms that it is and starts speaking about the information that is shown. (Edited field notes)

This first specific situation reveals that the remote participants cannot see which documents Harald is showing outside of WebEx. There seems to be no "share screen" function, so Ragnar finds it necessary to ask which document to search for. Thus, the degree of access the participants have is influenced by the location of the documents. After a short break, the meeting continues:

### **Field notes 2**

Harald shows a Word document on the screen, saying 'I don't know if I can share this so I haven't put it on our community area' (referring to the password-protected area of VBF.se, according to participant feedback). The document comes from a Nordic umbrella organization, and the file name ends with "corrected." The issue of the document involves Swedish state authorities. It is quite clear from the document and from Harald's actions that it is not an official, published document. It is also clear that the participants show great interest in the document, which seems to concern the future of their enterprise. Linnea says, laughing slightly, 'We can take a shot' and picks up her phone. Harald says 'But before you take

a shot ...' At least four persons take photos of the screen, and as Harald scrolls to show more of the text they take new photos each time. Linnea asks 'Is this a suggestion?' After about twenty minutes, the following interaction and actions take place:

Harald: Actually, it is damn good you take photos. But it's harder for you, Ragnar and Ursula.

Ragnar: I've already hacked the net. (everybody laughs)

Harald: (switches to Outlook, shown on the screen, writes an email asking if he can share the document, and sends it) If I get a reply from Eskil I can share it with you. (switches to the file system in his computer) I hate it when you see my super rotten document management. (opens a document) This one I can surely send out because they are all in the documentation I've put in the group room. (Edited field notes)

The photographing taking place can be interpreted as being a delicate matter for the participants. Firstly, it is likely that it would not have been mentioned at all if it had been unproblematic, but now it is verbally initiated by Linnea and valued by Harald. Moreover, the jokes are signs that the action is regarded as questionable. After this, Harald writes to ask a colleague if it is appropriate to share the document and also shares another document that he knows he is allowed to share. The excerpt also includes the mention of remote participants not being able to access the document, as well as the status of the document ('Is this a suggestion?'). Here, about twenty minutes of the meeting remain:

### Field notes 3

Harald shows parts of the VBF.se, and Ruth says 'Sometimes I find it hard to find my way there.' Harald jokingly points to the screen and says, 'You can look now!' Ruth explains that another reason for difficulties is that she tends to forget her password. When Harald continues to guide the participants through the structure of the area, Ruth says in a sarcastic tone: 'So *there* I can search instead of sending you an email?!' (Edited field notes)

The actual digital area is in focus here, and problems with access to the information within it, are raised in an informal and humorous way. Passwords are mentioned as a concrete tool of digital text sharing, and Harald is identified as a person whom to ask for documents.

To discuss this empirical case in its entirety using the analytical concepts, we can see literacy practices such as showing documents from digital areas, speaking about which texts are relevant and sharable, and

speaking about the location and status of texts. Moreover, photographing a document is a literacy practice that can lead to more people seeing it than just the meeting participants. It is possible that bringing the photos back to their companies is the main reason for taking the photos. Accordingly, what we see in this empirical case may be actions of future text sharing with several persons in different organizations through an action with a digital tool, the smartphone. Digital text sharing is also mentioned in the joke about hacking, and Harald's explicit embarrassment when the others see his file system ('I hate it when you see my super rotten document management,' an experience of unwillingly sharing his documents, expressed quite emotionally and with humor).

The members of the industry organization all have technical access to the web resources; they have passwords and knowledge about the VBF.se. But they do not seem to use the digital area sufficiently often to always remember their password or to know the area's structure very well. Thus, there are several obstacles to digital text sharing. Different persons may use the system more or less often, thus taking up the *discourse in place* of the digital area to a greater extent into their *historical body*, their individually collected knowledge and competencies.

The data also show sociomaterial aspects of the literacy practices in very practical aspects of digital text sharing: the remote participants cannot see everything shown on the screen. What the remote participants can see or not is partly governed by the software, where certain documents can be "screen shared" and others cannot. Thus, materiality influences digital text sharing with the remote participants (see also McNair & Paretto, 2010).

At the end of the description above, the participants make relevant the digital location of documents. To find a certain text is not always easy. They bring up two specific problems – finding the right area and remembering passwords – and one solution – asking the responsible person to send the document. This solution can be interpreted as this person acting as an alternative location of the text, a representative for the actual location, or as almost *being* the location of the text. This observation – that individual human beings can serve as keys or search engines for texts – can be captured by the concept of *pivot* (Lillis, 2013) in combination with the concepts of interaction order, discourses in place and historical body (Scollon & Scollon, 2004): Certain persons request someone else, who has knowledge about and access to the text in their historical body, to share the text. Thus, the 'text sharer' is constructed as a pivot in the interaction order. For the requested action of sharing the text to be performed, the interaction order or social norms must allow for this action. One can compare this with pre-digital ages, when there were more secretaries and office clerks, whose official duties were to perform such tasks. In the digital age, everyone is supposed to handle the lion's share of text management on their own (Tusting &

Barton, 2016), and it could possibly be face-threatening to make such a request of another professional at one's own level, let alone a superior. The example above can be seen as a case of social relations being changed by digital practices (cf. Uysal, 2016), where the potential face-threat can be assumed by the action of joking about asking Harald for texts.

In this scenario, several business organizations meet, and thus somewhat different "cultural ways" (Barton et al., 2000:7) come together. This may be one possible explanation for the literacy practice of taking shots being considered quite delicate. The most predominant factors, though, are probably the status of the text shown (verbally expressed as *suggestion* and *corrected*), and the competitive relation between the companies involved. In some issues, they cooperate, but in others they protect their trade secrets. In the matters discussed in the situation, they interact with Swedish state authorities and a Nordic umbrella organization. A document from the latter is shown in draft version, which means that it is considered sensitive material. The everyday literacy practice of taking shots of texts on a screen is frequently used within specific organizations but can constitute a breach of a norm when used between organizations and/or on texts that have not already been published.

*Resistance* (Wertsch, 1998; Corely & Gioia 2004) to these circumstances, as well as the breaching of challenging norms, is enacted by the participants in actions such as taking shots, joking about, for instance, "hacking the net," airing problems of not being able to access digital areas and perhaps regretting others to see one's own file system (a contested border between private and public, cf. Blåsjö et al., 2019).

#### 4.2.2 "What am I supposed to do when I've written an application"

In the second empirical case, from H&H, the communication manager Berte chaired a meeting where she informed others how the company under reorganization was working with information issues such as intranet and other digital community tools. In addition to Berte and the researcher, there were five people present at the meeting: Per, head of the unit and subject specialist; Ellida and Johan, senior project managers; Rebecka, financial officer; and Gina, assistant. They were seated at a rectangular table in a room with a big screen on one wall. This was also a virtual meeting with several remote participants. Only Berte's PowerPoint presentation was shown at the screen. Transcripts translated into English are provided below.

At the end of the meeting, Berte asks the participants for comments or questions. A discussion longer than 15 minutes then takes place, with the focus being on the workplace switching digital tools several times recently, that several digital tools are in use parallel to each other, and that employees

find it difficult to know about all the systems, routines and passwords for all these different tools. Digital text sharing is first brought up by Ellida, a senior project manager who often works with reports and project applications (“(.)” stands for a minimal pause):

## Transcript 2

Ellida     it concerns every every matter what I’m supposed to  
do when I’ve written an application (.) it changes  
every six months  
[...]  
but simply exhausted to keep track of where I’m  
supposed to when I’ve finished a report (.) who  
should I submit to (.) it to (.) it’s not the same  
as last time I wrote a report which was maybe just  
two months ago [hands firmly placed apart on the  
table]

Ellida’s concern is related to texts that she is supposed to submit to and share with colleagues. The problem is strongly related to time, as she points to the problems induced by the digital tools being repeatedly replaced, and she seems to mark time periods with her hands. Related to this, Ellida expresses a negative feeling, ‘exhausted,’ regarding the digital practices in her workplace.

After this, one of the remote participants, Johannes, speaks for several minutes about the same issue, supporting Ellida’s position. He states the opinion that the core activities of the organization should be in focus and should be supported by the digital tools, not obstructed by them. Within this statement, he uses the Swedish expletive ‘fasen’ (‘damn’).

Later, digital text sharing is made relevant by the participants more indirectly when they talk about the difficulty they have in finding information:

## Transcript 3

Berte     ... it’s very fragmented (.) where to find the  
information today  
Rebecka   ... it’s hard to find anything ...

Rebecka and Berte use negative words such as ‘fragmented’ and ‘hard’. Then, the participants also bring up that when new routines of where to share information are introduced, there is not always explicit information about this:

#### Transcript 4

Ellida        but but it's been like this since I started that you  
                  have routines (.) and they (.) you you (.) launch  
                  them (.) then when you (.) don't use them any longer  
                  there is nobody that tells you that

Berte        no

Ellida        but you just have to (.) notice that if I stop doing  
                  this there is no one who knows (.) I mean if I stop  
                  reporting my work time then I will bloody well be  
                  told so [hands outwards, one hand pointing]

Berte        [laughter]

Ellida        that this is the running routine

Berte        [laughter] yes

Ellida        right

Berte        yeah

Rebecka      yeah

The negative wordings increase until Ellida's expletive ‘bloody well’. Simultaneously, she acts out a small scene of someone blaming a person, while pointing towards a fictitious employee. Continuing this evaluation, several people agree that when it is important for the management that the staff comply to a certain new digital routine, information about them are more clear and strict, such as when a new time report system is introduced:

#### Transcript 5

Ellida        [...] I can keep at it for years after that

Berte        yeah

Ellida        that this routine ceased

Berte        yeah it's because there is no follow-up

Ellida        no

Berte        no

Ellida        exactly

Berte        mm

Ellida        and this concerns everything

Berte           mm  
 Johan           except time reports [laughter from several people]  
 Ellida           except time reports  
 Berte           yeah

Berte and Ellida are both sharing in experiences of performing obsolete tasks for years, due to a lack of information. After that, Johan takes up Ellida's earlier observation about time report systems. They both seem to mean that certain activities, such as time reporting, are more important to management, and thus it puts more effort into getting information on these activities and digital systems through to employees. Other activities involving digital text sharing do not seem to be as relevant to the business management, in the view of Ellida and Johan.

An issue mentioned by Ellida more than once concerns people involved in digital text sharing. This can be seen above when she says she does not know to whom a new report should be sent, as well as later in the meeting:

### Transcript 6

Ellida   [looks around at everyone in the room] did you see  
           that now we're supposed to log in our reports (.) the  
           ones we used to send to [name] (.) now we're supposed  
           to do it (.) that's the latest [thing] (.) it's like  
           [rolls her eyes, head bends forward]

The professionals at H&H have recently been instructed to submit texts themselves into a certain system, while earlier this was done by an administrator; the person responsible for the digital text sharing has been changed. Speaking on this matter, Ellida makes individual contact with each of the on-site participants by looking at them one by one, and eventually uses body language to express the fatigue she associates with new digital routines. The actions of rolling her eyes and letting her body fall forward towards the table evoke the image of a person giving up.

After the meeting is formally ended, and the remote participants are logged out, the discussion on site continues for about five minutes. Then, problems with passwords are broached and become the topic of intense discussion. Several of the participants report on how each system requires new passwords after a certain time, that different systems have different rules for the passwords (length, type of tokens) and how they have different strategies for coping (e.g., using the same password in different systems or adding different digits to existing passwords). Eventually, as the



participants start to get up from the table, Rebecka even questions the rationale for passwords, as follows:

### Transcript 7

Rebecka ... we can keep the computer at the reception (and I like) (.) yeah let's leave the rece- computer at the reception (xxx) it's just anyone can walk in and (.) get into our network [gets up from her chair]

Berte yeah

Rebecka (like) what's this load of (x) (.) you have passwords and then you can like keep the computers (.) like open [...] anyone can get in (.) so it's so (.) it's so clumsy  
[walks around the table]  
anyone can come in and do whatever in our networks  
[stands at the short side of the table waving her arms repeatedly]

From our ethnographic data from this workplace, we know that the entrance to the office is locked, so it is not clear what Rebecka means here. In an email conversation after this observation, she explained that behind the reception desk there was a password-protected computer that was sometimes left unattended, and that there were often seminars with external people mingling in the reception area. During these instances, it would have been possible for unauthorized persons to access the computer and, thus, the company network. Regardless of how likely or unlikely this might have been, the relevant aspect for the analysis is the expression of distrust in the security system of the business in relation to demands on staff to be orderly with their own password practices.

Applying the theoretical concepts to this empirical case, at first, we can see the participants speaking about *literacy practices* such as submitting reports and project applications, searching for information and reports, reporting work time, and writing passwords. All of these are performed through digital tools in this workplace (confirmed by participant feedback). In this knowledge-dependent business, sharing project applications and reports on finished projects is a critical action in the core activity.

Furthermore, we can identify *resistance*, as the interaction is focused on questioning the handling of digital systems in the company. Generally, this may indicate the amount of time and energy that the participants put into the literacy practices of digital text sharing. These literacy practices must be quite predominant to motivate their agitated discussions; this is

confirmed by other ethnographic data from the company (see Quantitative findings above) and participant feedback to our analysis. Moreover, it is interesting to see how this resistance is enacted. As Hamilton (2016:8) points out, artefacts shape “specific social interactions in ways which tangle people in the very processes they also resist.” The employees at H&H seem quite entangled with the imposed artefacts of digital systems and the processes of changed systems to share and access required texts. Their experience of entanglement is strongly expressed, both verbally and physically.

To resist and question the digital practices of one’s workplace may be regarded as signs of a *reflexive level of digital literacy* (Knutsson et al., 2012). The imposed digital practices are challenged in the case from H&H, where the participants also show awareness of the relationship between digital practices and issues of other types of communication and of management. Generally, digital tools are applied to facilitate work processes, to get things done and sometimes to implement new structures – that is, business management. When new tools or routines are introduced, there is a need for information surrounding the introduction. An experienced lack of such supporting information is one of the problems that the participants in the studied meeting present. A related issue of management is the mentioned tendency that when something is more important for the management, such as the time report system, information seems to be more forthcoming.

In this empirical case, *sociomaterial* aspects related to digital practices are visible in several ways. Social issues are those of management and agency, and the experiences and emotions (cf. Stein et al., 2015; Evans & Steptoe-Warren, 2018) of the participants in relation to this. Material aspects are the ones of the actual digital location of different texts and of the physical place of the computer in the entrance. The password-protected access to different systems shows a clear intersection between social and material aspects: one’s role in the organization gives rights of access to certain digital text sharing systems, materially formed in a password.

This characteristic of passwords can be described with the concepts from Mediated Discourse Analysis. The interaction order gives a person a specific role in relation to the discourses in place of digital systems, and the actual password is a discourse in place supposed to be ‘ingrained’ in the individual historical body, here the memory. Also the issue of the rationale of passwords has a clear sociomaterial aspect. A computer is located at the entrance of the company (material discourses in place), normally used by a receptionist who enables physical access to the premises (the action of one person assigning someone a specific role in the interaction order). In situations where the receptionist must leave the entrance, there is a risk that unauthorized persons could procure access. Here, the protection of the company at the material border of the premises and the digital border of

the IT systems can be said to overlap, and simultaneously be a social issue of different roles of insider/outsider. Even if this would not happen, Rebecka's concern is relevant to the observation of a type of resistance against routines for digital text sharing.

An interpretation of this empirical case is that the participants in the meeting experience that their professional *agency* is challenged by how digital systems are used and changed at their workplace. Reports and project applications are important material tools in Ellida's work, and if she does not know where to share them in the digital systems of the business, her professional role and status may be threatened. It may be as if she is putting them into a 'black hole' and consequently no one in the company reads them or takes them up (cf. Lillis, 2001). Additionally, if clarity indicates importance, and management is clear about where to report work times, then the lack of clear information on where to share other texts may indicate to the employees that those specific literacy practices are insignificant.

To sum up, the interaction order distributes different agencies of digital text sharing to managers and staff, respectively. Discourses in place, such as verbally and physically expressing frustration about threatened borders and difficulties with digital text sharing, are shown in this empirical case. There are also issues of time as the discussion concerns work processes and the fact that the business has gone through several reorganizations during a short period of time. A scope of different levels of digital literacy is exposed in speaking about both small, everyday practices such as writing passwords and big, general practices such as IT security.

## 5 DISCUSSION

In modern organizations, digital practices consist not only of discrete tools and routines for getting things done in-between activities such as production and support functions, but they are also activities in their own right. Digital practices are intimately intertwined with other practices of the organizations and are integrated with and constructing social roles. Consequently, digital literacy does not only include being able to perform different tasks at the computer, but also to relate to sociomaterial issues such as knowing which digital practice of text sharing is approved in which situation. As such, digital literacy has to do with norms. Below, we discuss social roles and norms as overarching issues for business communication and digital practices identified by previous research (Farrell, 2009; McCarthy et al., 2011; Cardon et al., 2019).

As to social roles, persons in workplaces are related to text and text sharing not only as writers and readers; they can also serve as gatekeepers, suppliers, mediators or patch-workers of texts (cf. Schryer, 2000; Lillis, 2001;

Jones, 2005; Lankshear & Knobel, 2006). The concept of *pivot*, presented by Lillis (2013) for key people or resources in a writing activity, was fruitful for the research question of sociomaterial aspects, highlighting key persons of digital text sharing. Additionally, such persons or pivots can function as substitutes for places for accessing texts, thus acting as artefactual places (cf. Latour, 2005; Crawford & Irving, 2009).

Concerning norms, the interplay of potential problems with, and engagement in, digital text sharing could be viewed with the Bakhtinian concepts of centrifugal-centripetal forces (Bakhtin, 1981; Lillis, 2013). Some norms are more or less shared, for instance, the ones that can be summarized as ‘texts which are not published should not be shared without care,’ and ‘staff should comply with managements demands.’ These norms reflect the centripetal forces, to which the participants orient in actions such as checking the status of texts and speaking about compliance of submitting certain texts. The centrifugal forces challenging these norms are shown in actions such as taking photos of texts with uncertain status and criticizing the management for lack of information about new IT systems. The concepts of centrifugal-centripetal can enable viewing these actions as general human practices of relating to norms, in order for people to be able to eventually move something forward in a new direction. This line of reasoning and these concepts entail avoiding singling out specific employers or employees as problematic. As Bakhtin (1981) points out, a tension between centripetal and centrifugal forces is always present in communication, and ‘conflicts’ such as the ones we have described occur every day and are necessary for the continual development of organizations (cf. Ogbonna and Wilkinson, 2003; Thomas & Hardy, 2011).

In the qualitative analyses, we can see issues in regard to the protection of borders of one organization in relation to others: the somewhat delicate situation of taking shots of documents from an organization that had not clearly stated that the document held the status of sharing, as well as the concern that outsiders could access the IT system of the company. In both cases, the issue of borders was related to a type of reflexive digital literacy (Knutsson et al., 2012): finding a way of sharing texts ‘outside’ of the regulated information sharing techniques and questioning the relevance of password protection. In the case of a computer in the entrance of the building, the issue of the border of the company is physical and material, and simultaneously social.

The study has several practical implications. Firstly, management cannot expect staff to have a general digital literacy from their education and apply it smoothly and compliantly (Abram, 2013; Lloyd, 2010). There is no general digital literacy, but individual literacies sometimes comprise a level of reflexive digital literacy (Knutsson et al., 2012). This reflexive digital literacy in turn includes a critical attitude, which is both natural and

eligible to ensure the development of business and the engagement of staff. Secondly, organizations constantly change, and in processes involving digital text sharing different groups need to be involved, not just IT specialists (cf. Våland & Georg 2014). In such processes, organizations can discuss more general questions such as: In design and implementation processes, how is agency distributed? How can we involve more groups and co-workers, strengthening their agency and thus compliance? Thirdly, knowledge management is crucial for modern business and is dependent on digital text sharing. Thus, business is dependent on creating the best conditions for co-workers to swiftly exchange and access information both internally and externally. An important issue related to this is how staff handle protection of knowledge in relation to digital tools and borders, as shown in this study.

The limitations of this study concern its character as a case study. With an ethnographic approach with initially open research questions, we subsequently and inductively noticed the phenomenon of digital text sharing as relevant for the study's participants. Inspired by our study, future research could be designed to focus on this specific issue.

## 6 CONCLUSIONS

Where to find documents and how to share digital texts are critical and growing concerns of modern businesses. Our study confirms that digital text sharing takes up a considerable amount of the time and engagement of professionals, and that it is integrated with many of their tasks, such as writing reports, and of social practices, such as inter-business collaboration and internal communication (cf. Orlikowski & Scott, 2016; Våland & Georg, 2014).

Professionals in the study speak about digital text sharing in the sense of *status of texts* (draft, versions, 'suggestion' etc.) and of *location* (shared digital areas). They also speak a good deal about *obstacles and hindrances* (e.g., difficulties finding documents and remembering passwords) and how to overcome these (asking other persons for a document, tricks for passwords).

Sociomaterial aspects are enacted by the participants in our study in two ways: they relate to – and challenge – the protection of borders of their own and other organizations, and they speak about locations and status of texts. The borders are both material in the sense of physical (as the entrance to H&H) and digital (as the issue of passwords to get access). The locations are digital areas to which the participants have a varying degree of access; moreover, they have varying knowledge about where to share their own texts.

Expressions of degree of agency occur in mainly two ways, both of which articulate threatened agency and may seem to break the formality of business meetings: these consist of jokes and humor (cf. Holmes & Marra, 2002; Evans & Steptoe-Warren, 2018), as well as expressed emotions of frustration and anger (Stein et al., 2015). We have interpreted these interactional strategies as a sign of conflicting norms (centrifugal forces, Bakhtin, 1981; Lillis, 2013) and issues of delicacy concerning the protection of borders and individual agency. In their daily work life, professionals seem to handle these issues by using strategies such as treating certain persons as pivots (Lillis, 2013) of digital text sharing, and tricks to remember and change passwords. Overall, the ways in which issues of agency are handled in the empirical cases can be interpreted as a confirmation that digital text sharing is an issue with high importance and relevance for professionals in modern business organizations. Thus, digital text sharing is highly relevant for business communication studies. This study has brought forth the hitherto quite invisible digital literacy practice of digital text sharing in workplaces. Theoretically, the article contributes by suggesting analytic concepts for analyzing digital text sharing, and practically by suggesting issues to discuss within organizations.

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**Appendix 1: Search strings for coding of data**

| <b>Swedish</b>    | <b>English</b>        |
|-------------------|-----------------------|
| kom(ma) åt        | access                |
| kom(ma) in        | gain, acquire, obtain |
| hitta             | find/found            |
| skicka            | send/sent, submit     |
| lösenord          | password              |
| dela              | share                 |
| Box               | Box                   |
| kopia             | copy                  |
| cc                | cc                    |
| bc                | bc                    |
| var finns, var är | where is/are          |
| logga in          | log in, sign in       |
| inloggning        | login                 |
| leta, söka        | search                |
| hämta             | retrieve              |
| lägga             | put                   |
| ladda             | download, upload      |
| version           | version               |
| dokument          | document              |
| yta, utrymme      | area, space, place    |

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**“WITHIN THE HOUR” AND “WHEREVER YOU ARE”: EXPLORING THE PROMISES OF DIGITAL HEALTHCARE APPS**Anna Sofia Lundgren<sup>a</sup>, Jens Lindberg<sup>b</sup> and Eric Carlsson<sup>c</sup>**ABSTRACT**

The use of healthcare apps for medical advice is becoming increasingly common. This paper explores apps that offer interaction with medical experts. Working from the supposition that digital technologies are intimately entangled in their cultural context, we argue that the apps do more than just neutrally mediate contacts and offer medical and psychological advice. The article addresses the cultural dimensions of healthcare apps and answers questions about the ways in which such apps contribute to forming changing notions of what “healthcare” and being a “patient” entail. Three popular Swedish apps and their marketing material is studied using a discursive interface analysis of the apps’ affordances. The results show that the apps significantly contribute to producing a marketable narrative about app health care that includes accessibility, security/safety and personalisation, and which is partly produced as an alternative to what is offered by Swedish public health care. The results further show that this narrative primarily represents and addresses users who are young, busy, urban consumers of care – partly contrasting policy expectations and hopes.

Keywords: healthcare apps; discursive interface analysis; affordances; e-health; digital health care; critical digital health studies; patient positions

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## 1 INTRODUCTION

The use of digital technology in health care has increased dramatically over the past decade. In Sweden, the government's goal is to become the "world's best" e-health provider by 2025 (Regeringskansliet and SKL 2016). Digital technologies are depicted as solutions to a range of problems: from long waiting times to the challenges of the geographically uneven distribution of health care. The transition to digital health care is happening quickly, partly because the Swedish welfare system supports private sector e-health businesses via public funding. Several private sector e-health agencies were established as startups only a few years ago and have quickly become dominant actors in the new market of digital health care in Sweden, as well as in several countries in Europe.

Via applications (apps) in smartphones and computers, patients can interact with physicians, nurses, psychologists and chatbots instead of visiting physical hospitals and healthcare centres. The apps have been described as important complements to public health care by various Swedish stakeholders: representatives of the app companies, as well as politicians and public officials (e.g. Skr. 2005/06:139; Nyhlén and Kangro 2017). Even though e-health solutions are not new, these digital and commercial platforms are significantly changing the ways in which people practice and experience health care, contesting what health care means and also what it means to be a patient.

In the first issue of the *Journal of Digital Social Research*, Christian Fuchs (2019, p. 13) argues in favour of "critical digital methods that are more qualitative than quantitative", which are "critical theory-based" and that engage with societal power structures. This paper explores three Swedish apps that offer interaction with medical experts and asks questions about their ideological embeddedness. Working from the supposition that digital technologies are intimately entangled in their cultural context, we argue that the apps do more than just neutrally mediate contacts and offer medical and psychological advice, and that there is much to learn about what is at stake in contemporary constructions of health care and patients from a qualitative scrutiny of the affordances of new digital technologies, acknowledging that as well as their stated purpose, the apps also work as techno-commercial constructs. Hence, the aim is to explore the ways in which healthcare apps are promoted through self-descriptions, imageries, functions and design within the apps themselves, as well as through websites and marketing. In order to explore the apps' own stories about what they provide and to whom we apply the concept of *fantasmatic app narrative*. The first research question concerns the ways in which such narratives produce notions of "patients" and "health care". In Durham Peter's (2015, p.1) words, and in line with the theoretical starting point of

this study, technologies are not only devices of information but also “agencies of order”; they are engaged in the struggle over meaning. Hence, the second research question concerns how the fantasmatic app narrative was defended from potential criticism. This second focus highlights what is identified as antagonisms that might threaten the fantasmatic app narrative.

We start by reviewing the research area and describe our theoretical points of departure, data selection and methods of analysis before delving into the analysis of the material.

## 2 LITERATURE REVIEW

In recent decades, there has been an increased interest in digital health apps and their effectiveness as a healthcare technology (Black et al. 2011). Many studies are evaluative and techno-positive in nature, aimed at describing uses, suggesting improvements and mapping patient perceptions (e.g. Vo, Auroy and Sarradon-Eck 2019). However, there is also a more critical strand of research that is sometimes referred to as *critical digital health studies* (Lupton 2014b). Building on the notions of patient healthcare practices as inherently cultural and affected by contemporary lifestyles, images and tastes (Bunton and Burrows 1995), it explores the wider “social, cultural and political roles” that app technologies play in contemporary healthcare practice (Lupton 2014a, p. 607; see also van Dijck and Poell 2016). A starting point for most research in this strand is that apps constitute sociocultural artefacts that are underpinned by “tacit assumptions, norms, meanings and values” (Lupton 2017a), and that what digital health apps promise to deliver is not only a response to medical needs. Rather, by responding to more general types of needs, the apps *create* medical needs through their stylized content (cf. Frank 2000). In this sense, it is a field that takes the relationships between digital technologies and societal processes seriously, viewing them as relations of power in much the same way as Fuchs (2017) has argued in his appeal for critical digital media studies.

This critical perspective implies a perspective of power in the Foucauldian sense (e.g. Foucault 1979) as it has been developed to appreciate the impelling powers of new technologies entering into assemblages of humans and non-humans of significance for the ways in which people think and act, and for what they can become (e.g. Lupton 2016; Fox 2017). It specifically acknowledges the significance of discourse in interlinking contexts, such as the policy context and the contexts in which apps are used. It further suggests that digital devices and the personal data they collect and display are becoming integrated parts of our identities, bodies and daily lives (Lupton 2017b), not least since devices are increasingly being designed as wearables, such as wrist bands and

smartwatches. The capacities of these “everywears” (Gilmore 2015) also include haptic surveillance, in which wearable technologies communicate with the user without the user even having to remove the device in order to look at it (Rich and Miah 2014; Millington 2015).

Thus, much research has been devoted to various sorts of self-tracking devices and apps that generate detailed personal information (e.g. Pink and Fors 2017). The opportunities offered by wearables and apps for self-surveillance have been recognised as having biopolitical implications. As Sanders (2017, p. 42) suggests, digital self-tracking devices are instruments of normalisation; they facilitate the biopolitical aims of public health discourses that portray all bodies as being at risk of poor health and promote an “ethic of personal responsibility for health”. The emphasis on the significance of prevention, Sanders argues, helps to rationalise monitoring and regulate technologies “in the name of early detection and prudent action” (see also Lupton 2012). In this sense, self-tracking has been seen as one important way of tackling the crisis of public healthcare systems (Norris 2012).

While self-tracking apps are undoubtedly related to public health systems by enabling public health discourses to get a firmer grip on citizens in their private lives, there are also technologies that are more clearly deployed by and integrated into the healthcare system. Such technologies include devices and apps that work as self-care regimens for chronic illnesses, as well as technologies for monitoring older adults in their homes. While the assumptions that underly much of these technologies position users as empowered consumers who are able and willing to “take up the ideal of the engaged patient” (Lupton 2018, p. 281; 2012), there has been less focus on their limitations (Mol and Law 2004). For example, empirical studies have often problematised the balance between the capacity for self-knowledge and the surveillance and self-disciplinary effects of apps (Lupton and Jutel 2015; Sanders 2017). In their study on hypoglycaemia, Mol and Law (2004) highlight how the technical possibilities to self-measure blood sugar levels are sometimes difficult to handle in practice due to the equipment design, often aimed at a younger user, with good eyesight and whose hands do not tremble, and who the industry does not want to offend with an unfashionable design. This suggests that healthcare technologies not only partake in the constitution of medical needs as suggested by Frank (2000), but also affect the constitution of key nodes and understandings within health care, such as notions of the patient and medical expertise. As the designs are always ideologically invested, and technologies are often produced with distinct imagined user groups in mind (Woolgar 1990), an important aspect is the study of how user subjects are positioned in and by new digital healthcare technologies: Who is depicted as the ideal patient? Who is encouraged to use the technologies?



Recognising the cultural dimension of digital healthcare technologies working as “agencies of order” (Durham Peter 2015, p. 1), privileging some user subjects while discouraging others, Lupton (2014b) calls for further research to explore the affordances and sociocultural aspects of health and medical apps; how specific apps affect the understandings, positionings and practices of health and health care among patients and app users. In this paper, we answer this call by focusing on types of apps that have hitherto not been sufficiently studied. While much research has focused on apps that work as a complement to outpatient health care by encouraging people to take personal responsibility for their health, diets and physical exercise, less is known about apps whose principal function is to provide health care via digital interaction with physicians. Because of this research gap, and because of the increasing presence of these apps in public commercial space and their potential impact on people’s everyday understanding of health care and patient positions and practices, there is reason to explore how the apps’ services are presented and how their users are approached.

### 3 METHODOLOGICAL APPROACH

In order to select apps, we searched the App Store and looked at the ratings for free Swedish applications in the Medicine category. The three most popular healthcare apps that offered digital medical advice from physicians were chosen for our study: Kry, Min Doktor and Doktor.se. All the apps provide what is sometimes referred to as online doctor services (Bergwall 2021); they aim to provide general medical treatment and are openly available. They are also all persistently advertised in the apps themselves, as well as online, on television and in public spaces in Sweden. The three apps were studied from January 2018 to February 2020 (pre COVID-19).

We refer to the selected apps as “healthcare apps” in order to distinguish them from the wider category of health apps that also include lifestyle apps (e.g. Rich and Miah 2017), fitness apps (e.g. Hardey 2019) and apps used to feature users’ sexual and reproductive practices (e.g. Lupton 2015). In doing so, we emphasise how these apps constitute a specific category that resembles telemedicine (Lupton 2018) and which is becoming increasingly embedded in mainstream health care. The selected apps provide (online) medical treatment by trained and licensed professionals employed by the app companies behind the apps. They are funded by venture capitalists and public taxes. Overall, this makes Kry, Min Doktor and Doktor.se good empirical examples for an investigation of the ongoing transformation of health care and patient subjectivities in an era of healthcare digitalisation. As the focus of the analysis is on the production of meaning, we have chosen not to distinguish between messages based on

the sender, but to view the apps as actors involved in the ongoing construction of the social. Hence, when we talk about the “apps”, the focus is on the meaning created within/by the app, and it is of no concern whether it was the company providing health care or a software consultant who came up with a particular feature. In a few cases it was clear that the healthcare companies behind the respective apps were the primary agents, and these are then referred to as “app companies” (Kry, Min Doktor and Doktor.se) that should not be confused with the companies that may have been technically involved in creating the apps.

In order to understand the constitution of meaning around the apps and the ways in which they presented themselves and their users more fully, we also included marketing practices that took place outside of the apps themselves. This meant that the analysis comprised the apps’ respective websites and the commercials that became instantly visible to us. After downloading the chosen apps, they started promoting their services through notifications and through the e-mail addresses we used when registering accounts in the apps. We also analysed the online marketing carried out through collaborations. By searching for “collaboration with [name of app]” on YouTube and the name of the apps as hashtags on Instagram, we found 30 influencers (with between 10,000 to one million subscribers/followers) who were ranked “most popular” by Instagram’s algorithms and who, as part of their own self-branding practices (Khamis, Ang and Welling 2017), had published sponsored posts in which they promoted the apps. This method of selection meant that a few posts from before 2018 were also included. Although the influencers apparently chose their own ways of promoting the apps, they sometimes clearly followed scripted statements and we analysed their films and posts as part of the more general marketing of the apps. Also, comments on posts were included in order to see how this specific affordance contributed to the creation of meaning around the apps. All Swedish texts have been translated into English by the authors.

The theoretical framework that informs the paper includes a view of digital healthcare technologies as sociocultural artefacts underpinned by “tacit assumptions, norms, meanings and values” (Lupton 2017a). The chosen method of analysis is discursive interface analysis, inspired by Stanfill’s (2015, p. 1062) suggestion on how to approach interfaces for the structures at work within them; their “embedded assumptions about their own purpose and appropriate use”. The method is based on a view of apps as “communicative agents” (Lupton and Jutel 2015, p. 130) that employ “carefully chosen images and discourses to represent their use and function”. It recognises the constraining and enabling materiality of the apps (Hutchby 2001) and the ways in which they encourage user positions via certain forms of address. Affordance is a key concept. Originally

introduced by Gibson (1977), the concept of affordance has been developed and defined differently across various disciplinary boundaries. In this paper it is conceptualised as something which mediates but does not determine the relationship “between a technology’s features and its outcomes” (Davis 2020, p. 17; see also Hutchby 2003). This implies acknowledging how technologies *encourage* certain uses and identities, but also, as pointed out by Bucher and Helmond (2017) in their thorough review of the concept, recognising the relational aspect of affordances, which includes the context in which technologies are used.

Suggesting a methodology for the analysis of the underlying assumptions of interfaces, Stanfill (2015), building on Hartson (2003), differentiates between functional, sensory and cognitive affordances. This differentiation structured our analysis and helped us focus not only on *what* the studied objects might afford, but *how* they afford – the mechanisms and conditions of affordance (Davis 2020). According to Stanfill, *functional* affordances are about what it is possible to do with the apps. We approached the studied apps through descriptions of what they could do and what they offered the user; what functions were built into the apps. This analysis included noting whether there were any alternative options, how many stages the user had to complete before receiving an appointment with a physician, and whether the triage questions encouraged or discouraged the user from making appointments.

*Sensory* affordances are about the aesthetic appearance, such as choice of fonts, colours and whether or not the apps include many ads. Sensory affordances were registered and interpreted for how the apps might make the user sense and feel. This included reflections of what was used to create credibility, as well as who and what the app was for.

Stanfill describes *cognitive* affordances as being related to meaning making and entailing the intelligibility of technologies and interfaces, including textual and audio-visual content. As cognitive affordances comprise explicit statements about the app, they received a lot of focus. We approached the cognitive affordances by studying features such as button labels, instructions, self-descriptions, commentaries, and images. These features were then analysed as a way of highlighting what was perceived to be important selling points by the healthcare companies behind the apps, such as the constant focus on the short waiting times.

In practice, we used a methodology of “walkthroughs” (Light, Burgess and Duduay 2018), which involved downloading, registering, logging on and using the apps like any user, the only difference being that while surveying the apps, we took notes of the information, addresses, prompts and illustrations, and of how users were supposed to ideally navigate through the apps. We also went through the initial triage, either via a chatbot or predetermined questionnaires, in order to make an

appointment. Because of ethical considerations, we did not actually make any appointments as these would have been paid for by public funding. The direct engagement with the apps' interfaces facilitated an understanding of how user experiences are shaped and affordances perceived, and also enabled ethnographic observations of embedded cultural references (Light, Burgess and Duguay 2018; MacLean and Hatcher 2019). Thus, it is important to emphasise that our analysis is based on our perceptions of the apps' technological affordances, which reveal our roles as being simultaneously positioned as both ethnographers and users. However, a decisive difference between these positions, and one which perhaps partly disqualifies us as proper patient users, is that we used the apps for analytical, not personal reasons, such as needing medical advice. This difference may be of importance for how users feel about the apps.

Importantly, and as pointed out by Hutchby (2001, p. 448), the affordances of digital apps may be "interrelated or compounded on any given occasion" with other types of affordances. Hence, when analysing the marketing material, particularly the collaborations with influencers, we also considered the affordances of the platforms used by the influencers, primarily Instagram and YouTube. This meant, for example, that we included functional affordances such as the possibility to comment or like, and thereby interact with the messages produced via such platforms.

Throughout the analysis, our focal point was on how the functional, sensory, and cognitive affordances collectively contributed to promoting and characterising the apps. Thus, the selected apps were analysed in terms of the ways in which they reflected or challenged tendencies in the broader landscape of health care in which they operated, and for their efforts to encourage or discourage, facilitate, or impede, certain patient behaviours and identifications (Davis 2020).

The interface analysis did not distinguish between the different stages of usage but was applied throughout. For practical reasons, the different affordances of each app were first noted separately. We then grouped the recurring features together thematically. All three apps exhibited very similar affordances, which contributed to the constitution of a quite uniform image of the apps that centred around three particularly pervasive themes: the promises of accessibility, safety, and personalisation – themes that also structure the first section below.

In order to capture this uniformity, an important concept – paraphrasing Howarth, Glynos and Griggs' (2016) notion of a "fantasmatic policy narrative" – is what we have called the "fantasmatic app narrative". We define this as a normative narrative about what healthcare apps are, and what they promise and provide in terms of ideologically desirable notions of health care and patient identities. Its fantasmatic character lies in its ability to provide users with a story that both evokes and promises to fulfil

specific desires and needs (Bardini 2014). By extension, it encourages specific patient positions and practices, and legitimises the move towards specific interpretations of digital app health care. The notion of a fantasmatic app narrative closely resembles the concept of “digital imaginary”, which is sometimes applied in studies of technological assemblages, and theorised as the expectations of users and uses that form part of the apps’ affordances (Lupton 2019). Just like the concept of digital imaginary, fantasmatic app narratives engage with the ways in which an app “tells or presumes a story” (Markham 2021, p. 385), and emphasises the significance of the structured meaning provided by the apps. Our choice of the notion of fantasmatic app narrative is motivated by the way it supports the analysis of issues of power and ideology and by its ability to theorise the multiple sides of fantasmatic narratives; that they construct and offer desired practices and identifications, work to conceal the contingencies of these very constructions, and offer explanations of the way things are – why we do not seem to achieve the desired goals (Glynos 2008).

One problem that occurred, and which has been identified in analyses of similar platforms, is that their content is dynamic and thus slightly changes over time. For example, information was regularly updated and some information was removed during the period of analysis. Because of this, we noted the dates when the material was collected. The dynamism of the material also included the fact that the apps that we had installed on our own smartphones were also sensitive to our personal Bank IDs (Swedish citizen identification document to authenticate agreements online), which was mandatory for logging in. This meant that the apps were already adapted to our personal demographics, such as gender and age. Thus, there is reason to emphasise that the same app may offer partly different interfaces to different users.<sup>1</sup>

Below, we first describe three recurring themes in the apps’ self-descriptions, which we argue constitute the promises that lay at the core of the fantasmatic app narrative. We then go on to discuss the efforts to control the narrative’s relationship to Swedish public health care. Finally, we discuss the patient positions afforded by the apps and marketing material and consider how this relates to the way in which app care is promoted on a policy level.

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<sup>1</sup> To ensure that our analysis was not solely based on the authors’ age (between 40 and 48), colleagues and friends of different ages also logged in. Visits to websites did not require logging in.

## 4 THREE CENTRAL THEMES IN THE FANTASMATIC APP NARRATIVE

In this section we describe what the apps promise to deliver and what is highlighted in order to attract users. Focusing on the cognitive, sensory, and functional affordances that stood out when reviewing the material, we noted three recurring themes: accessibility, safety, and personalisation. In the material, these themes were overlapping and intertwined, but for the sake of clarity, we present them below as separate empirical themes.

### 4.1 Accessibility: time, money, space

All apps specifically presented their health care as being highly accessible – available around the clock, often free of charge, and reachable from any location.

Cognitive affordances described this option in short statements highlighted in terms of size and placement. “Access care instantly”, “already today”, “directly”, “within the hour” or “within a few minutes” were recurring phrases. Users were frequently told that by using the apps they would not have to wait ages for an appointment, nor would they have to spend valuable time in waiting rooms in public healthcare centres. Sensory affordances emphasised the advantages of saving time by depicting users staying comfortably at home or working.

Embedding the theme into personal experiences and opinions, the sponsored influencers provided more elaborated and personalised reasons about why saving time is important. In a YouTube video sponsored by Kry, influencer Therese Lindgren (983,000 subscribers on YouTube as of September 2019) recollects how she once had to wait seven weeks to contact a psychologist. “It’s *not good* that it takes so long!”, she claims and stresses the importance of an app option that promises help within 24 hours (Lindgren 2018).

Throughout the apps, time is constructed as important, precious, and scarce, and is transformed into a commodity that is being used as one of the main selling points: the apps sell time and patients are encouraged to buy it. However, the purchase is made invisible as it is mainly paid for via the tax bill. Some apps even promote themselves by highlighting that using the app is free of charge: “Your digital healthcare visit has a patient fee of SEK 0.00” (doktor.se, 26 Feb 2020). Being accessible also through low costs distinguishes them from visits to public healthcare facilities where patients usually pay a small fee. Thus, a pivotal point of reference in the endeavour to depict app care as an easy and rational choice is the unarticulated comparison with the largely tax-funded public healthcare organised by the Swedish regions.

Accessibility was also sold in relation to space. The portability of smartphones and the taken-for-granted internet access made it an “everywear” technology (Gilbert 2015), making health care possible regardless of the users’ physical location (cf. Lupton and Jutel 2015).

Get help wherever you are. It doesn’t matter whether you’re on the bus or abroad. With chat, voice and video calls you can easily and quickly get help from us (doktor.se, 20 Sept 2019).

On sponsored content by tonyh, categorised on Instagram as an athlete with around 30000 followers, he claims that he no longer calls a healthcare centre when he has problems with his allergies, but uses the app instead:

I meet the physician via video and don’t have to visit them. This is perfect because I travel a lot. Try it! Convenient and very practical! (tonyh, 23 April 2018)

One of the suggested perks of using the apps is that users can use the waiting time to attend to other things. Sensory affordances comprise the recurring motif of a casually dressed patient situated in their home, often symbolised by a sofa or a bed. This was found in two of the apps and is common in the images used by influencers on Instagram. However, there are also plenty of suggestions that the apps allow people to work while they are ill. A fashion blogger and lifestyle youtuber with 102,000 followers on Instagram puts it like this:

#MinDoktor asked if I wanted to try its online service and be consulted at home instead of spending the day in the waiting room...

-

quite handy to be working on my cooking skills 🍲 such as these polenta fries dipped in David’s garlic sauce 🌶️

-

what’s your game plan when you’re ill and you want to chat with a doctor? Time to step up your game? 🤔🤔🤔

-

#MinDoktor #sponsored #realtale (jennymustard, 23 June 2016)

Thus, the constructions of the healthcare apps as being a more accessible choice for health care are embedded in the digital flows of popular role models with desirable lives. The descriptions of the apps not only constitute them as a streamlined and neutral choice, but as the choice of a rational (and rather privileged) person. Who wouldn’t rather drink coffee and finish the

next task at home than spend the day in a waiting room at a public healthcare facility? The user is addressed as a rational but also a busy and highly mobile person, who has important and exciting things to do, and, frankly, who is not that ill.

## 4.2 Enabling security, safety, and credibility

Now during the holidays when we're travelling a lot it's so reassuring to have a healthcare app that gives us, as a family, the possibility to make an appointment with a physician directly in the mobile completely free of charge ❤️ (saracelinaa, 103 000 followers on Instagram, 9 July 2018)

The second theme that recurred as a selling point included efforts to ensure users that the apps are safe and secure. While issues regarding data security were mostly resolved by formally informing the user how personal data are handled, strategies to ensure the users' sense of safety were consistently present throughout the apps. The cognitive affordances of taglines offered promises such as: "Safe care when you need it" (Min Doktor, 21 Oct 2019) or "Safe care in the mobile" (kry.se, 21 Oct 2019). Sensory affordances comprised the lending of symbolic attributes that constituted familiar aesthetics for the user: white coats, stethoscopes, serious faces together with a direct form of address and a clean design resembling public healthcare facilities. Two out of three apps, Kry and Doktor.se, use white and bright green colours, aesthetic considerations that borrow from the white and green coloured Swedish state-owned pharmacy *Apoteket*, thus lending the apps some of its credibility. These two apps also have crosses as their logos. Min Doktor has a red heart-shaped form with a white smiley face as its logo which – despite the colour association with the red cross – partly contrasts with the soberness of the other two apps. The sense of professionalism and credibility indicated by the sober aesthetics (cf. Nakamura 2008) was strengthened by the lack of banners competing for attention. Users are left with the feeling that this is not a commercial site. Instead, on occasion, advertising is made implicitly, i.e. when the symbol for Doktor.se's service "Pharmacy" is the logo of the pharmacy owned by the app company.

Another aspect aimed at establishing a sense of safety was how the services were described. Users were repeatedly assured that members of the medical staff were "experienced" and worked at "Swedish health centres or hospitals" when not working for the app. There were also many assurances that physicians "collect all the information needed to make a correct diagnosis" and that they "follow the applicable guidelines for all prescriptions" (Min Doktor, 28 Nov 2019).

What is not explicitly communicated within the apps, but can be seen on the websites, is that the apps also work with conversational agents, or



“emphatic chatbots” (kry.se, 24 Sept 2019), specifically on matters regarding mental health and in initial triage. Min Doktor offers the opportunity to chat with a chatbot; it is humanised and called “Elsa, your digital assistant”. Although studies claim that engaging in conversations with AI chatbots works well (e.g. Ly, Ly and Andersson 2017), the under communication in the apps suggests a fear that patients would find the idea of relating to a chatbot rather than a person unreliable or impersonal.

### 4.3 Personalisation and creating relationships

“Good morning Anna Sofia, how may we help you?” (Kry, 23 Oct 2019). When logging on to the Kry app at 08.48 in the morning, the user is appropriately greeted with a “good morning” and called by their first name. The time sensitivity and the use of the first name creates a feeling of having a personal relationship with the app and contributes to the informalisation of relationships between citizens and representatives of Swedish state agencies and experts that goes back to the 1980s (Löfgren 1988). This is a type of personalisation that must be understood as a discourse (West 2013) in which users are positioned not only as patients but as respected acquaintances or even friends. In a similar vein, cognitive affordances assure users that the app staff “are here for you and your family” (Kry, 23 Oct 2019).

All apps further facilitated the organisation of appointments and administration of the health care of family members. Such functional affordances materialise the history of the relationship between the app, the user (and sometimes their children) and healthcare providers over time, and work as a digital memory that contains information that personalises the app and makes it part of the user’s (family) healthcare history. This personalising feature was also present in the affordances to customise the apps by including personal information that would serve to improve the service and user experience. In Kry, this involves height, weight, blood pressure, allergies, nicotine habits and a specific health profile that is created based on the user’s answers to questions about their health (for credibility, the survey is said to be based on “one of the world’s most used health surveys, RAND-36”, 23 May 2019). It is presented as being in the interest of the user to offer personal information. This is conducted beforehand and is not related to the issue for which the user requires medical advice.

During the studied period, the apps’ implicit claims to a holistic approach also involved connecting the user to other commercial actors within more or less related areas. For example, tapping the Kry app’s button “Apotek” (*Pharmacy*) leads to two options: “Renew your prescription” and “Order medicines” (23 Oct 2019). By clicking on the latter option, the user

is directed to Kry's partner Lloyds Apotek (*Lloyds Pharmacy*), from which they could also order non-prescription products that the pharmacy sold and that were not necessarily connected to the care visit in the app (this was not an option in all apps). However, in 2019, the Swedish Medical Products Agency suggested that caregivers be included as one of the actors who cannot be granted permission to operate outpatient pharmacies (Läkemedelsverket 2019). Since this time, the links to pharmacies' general websites have been replaced by links to the user's prescriptions only.

The apps also integrate with their users in a more aggressive manner, demanding their attention through emails and push notifications, alerting users to messages within the app or sending news and product information to users. For example, after registering an account, Doktor.se sent us e-mails twice a month. The product information was quite general and related to the season so that during spring, for example, we received information about hay fever and in the autumn information about the autumn colds. Through these functional affordances – reinterpreted as services – the apps are given mandate to interact with the user also when the user is not using the app. In a sense, the user becomes a follower that is positioned as a valued friend with whom the app builds a lasting relationship and to whom the app sends its best offers.

The creation of relationships also lies at the core of the influencers' sponsored content. The association with particular influencers and their online personae with whom their followers and subscribers have formed relationships (Dhanesh and Duthler 2019) adds layers of authenticity and potential affective value to the apps. Influencers often marketed the apps by showing their vulnerability and cultivating relatability. They also explicitly emphasised how easy it was to talk to physicians over the phone, partly because they all are “very easy going” and “friendly”, thus convincing their followers to lower their threshold for seeking medical care (e.g. Ingrosso 2018).

Also, the functional affordances of the platforms used by influencers – such as YouTube and Instagram – play a part as they allow the influencers' subscribers and followers to leave comments. The apps are thereby included in the communities of the influencers and their fans, and comments on the apps are drowned in, but perhaps also associated with, the mainly positive and sometimes almost worship-like comments about the respective influencers. However, the commentary sections also render the use of influencer marketing somewhat unreliable. Not only is it difficult for the app companies to control the articulations of meaning made on the influencers' posts, it is also difficult to control the reactions of the subscribers and followers who may very well argue against the use of healthcare apps. Thus, the fantasmatic app narrative and its highlighted promises of accessibility, safety and personalisation were open to

contestation, which could certainly undermine efforts to promote the apps. To prevent this from happening, representatives of the app companies sometimes took the opportunity to answer critical commentators.<sup>2</sup> However, as shown below, criticism is also countered even when it is not explicitly levered.

## 5 RELATING TO PUBLIC HEALTH CARE

Many of the affordances that aimed to encourage users and direct them to using the apps highlight characteristics in ways that seem to compete with public health care. Certainly, the presentation and marketing of healthcare apps in Sweden have to be understood in light of the heated debate about private digital care that the deregulation in the welfare state has engendered (Carlsson 2020). In this respect, one strategic way to legitimise change and market app care is also to take control of the meaning production around the apps’ relationship to public health care by countering the expected criticism (cf. Lindberg and Lundgren 2019). In this section we discuss how the apps and their marketing material relate to public health care.

The pre-empting of criticism took place through various cognitive affordances, some of which have already been mentioned, such as the emphasis on the benefits of the digital regarding accessibility in space and time. However, it was also carried out more explicitly. On its YouTube channel, Kry published eight films called “Myths and facts about physician visits via video”. The films are just a couple of minutes long and in all of them the viewer sees a young white male wearing a white polo shirt. A sign in the lower left corner informs the viewer that he is a physician at Kry. The myths countered in the films are: 1) You cannot make a diagnosis without touching the patient, 2) Medical visits via video require more public funding than visits to health centres, 3) Doctors who work via video are not proper physicians, 4) Medical visits in a mobile app result in over-consumption of health care, 5) Digital health care drains the county councils of public funds, 6) KRY is only for young urban people, 7) Only hypochondriacs seek digital health care, and 8) Seeing a physician via a video call in a mobile app results in shorter queuing time and increased accessibility (kry.se, 23 Oct 2019). The chosen myths seem to be formulated with the public healthcare system and notions of a more traditional kind of health care in mind, and it is clear that the films are not only used to kill the myths, but to convey a message: app health care is just as good as traditional health care and even works to improve the situation for public health care.

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<sup>2</sup> For example, on Bianca Ingrosso’s blog, ‘Samuel’, presenting himself as ‘working at KRY’, answers a commentator’s critical question about the costs for the county councils and the critical suggestion that taxpayers will lose on the app service in the long term (Ingrosso 2019).

Hence, out of the eight myths, all but one of them are firmly countered. It is only the last myth – apparently a myth created or at least frequently repeated by the app company itself – that the physician seems unable to contradict. Expressing satisfaction, he states that seeing a physician via a video call really does result in shorter queueing time and increased accessibility for all.

Labelling the criticism “myths” effectively works to delegitimise them. It may also be understood as part of a strategy in which practices of capitalism are reinterpreted as being helpful for the public healthcare system and for Swedish healthcare-seeking citizens in general. The strategy may be viewed as a countermeasure taken by the companies to pre-empt the potential contestation and criticism of the neoliberal choice reforms that have enabled these digital services (cf. Glynos, Speed and West 2015). As the criticism has sometimes been harsh, countering it is crucial in order to establish the apps as legitimate. It reinforces digital health care as the logical way forward. Thus, a central aspect is to undermine public health care as the better option, although – and importantly – any notion that there would be an antagonistic relationship between the apps and the public healthcare system is repeatedly rejected.

In this sense, the practice of pre-empting criticism ensures the continued enjoyment of the accessibility, safety and personalisation that the apps offer, and which are further associated with positively charged notions, such as patient choice, empowerment, individuality and freedom (cf. Lindberg and Lundgren 2019). By taking control of the expected criticism that threatens to disrupt the fantasmatic app narrative and the promises it gives, users can continue to enjoy the perks of accessibility, safety and personalisation in the way they are depicted in the apps’ own self-descriptions, without having to reflect on the wider societal effects of the healthcare practices that the apps give rise to, such as the costs for the various regions. The latter constitutes a common problem regarding public health care, which has experienced difficulty in achieving waiting time goals (Björk 2016; SOU 2019:42). An unquestioned link between app health care and the undermining of public health care would certainly discourage at least some citizens from using the apps – which was clear from the commentaries on Instagram and YouTube. Thus, the effort put into retaining the fantasmatic app narrative may be regarded as an important answer as to why the narrative proves to be so persistent (cf. Glynos 2008). Such an effort is needed because of the ethical dilemma that some users obviously identified between the notion of the free choice of care on which app health care is based, and the principle that those who are most in need of care should receive care first, which guides the public healthcare system (cf. Bergwall 2021). Another answer concerns the patient positions provided

by the fantasmatic app narrative’s focus on accessibility, safety, and personalisation.

## 6 POSITIONING THE PATIENT SUBJECT

The empirical themes not only promoted app health care through promises of accessible, safe, and personalised care. They also addressed the user in specific ways, encouraging particular forms of patient subjectivity. In this section we discuss the two interrelated aspects of patient subjectivity that emerged: the patient as a consumer and the patient as young, busy, and urban.

### 6.1 Consumers

Following the changes resulting from the choice reforms in recent decades, patients are increasingly being addressed in their role as *consumers* of health care (Szebehely 2000; Henderson and Petersen 2002; SOU 2008:15; Lindberg and Lundgren 2019; Carlsson 2020). This was also an overarching theme in the studied material; the apps were aggressively marketed, firmly establishing app health care as a consumer product. Encouraging patients to identify as consumers was achieved using a plethora of functional and cognitive affordances within the apps, including the design and content of interfaces. For example, as part of the affordance of accessibility, all apps have a start view after logging in where illness categories are listed and the user chooses an illness from this list. The Kry app even highlights illnesses that are “Currently common” (27 March 2019), just like many online stores do with their products. As part of the affordance of safety, the apps also publish app store ratings, patient satisfaction scores and user reviews, which would serve to reassure that the services are proven and popular. The latter were clearly selected by the companies and only showed overwhelmingly positive reviews (cf. Adams 2012; Lupton 2014c) that were in line with the fantasmatic app narrative. In influencer films and posts, app health care is marketed as a commodity and the app as being the best way to access this commodity. This becomes strikingly obvious as influencers sometimes provide vouchers that can be used at the sponsoring app company’s pharmacy. It is made even more clear when scrolling through the contents of an influencer’s profile, in which posts on app health care are published alongside other sponsored contents.

The apps’ services are described in the apps and the marketing material in such a way that users are compelled to adopt a consumerist mindset based on a discourse of “choice”, in which the subject is expected to weigh the pros and cons of different healthcare providers in order to make a decision, and ultimately identify with such decisions. Hence, the

subject “is defined, first and foremost, as *homo eligens*” (man choosing), as Bauman (2007, p. 61) puts it. Such notions of choice have been described as effective tools for the reorganisation of healthcare systems along neoliberal lines (e.g. Irvine 2002) and have been at the core of Western culture from late modernity onwards, in which choice ideologies and consumption technologies have offered lifestyle pedagogies, as it were, for “living a life that is both pleasurable and respectable” (Rose 2004, p. 86). In a sense, the promise of accessibility, safety and personalisation that was included in the fantasmatic app narrative addressed a rational user who would choose the app because it is the quickest, easiest, least expensive, and most modern way to receive care.

However, at the same time, and as highlighted by Rose (2004), the appeal targets the emotional aspects of consumption and addresses the users’ insecurities and fears. In this latter sense, the apps not only contributed to the establishment of new needs, but also to new notions of rights. Inscribed in a rights discourse, the accessible, safe and personalised health care promised by the apps was legitimated as being *more* than just a possibility. The rights discourse was, however, tempered, and users were encouraged to identify themselves not only as rightfully consuming what is in their personal interest, but as moral consumers, as it was stated that using the apps would ease the burden on the public healthcare system by saving “space and resources for both individuals and society at large” (Doktor.se, 26 Nov 2019). Thus, the individualism that is at the core of the discourses of “choice” and “rights” that permeate modern health care is partly articulated as a way of achieving moral solidarity. By positioning users as consumers, the apps therefore confirm and speed up the processes of consumerism taking place in health care (Irvine 2002). This positioning not only marks a boundary between digital app care and public health care. Users are told that as consumers of app care they would, paradoxically, both escape and help the public healthcare system, an argument that complements observations made by others (e.g. Norris 2012).

## 6.2 Young, busy, and urban

The apps’ visual representations of patients and employees tended to portray relatively young persons in their 20s, 30s or early 40s – or their children. Also, the influencers who had been sponsored to promote the apps were all quite young and predominately white adults. In quotes from former patients who were used to promote the apps on their websites, the theme of saving precious time is also closely associated with having busy lives and important careers, as in the following patient quote:

04.00 Monday morning and I have to constantly pee. I have all the signs of a urinary infection and know that I need medicine to make it stop. My

first meeting is at 08.45 – an important meeting that I cannot cancel or postpone. That’s when I remember mindoktor.se. At 06.00 I log on to their website and, to my surprise, I get an answer right away. At 07.00 everything is ready and I’m at the pharmacy at the central station taking my first pill. Thanks to this quick treatment I can attend my meeting and work as normal for the rest of the week (Min Doktor, 26 Nov 2019).

The cognitive affordances of this quote demonstrate how the app encourages identification with a self-motivated, ideal neoliberal employee who can get ill, be treated and attend a meeting at work at the same time (cf. Lordon 2014). Through articulating the app and its services with freedom from queues at public healthcare facilities, and indeed from the very condition of being ill, the demands of neoliberal ideology are effectively concealed. Instead the apps are presented as valued attributes of the ideal neoliberal employee. In that sense, the way in which the affordances of the apps are symbolised also works to sustain the grip of the neoliberal work ideology (Glynos 2008).

The focus on youth, busyness, and urbanity (the latter implied in the quote by the proximity to a pharmacy and referring to the central station) corresponds with results that suggest that young adults tend to appreciate accessibility more than continuity, and that younger cohorts are increasingly turning to alternatives to physical health care, such as digital care (SOU 2019:42). However, the strong focus on youth, busyness and urbanity is particularly interesting since it contradicts how public policy and commercial actors have presented digital health care. As the restructuring of public health care and the geographically uneven distribution of health care have gone hand in hand with a focus on citizen influence (Enlund 2020), digital technologies emerged as promising solutions. By “being independent of geography and enabling asynchronous contacts” (SOU 2019:42, p. 38), it has been ascribed the promise of solving the problems of demographic ageing, the long distances to physical healthcare facilities in Sweden’s rural areas due to the withdrawal of health care, and the difficulties faced by older people in transporting themselves in order to receive the quality of health care to which they are entitled (e.g. Skr. 2005/06:139; Lindberg and Carlsson 2018).

However, these categories were neither represented nor addressed in the material. Although Kry made efforts to counter the supposed myth that the apps were primarily being used by younger people from urban areas, none of the studied apps’ visual depictions portrayed older people as a patient category or highlighted the significance of the app for people living

in sparsely populated areas where distances to healthcare centres are long.<sup>3</sup> In Kry's own *Quality report* for 2019, it reports that as many as 41% of users were aged 21–39 years and 32% were parents/guardians of children aged 0–15 years. Only 3% of users were over the age of 60.

The differences in this regard between policy documents and the apps are indicative of their different goals. While policy reports – whether these are Swedish government official reports or policy documents written by stakeholder organizations – are often written from within a discourse in which responsibility is taken for providing equal care throughout Sweden and the goal of the app companies is profit. It is therefore not in their interest to describe and address people in sparsely populated areas as consumers of app services, possibly because there are less of them. From the perspective of public policy makers, commercial apps of the type described here might be seen as a potential solution to a problem, but that problem should not be confused with the app companies' problems. It is possible that the representations of users are also describing what Carpentier (2011) called a “digital divide” created by the digitalisation of public services.

Technologies have been described as being produced with distinct user groups in mind (Woolgar 1990). By foregrounding patients as aware consumers, and as young, busy and urban, the healthcare apps showed a close affiliation with other types of lifestyle, health and self-tracking apps (e.g. Lupton 2018, 2012).

## 7 CONCLUDING DISCUSSION

Care has been described as a selective mode of attention, focusing or even cherishing some aspects (certain lives, illnesses, bodies, etc.), while excluding others (Martin, Myers and Viseu 2015:627). Employing Stanfill's (2015) discursive interface analysis and exploring healthcare apps for “the structures at work within them”, we identified what we called a fantasmatic app narrative to which all three apps and their marketing material contributed, and that worked to sell, as it were, the healthcare apps. Through functions, taglines, descriptions, and marketing material, the fantasmatic app narrative foregrounded the apps' ability to deliver accessible (in time and space, as well as financially), safe and personalised health care, characteristics that are typically highlighted as important in today's Swedish landscape of care (SOU 2019:42). On the one hand, the apps afforded users the opportunity to take the “path of least resistance” (Stanfill

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<sup>3</sup> With the advent of the COVID-19 pandemic, and outside of the scope of this article, this partly seemed to change, at least in the televised commercials, and older patients became more commonplace.



2015, p. 1066), urging them to ignore criticism of the apps, and guiding them from downloading the app to making an appointment with a physician. On the other hand, healthcare apps and their commercials also articulated ideal patient subjects by addressing and representing users in specific ways (Hutchby 2001, 2003).

The apps undoubtedly contributed to creating notions of both patients and health care. Through various mechanisms of affordance, including functional, sensory, cognitive affordances, the app narrative encouraged a personal everyday relationship with health care via the apps. In this sense, the studied apps both resembled and differed from other types of health apps such as the much-studied self-tracking apps (e.g. Pink and Fors 2017). There were some resemblances as they foregrounded young and seemingly healthy users who took personal responsibility for their health and well-being, and for whom illness seemed to be something transient and easily remedied. Like many health apps and self-tracking devices (cf. Lupton 2012; Sanders 2017), the studied healthcare apps also tended to facilitate the biopolitical aims of public health discourses by repeatedly suggesting the importance of accessibility and by suggesting that users also use the app for mild symptoms.

But while self-tracking apps seem to gain momentum from relocating health care to the individual, thereby facilitating the public health care, the apps studied seemed to encourage individuals to use healthcare appointments instead. Because the studied apps did not work as a *replacement* for healthcare appointments, but *provided* them, the focus on accessibility, safety and personalisation primarily worked to encourage the patients' close contact with the apps – and thus with using tax-funded health care.

There was a tendency to primarily represent patient users as relatively young, urban and noticeably busy and mobile, both within the apps and on the websites, and through the uses of influencers, who acted as trusted users with whom potential users could identify. Apart from a lack of representations of patients who were visibly ill or had visible disabilities, there was also a noticeable lack of representations of older and rural patients. Existing studies suggest there is a digital divide in which older rural adults tend to use the internet less (Berner et al. 2015). The studied apps' conditions of affordance tended to discourage both rural and older users from using the apps. Paradoxically, these groups are described as beneficiaries of, and empowered by, digital health care in policy and politics (Skr. 2005/06:139), which calls for further research into how digital healthcare technologies relate to ageing and rural patients (e.g. Katz and Marshall 2018).

As a growing number of studies in the field have acknowledged, digital health care and the patient positions it encourages can be viewed as

part of neoliberal consumerist ideology (e.g. Thomas and Lupton 2016; MacLean and Hatcher 2019). The studied apps were no exception, and they were clearly influenced by the design discourse of other commercial health, lifestyle, and self-tracking apps. An important finding of the study was the way in which digital healthcare apps were part of a wider digital landscape in which paid collaborations with influencers not only helped create goodwill, but also presented the information in new, clearly consumerist, highly youth-centric, and less controllable ways. By showing personal vulnerability and cultivating relatability, influencers partly took the edge off this consumerism. Overall, however, the collaborations suggested a specific form of market orientation that represented a clear departure from how health care has traditionally been presented, reinforcing a consumerist healthcare logic, transforming it – and the highlighted health, time, and safety – into commodities and selling arguments, and positioning patients as consumers. In this sense, the apps work as communicative agents (Lupton and Jutel 2015) that reinforce a view of illness and disease as (admittedly common) exceptions rather than intrinsic parts of life (Wainwright 2008). But while the increased accessibility of medical care through marketisation, digitalisation and personalisation clearly has its benefits, it may also lead to increased medical “needs” – articulated in the realm of a rights discourse (Frank 2000) that sits well with the Swedish free choice of care reform which, since 2010, has transformed the Swedish health system into a quasi-market (Bergwall 2021). Increased accessibility also implies greater surveillance opportunities, which is a central theme in the field of critical digital health studies (Lupton 2014b). Encouraging users to contact public healthcare facilities via apps means encouraging patients’ conditions to be registered in their medical records.

Regarding the second research question about how the fantasmatic app narrative was defended against potential criticism, a point of contention was the apps’ relationship to the public health care organised by the Swedish regions. On the one hand it was implicitly criticised for being slow, inefficient and out of date, and the apps therefore provided a much needed modern alternative. At the same time, the apps used the goodwill and credibility of public health care by borrowing from its aesthetics, emphasising that app physicians also worked in public health care, and that the apps would not compete with it but would relieve it.

Healthcare apps are good examples of the need to explore the affordances of digital healthcare devices. In a public healthcare system that is becoming increasingly digitalised, questions about the normative dimensions built into seemingly neutral digital technologies are important, as they may support but also counteract policy objectives. The present analysis could work as an example of how apps that are becoming increasingly enmeshed in mainstream health care certainly reach out and

affect relationships and identities outside of the digital realm; they encourage transformations of patient subjectivities and healthcare use. However, the analysis does not cover the experiences of users, for example, physicians and patients. It would be of great interest to further explore how the fantasmatic app narrative described in this paper is manifested, challenged, and negotiated in app users’ narratives about their experiences.

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**WHAT IS DIGITAL ACTIVISM ANYWAY?  
SOCIAL CONSTRUCTIONS OF THE “DIGITAL”  
IN CONTEMPORARY ACTIVISM**Suay Melisa Özkula<sup>a</sup>**ABSTRACT**

In recent decades, digital activism has received a lot of scholarly and journalistic attention. Even so, there remains no firm consensus on its precise definition and scope. This paper addresses this conceptual haziness and contends that there are analytical issues and conceptual implications in the openness of the term and its description as digital, as 'digitality' is neither the sole nor the primary feature along which activism has changed. Drawing on extant practices of digital activism and conceptual approaches to its scope, the paper aims to (1) critically discuss & highlight a range of conceptual obscurities in digital activism scholarship, (2) provide a glimpse into the concept's evolution, and, through these (3) suggest that the term (incl. synonyms) suffers from myriad conceptual and epistemological fallacies: omissions of the concept's complexity (e.g. hybridity, rhizomatism, multi-mediality), implications of digital dualism and therefore potentially technological determinism, and the invitation of stigma, luddite sentiment, and other social constructions of the technologies to which the term is attached.

Keywords: digital activism; digitality; digital dualism; social construction; technological determinism; clicktivism.

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## 1 INTRODUCTION: CONCEPTUALISING DIGITAL ACTIVISM

In broad terms, digital activism (D.A.) refers to political activism on the internet or political movements relying on it (e.g. McCaughey & Ayers, 2003, p. 1; Vegh, 2003, p. 71). Examples include politically motivated actions comprising of both digital or online versions of traditional activism practices, e.g. petitions and protests, and the use of internet-enabled digital technologies in support or preparation of offline activism, e.g. the organization of an offline event over social media (see Mercea, 2011). The phenomenon has received broad scholarly, journalistic, and public attention, in particular for enabling two-way or “many-to-many” mass communication (see Castells, 2007). That change has, in the last two decades, shown to enable high degrees of interaction and networking, for example through tweeting, posting, chatting, and sharing - particularly of user-generated content and through personalized action frames across national and regional boundaries. These attributes have been said to change movement dynamics through new connective action frames that include self-organizing and organizationally enabled networks (see Bennett & Segerberg, 2012).

While these new forms of activism have been praised for their wide reach, networkedness, immediacy, directness/ disintermediation, interactive potential, and potential for empowerment (see McCaughey & Ayers, 2003; Polletta, 2013; Negroponte, 1995), they have also been criticized for what has been judged low efficacy, the creation or reinforcement of political apathy, and potentially harmful consequences such as hacking and surveillance (see Murdoch, 2010; Gladwell, 2010; Morozov, 2009; overview in Karpf, 2010a). Consequently, the terms clicktivism and slacktivism have been used derogatorily to describe a phlegmatic form of digitally enabled activism that is rooted in low commitment (see Karpf, 2010a), or, in Shulman’s (2009, p. 26) words, “low-quality, redundant, and generally insubstantial commenting by the public”. As such, digital activism remains a contentious subject and somewhat obscure with regards to its scope and societal effects, issues that inform its conceptualization.

Following that premise, this paper will argue that digital activism is a hazy and, as such, immanently problematic, if not dysfunctional, concept. This dysfunctionality arises from it typically being defined as digitally enabled activism, suggesting that digitality is a key paradigm change in newer forms of activism. Originally, digitality (or digitalism) was defined by Negroponte (1995) as the condition of “being digital”, meaning that the digital constituted a new era in which the ways of the living had culturally changed. Both Negroponte’s (1995) and later Castells’ work (2007, 2010) stress how the digital has become enmeshed in the physical and is therefore

inseparable from it. Even so, the idea of being digital reinforces in many ways that the 'digital' is different, 'a thing of its own', which lends itself to "digital dualism" - a distinction between physicality and digitality (Jurgenson, 2012) - or similarly dichotomous views, as well as a perception of the internet as a singular monolithic entity.

This raises questions as to what digitality conceptually assumes. In many ways, understandings of D.A. have evolved not just with technological advancement, but with changing notions of being digital. A substantial amount of literature (e.g. Jurgenson, 2012; Karatzogianni, 2015; Treré, 2019; Lupton, 2014; Breindl, 2010; Dahlberg-Grundberg, 2015; Karpf, 2010a; Sassen, 2002) already assumes that online and offline activities cannot be separated clearly and are at best blurred. Instead, several new approaches to contemporary activism have been introduced including, for example, holistic views that emphasize media hybridity (e.g. Chadwick, 2007, 2014, 2017; Lindgren, Dahlberg-Grundberg, & Johansson, 2014; Treré, 2019) and wider communication ecologies of contemporary social movements (e.g. Mattoni, 2017; Mercea, Iannelli, & Loader, 2016). Several scholars have additionally cautioned about the technological determinism such digital dualism implies (e.g. Foust & Hoyt, 2018; Gerbaudo, 2017; Kaun & Uldam, 2018). This paper aims to discuss these approaches towards shedding some light on conceptual assumptions and fallacies in digital activism theory. It will outline issues of generalization, foci on the 'digital', and definition via practice towards highlighting conceptual ambiguities in activism that is labelled 'digital'.

Through this synthesis, the paper will argue that digitality has become not only a relatively meaningless descriptor of new activist practices, but also dysfunctional and counterproductive to its potential. More specifically, the paper will suggest that the labelling of contemporary activism with the term 'digital' implies and indeed carries with it a range of fallacies: (1) it omits the concept's complexity (e.g. hybridity, rhizomatism, multi-mediality); (2) it implies digital dualism and potentially also technological determinism; and (3) it invites stigma, luddite sentiment, and other social constructions of these technologies (e.g. clicktivism). The paper concludes by cautioning about the implicit labelling processes that accompany the usage and conceptual framing of the term.

## 2 DEFINING DIGITAL ACTIVISM

Following the Arab Spring, a surge of publications has discussed and advanced knowledge on digital activism. Even so, there remains little consensus on its conceptual scope. A range of factors have contributed to this obscurity, including the comparatively low number of conceptual contributions, ambiguous and changing terminology, as well as assumed

attributes and practices filed under the term. To date, many scholarly contributions do not give an extensive or sometimes any definition of the term (e.g. Adi & Miah, 2011; Breindl, 2010; Karpf, 2010a; Ng & Toupin, 2013). Among the few more comprehensive conceptual discussions and definitions are Hands' (2011) three-pronged approach to activism as dissent, resistance, and rebellion, and Karatzogianni's (2015, p.1) definition of D.A. as "political participation, activities and protests organized in digital networks beyond representational politics" and by non-state actors.

Part of the difficulty in defining the term lies in its combination of two elements that are complex concepts on their own: the internet (or digital technology) and activism. At a minimum, digital technologies have been described as devices based on a code existing of 0s and 1s (Joyce, 2010, p. IX). Even so, digital activism typically implies the use of internet-enabled digital technologies, and yet, the internet itself has been described as a new field in which conceptual confusion is not uncommon (e.g. Postill, 2011, p. 25). In fact, scholars do not necessarily separate between information and communication technology, the internet, new media, and similar terms, and therefore clearer definitions of the politics and technologies implied in D.A. are needed (Breindl, 2010, p. 56). This is perhaps best illustrated in recent debates surrounding the internet's 'birthday' in 2019 and which precise technology is celebrated by it: The Internet, the Advanced Research Projects Agency, or the World Wide Web. - The answer depends very much on how the Internet is defined in the first place (Paloque-Bergès & Schafer, 2019, drawing on Novak).

Similar difficulties arise in defining which digitally-assisted activities should even be considered activism. For instance, Adi and Miah (2011) explain that sharing a website through a tweet may be counted as activism, or may not. Digital activism has therefore sometimes been conceptualised through the term 'participation'. For example, in his work on "digital prefigurative participation", a form of digital pre-protest engagement, Mercea (2011, drawing on Flanagin et al., 2006) suggests that protest participation online is essentially a communicative act that expresses personal views on public issues, a narrative also driven by others (e.g. Bimber, Flanagin, & Stohl, 2005). Even so, it remains questionable whether such acts do indeed constitute activism or perhaps advocacy instead, areas that often overlap. For example, according to Hands (2011, p. 3) activism includes a range of practices of resistance rather than a "general sense of opposition to prevailing power". Indeed, the use of D.A. as a concept is often *context-specific*, as socio-political acts are often defined based on the political environment or regime they take place in, as well as the particular technologies that are used, as is, for example, the case with far-right protest movements or activism against or as part of authoritarian regimes. As such,

definitions of digital activism rely on a range of attributes and sub-concepts and remain largely speculative.

This issue is reflected in (if not exacerbated by) the terminological ambiguity in the evolution of the combined term (an issue also picked up by George & Leidner, 2019; Özkula, 2021). Aside 'digital activism' (e.g. Kaun & Uldam, 2018; Hands, 2011), a range of other terms have been used to represent either the same or overlapping concepts (see Özkula, 2021) including online activism (e.g. Yang, 2018), networked activism (e.g. Tufekci, 2013), social media activism (e.g. Miller, 2017), internet activism (e.g. Kang, 2017; Tatarchevskiy, 2011), hybrid activism (Treré, 2019), hashtag activism (e.g. Briones, Janoske, & Madden, 2016), activism with prefixes commonly denoting digital connections such as "e", "net", "web", or "mobile" (e.g. Carty, 2010; Cullum, 2010; Meikle, 2010), or in diverse keyword combinations such as hashtag internet activism (Peters & Besley, 2019). A variety of scholars have also used several of those terms interchangeably (e.g. Earl, Kimport, Prieto, Rush, & Reynoso, 2010; Kahn & Kellner, 2004; Meikle, 2010).

In many ways, this terminological ubiquity highlights the rapid growth and popularity of the phenomenon including its changing language discourses, where individuals and organisations sometimes quickly embrace new terms with (initially) little need for terminological refinement. For instance, the changing terminology often reflects technological developments. While 'web' and 'cyber' reflect early (mostly 1-way) forms of digital communication, the terms 'social media', 'mobile', and 'hashtag' highlight post-2005 developments. The choice of term often also signals a particular era in which a given term dominated the language discourse, such as the term cyber-activism for "futuristic, science-fiction dimensions" (Lupton, 2014, p. 13), and social media for technologies developing in the mid-2000s alongside smartphones (although social technologies have existed for longer). These choices are additionally influenced by the concept's positioning in a wide, varied, and interdisciplinary field with varying terminological preferences. Digital scholarship is in itself necessarily interdisciplinary and includes large corpuses of works in the areas of media studies, computer sciences, sociology, anthropology, political science, cultural geography, and marketing, where disciplinary preferences have affected terminology.

Thus, beyond the simpler issue of definition, D.A. is a complex and perhaps even problematic concept to operationalise due to its intricate terminological and conceptual evolution, as well as varying disciplinary and methodological approaches. While such discrepancies may well be expected in phenomena that are closely tied to developing technologies, the focus on the precise technology then becomes, to some extent, its fallacy. After all, this concept appears to be labelled by the technologies that seem

to differentiate it, suggesting that its practice is technology-tied if not -driven, a notion that implies at a minimum digital dualism and at a maximum technological determinism.

For pragmatic reasons, this paper uses the term 'digital activism' as an umbrella term. While the other terms are acknowledged as part of the D.A. terminology and language discourse, this term is consistent with recent trends where the term 'online' is increasingly substituted by 'digital' in recognition of widespread digitisation and digitalisation processes. From an evolutionary perspective, 'digital' describes best the *current* language discourse around the new technologies. The preference of the term is further based on some conceptual variations as explored by Joyce (2010). According to Joyce, D.A. suffers from terminological ambiguity in that some terms are not exhaustive, and others are not exclusive (2010, p. VIII). Some terms, she says, are not exhaustive in that they include only internet-enabled technologies, such as cyber-activism and online activism (ibid, p. VIII). Other terms such as 'social media' are additionally limited to more specific areas or technologies (ibid). Along similar lines to Joyce's explanation of exhaustiveness, some terms appear unsuitable in that they are defined by the primary purpose of the new technologies. Those terms include information activism (e.g. Stein, Notley, & Davis, 2012, based on Tactical Tech) and keywords in combination with ICTs such as ICT activism (e.g. Hintz, 2012). These expressions focus on digital technologies as tools for communication or as part of information management, areas that are here considered part of D.A., but again not exhaustive to its purposes.

Other terms can be deemed unsuitable in that they are (in Joyce's terms) not exclusive, meaning that they are too broad. Joyce gives the example of e-activism, which includes various electronic devices. For example, dictaphones and tape recorders are electronic, but not devices that have had major societal effects in recent years. Following the same logic, digital technologies that have not shown relevance for activism in literature have not been included as part of the spectrum here. Those technologies foremost include tools and technologies that have primarily pragmatic functions, such as storage devices (e.g. DVD and USB technologies) or internal workflow technologies. Although those tools are acknowledged as relevant within their functions, they are not of particular value for conceptualising activism practice.

Although D.A. is currently a popular term (and has therefore been chosen as a working term here), the term digital remains problematic, an issue this paper addresses. On a basic semantic level, the term can be said to not be exclusive enough in that (like the 'e-' prefix) 'digital' includes by default a wide array of devices that may not prove relevant to political activity or activism at all, such as digital household appliances, storage devices, and workflow technologies. While the term may still be more

accurate than other variations, it could also be questioned whether 'digital' highlights the complex networked potential of the web and smartphones to a fair extent. It may consequently also be challenged what particular features or distinctions the term 'digital' *actually* proposes, as well as how these propositions influence its current understandings and social construction.

### 3 DIGITAL ACTIVISM REPERTOIRES

Given the large variety of technologies that have been subsumed under D.A., as well as their complex evolution, a comprehensive account and lasting definition of D.A. is of course difficult to attain. Only few scholars offer a detailed description that clarifies the term or sets limits to its practice. Works that have made substantial contributions to further understanding the conceptual variations and ramifications of the phenomenon include above all [in no particular order] (1) Hands' (2011) categorisation of D.A. as dissent, resistance, and rebellion; (2) Bennett and Segerberg's (2012) seminal text on connective and collective action frames, which highlights changing social movement dynamics, (3) Karatzogianni's (2015) four waves of digital activism 1994-2014, possibly the most comprehensive historical and evolutionary work on D.A. to date, (4) work on reductionist views in hybrid media activism (e.g. Treré, 2019; Treré & Mattoni, 2016), (5) Gerbaudo's (2017) periodisation of two waves of socio-political protest, and (6) ecological views of digitally enabled activism (e.g. Mattoni, 2017; Mercea et al., 2016). While this body of work has provided substantive knowledge on what is considered D.A. as well as how the phenomenon has developed over the years, it also highlights the immense breadth and haziness of what it comprises.

A contributing factor is that, more often than not, scholars explain D.A. via its practice (e.g. Brunsting & Postmes, 2002; Yang, 2009). For example, Yang describes D.A. not by way of a definition, but by listing activities that *are* D.A.:

In some cases, the Internet serves to mobilize street protests. More often, protest takes place online. The most common forms include online petitions, the hosting of campaign websites, and large-scale verbal protests. The most radical is perhaps the hacking of websites (Yang, 2009, p. 33).

Other texts have provided more detailed categorisations. For example, Jordan (2002) distinguishes between direct action and (dis)organisation, pleasure-politics, hacktivism, and culture jamming. Later publications include newly developed activities in their groupings; for instance, George and Leidner's (2019) categories include clicktivism, metavoicing (= the

amplification of a user's voice or opinion through re-sharing), assertion (= content creation), e-funding, political consumerism, digital petitions, botivism (= robot-distributed activism), data activism, exposure, and hacktivism. By itself, such definition via practice is, however, problematic, as the resulting list of practices raises some questions as to what can justifiably be listed under the term. Here I outline the wide range of practices typically subsumed under digital activism via five categories: (1) advocacy and political commentary, (2) recruitment and movement-building, (3) organisation & coordination, (4) online direct action, hacktivism, and civil disobedience, and (5) research and documentation. These categories are used to provide an overview of the myriad practices assumed to pertain to the vast D.A. spectrum and the conceptual issues that accompany such generalisation.

### **3.1 Advocacy & political commentary**

In its basic form, this category describes the expressive support of a particular position or ideology and potentially the respective distribution of information. This relatively broad category includes various forms of self-publishing or dissemination through websites, forums, or social media coverage such as tweeting, blogging, or posting, as well as responses to such content through various platform features (e.g. commenting, replying, liking, reacting, or sharing - called 'meta-voicing' by George & Leidner (2019)). Such coverage may take place in textual or visual form, through personal networks or in more public domains such as through hashtag publics, and with the addition of images, videos, article links, or other forms of multimedia commentary. In recent years, popular creative forms have additionally included political memes in image, GIF, or video format (e.g. the Harlem Shake flashmobs), social media challenges (e.g. the ALS Ice Bucket Challenge), and various representations of digital solidarity. The latter may include hashtagged anecdotes for awareness-raising (e.g. #MeToo sharing of personal experiences of sexual harassment), "protest avatars" - visual symbolic representations of movement support or membership (see Gerbaudo, 2015), as well as politically motivated visual overlays for profile pictures, and affective displays of solidarity (see Reilly & Vicari, 2021).

### **3.2 Recruitment, movement-building, & campaigns**

Recruitment and movement-building may draw on the same or similar repertoires, but are (arguably) more targeted at inclusion or mobilization than advocacy. As such, these activities tend to implement and focus on collective action frames, i.e. organisationally initiated or supported



activities and campaigns (as per Bennett & Segerberg's distinction), rather than individualised or ad-hoc cumulative efforts. While advocacy includes activities that may require both little effort (such as liking, sharing or debating) or more commitment (such as creating websites for information dissemination), recruitment and movement-building require potential activists to commit to more than an individual case by joining a particular movement in some form. This is also the case when individuals are active on various causes synonymously, which may lead to a gradual development of a collective identity or community. As such, movement-building activities aim at creating collective action, compared to advocacy and political commentary, which may comprise the entire spectrum of connective and collection action frames (differentiation as per Bennett & Segerberg, 2012) depending on scope, context, and intent.

Arguably, it may be difficult to distinguish recruitment from other actions, as digital solidarity and advocacy (cf. 3.1) or organising activities (cf. 3.3) may well contribute to movement-building. Even so, the past few years have shown various movements aimed specifically at garnering an increased membership or creating a movement through awareness-raising campaigns (rather than individualised posting efforts). This includes organisational campaigns or activities such as the infamous ASL IceBucket Challenge that asked users to either donate to the cause or to tip a bucket of ice over the heads, often achieving both (see Briones, Janoske, & Madden, 2016). In other cases, individual actions and campaigns have developed, through the creation of collective contents, into sustained movements. Such cases include #MeToo, Occupy, and #BlackLivesMatter, where the original campaigns (e.g. the Harvey Weinstein scandal in the case of #MeToo) developed into wider social movements with dedicated websites, hashtags, and profiles that unite common goals.

### 3.3 Organisation & coordination

The third category, protest organisation and coordination, comprises the organisation of online and/or offline activities or political opposition, coordination of activities, and mobilisation online, most prominently (in the Global North) via Twitter hashtags, Facebook groups, or organisation-led campaigns. This organisation can be done pre-protest as an incentive for online or offline protests, but also during or after. During a given action, new technologies can be used to coordinate or track activities through GPS location-tracking by using mobile phones, location-based networks such as Foursquare or Google Latitude, or instant messaging via public microblogging sites such as Twitter and their use of hashtags through what has been labelled "smart mobs" (see Cullum, 2010, p. 55-57; Rheingold, 2003). Such activities have, for example, shown to facilitate on-the-ground

protest action and the evasion of violent responses by repressive regimes (e.g. Hong Kong protests - see Ting, 2020). Some of these evasive tactics have been extended to the digital realm through the manipulation of keywords and hashtags, also called "morphs" (see Rauchfleisch & Schäfer, 2015).

As with the previous categories, these activities may be pertinent to either digital or non-digital actions, realms which are, more often than not, enmeshed – particularly in the case of digitally coordinated offline action. Even so, digital technologies have shown to carry significant weight in mobilisation due to the organising potential of tagging markers (e.g. hashtags) and similar digital enablers/mechanisms (e.g. location markers). These features have allowed for the development of social media publics, most prominently "hashtag publics" (Rambukkana, 2015) and "ad-hoc issue publics" (Bruns & Burgess, 2015). These are often "self-organising" grassroots networks (as per Bennett & Segerberg's framework) that may coordinate activities online (e.g. personalised sharing in #MeToo) or offline in the form of street protests (e.g. #BlackLivesMatter). New technologies are here used largely for digital prefigurative participation (Mercea, 2011) rather than protest or advocacy itself.

### **3.4 Online direct action, hacktivism & civil disobedience**

Online direct action consists of direct actions of dissent or protest in digital space. This may include creative forms of protest online such as the creation of political parody, e.g. memes, parodic banner ads or software for ideological or political points (see Gurak & Logie, 2003; Tang, 2013), and elements of culture jamming – the critical subversive use or manipulation of mainstream media or cultural artefacts (see Lievrouw, 2011). Unlike many activities in recruitment, organisation and cooperation, many of these activities are not necessarily intended to create action outside (e.g. street protests) but only within digital space (see Carty & Onyett, 2006; Yang, 2009). Some of those actions can be filed under "politically motivated hacking" (Jordan, 2002, p. 119) or hacktivism, which has been defined as a form of D.A. that draws strongly on computational skills (Jordan & Taylor, 2004). Hacktivism has often been accompanied by negative connotations; in fact, hacking itself is often associated with aggression or disturbance (e.g. Murdoch, 2010). At times, these acts are classed as online civil disobedience, a term that encompasses a range of minor acts of societal rebellion as well as larger acts that may be seen as cyberattacks or in accumulation even cyberwar (see Arquilla & Ronfeldt, 2001; Jordan & Taylor, 2004).

Minor activities may include different types of spamming such as email spamming or "e-mail bombs" – the flooding users with (typically disapproving) emails (see Kavada, 2005, p. 210; Vegh, 2003, p. 78 & 85) or

"twitterbombs" – the flooding of users with public tweets via Twitter (see Karpf, 2010b, p.156) and similarly the automatic tracking or following of specific accounts (Hwang, 2010, p. 133). "Google-bombing" (Kahn & Kellner, 2004, p. 91-92) equally falls into this category, although here users apply particular keyword combinations in their search engine optimisation to link organisations or groups to spoof or critique. Other such acts include spoof websites for the purpose of making political points such as the fake WTO website [www.gatt.org](http://www.gatt.org) during the Seattle WTO protests, and browser or page hijacking – the redirection of users via their browser, website, or a web page (see Vegh, 2003, p. 76-80).

While their connotations differ, online direct action, hacktivism, and online civil disobedience are largely analogous in that they are groups of actions that are considered a direct form of action that takes place online or is indeed *designed* for digital space. In comparison, many activities filed under the previous categories may draw on digital technologies for their pragmatic value or simply as the new way of 'being' in increased digitalised societies, where any activity may realistically incorporate digital elements (as argued by Nielsen, 2010; Negroponte, 1995).

### 3.5 Research & documentation

Other areas that have at times been included as part of the D.A. spectrum include research and documentation activities. These may be used by activists as a precursor to information dissemination and may consist of any type of human rights abuse documentation or citizen reporting, directly (for instance via mobile phones), via an outlet such as Indymedia, or an organisation such as Witness (see Cullum, 2010, pp. 59-60). It may include the leakage of information as done by the Zapatista movement in the mid-1990s or later by Wikileaks, but also election monitoring, countering rumours, and fighting voting fraud, as well as forms of "sousveillance" – bottom-up, reverse or grassroots surveillance whereby individuals monitor institutions such as government, police or other law enforcement through documenting and distributing evidence of police brutality (see e.g. Reilly, 2015).

Research and documentation may arguably also stretch to include other elements of information management such the dissemination of research (as with advocacy), e.g. through the use of listservs, website development specifically dedicated to informing and raising awareness or links to traditional organisations, and via alternative news outlets such as Indymedia (see Karpf, 2010b). While it is debatable whether research for activism should be considered activism in itself, some of these activities are conducted either in support of it or specifically with the intent of dissent (e.g. in the case of Wikileaks). As such, it remains difficult to determine not

only which activities are digitised or digitally enabled, but also which of them constitute activism in the larger sense.

### 3.6 Other

There are various other activities that can be and have been subsumed under the umbrella of digital activism, albeit somewhat less commonly so. They include diverse forms of online discussion along with their various rhetorics, narratives, and visually creative features. For example, the WWF's Virtual Spotlight in 2021 was a dedicated action that fused video dissemination, social media coverage across platforms, and a physical element in the form of switching off lights. They may further comprise the use of smartphone apps in support of movement activities or protecting individuals at risk (such as Amnesty International's app 'Panic Button' that alerts family members in cases of abduction/attack), bot activity/ "botivism" (George & Leidner, 2019), creative forms of data activism such as obfuscation on social media platforms (Brunton & Nissenbaum, 2011, 2015), funding or donation activity (see George & Leidner, 2019; Briones, Janoske, & Madden, 2016), as well as crowdsourcing in which individuals participate in activities through open calls. Not all of these could be reflected here in their entirety, although this can, in part, be attributed to the popularity of some actions over others in use or in extant literature, as well as their positioning at the edges of what is conventionally understood as core activist activity.

## 4 DIGITAL ACTIVISM FALLACIES

The five areas of D.A. outlined here represent what is typically subsumed under the term in existing scholarship. In accumulation, they portray D.A. as a fairly broad, if not almost all-encompassing, concept, primarily based on a distinction between activism that is conducted offline and activism that is conducted either entirely or partially online. Even so, some activities have become more synonymous with the term than others, despite the 'digital' occupying a different place or meaning across these activities. Certain activities may not even necessarily be counted as D.A. as they are strongly reliant on physical or offline actions, which makes it questionable whether those actions are indeed immanently or at all digital. For example, it is debatable whether the organisation of a protest on Facebook could be counted as D.A. if the only digital element of a given activity is an event page that invites users, when all the other material preparation and the protest itself take place offline. It is then doubtful that some email communication for an otherwise entirely offline movement is an act of digital activism rather than, simply, activism. Another example is the

distribution of protest videos on Youtube as mentioned by Kavada (2010). Unless the video is specifically used for further mobilisation, it may not have been an act of digital activism, but the digital archival of an event that is in itself not digital. Hence, interpretations of D.A. tend to be fairly broad and general in that they include online as well as offline activities, traditional activism activities, digital media in support functions, and mere communications. In that sense, what is often called digital activism is partly neither 'digital' nor 'activism'.

Thus, beyond the social media culture that D.A. has been said to be part of (e.g. decentralised, flexible, networked, and hierarchically flatter), the primary distinguishing factor of the new activism is assumed to be a degree of digitality. This, however, poses conceptual and epistemological problems.

#### **4.1 Digital duality and the omissions of conceptual complexity**

A lot of literature (e.g. Foust & Hoyt, 2018; Jurgenson, 2012; Karatzogianni, 2015; Treré, 2019; Treré & Mattoni, 2016; Lupton, 2014; Breindl, 2010; Dahlberg-Grundberg, 2015; Karpf, 2010a; Sassen, 2002) already assumes that online and offline activities cannot be separated clearly and are at best blurred. Jurgenson (2012) calls this digital dualism conceptually unsound and explains that we already know that the digital does not exist outside or separate from the physical. Instead, the relationship between the digital and physical is much more complex or enmeshed (Jurgenson, 2012; Negroponte, 1995), a view that has become increasingly adopted in the scholarly community within the past decade. Less rigid or reductionist views have, for example, focused on hybridity in complex media ecologies (an argument also driven by Treré & Mattoni, 2016; examples: above all Chadwick, 2017; Lindgren, Dahlberg-Grundberg, & Johansson, 2014; Mattoni, 2017; Mercea et al., 2016; Treré, 2019), changing movement dynamics and structures (Bennett & Segerberg, 2012), contextual factors in contemporary activism (Wolfsfeld, Segev, & Sheaffer, 2013), diverse media practices (Mattoni, 2017), and wider discussions of media effects in new social movements beyond technological determinism and media centrism (see Foust & Hoyt, 2018; Gerbaudo, 2017; Kaun & Uldam, 2018).

These approaches better capture the rhizomatic nature of protest communication, wider action repertoires and dynamics, media diversity/ecologies or what Madianou (2015) calls “poly-media”, as well as multi-actor spheres. They further imply that (multi-)media uses are not entirely new features of newer information and communication technologies. As such, they do not ignore the historical multi-mediality of social movements. For instance, early 20th century campaigns by Amnesty International already included global network activity and combined letter-writing

marathons with petitions and poster campaigns. Thus, calling the new activism 'digital' does not necessarily make conceptual sense, nor does it convey (if anything, it reduces) the complexity of the term.

Admittedly, extant uses of the term suggest that the term may at times be kept deliberately open as a way of allowing for some ambiguity or, indeed, flexibility. While this offers a potentially *desirable* broad and all-encompassing definition, it also lends itself to conceptual obscurity, ambiguity and value-driven/ stigmatised approaches. It further makes the operationalisation of the phenomenon for research – both for methodological choices and for the comparison of scholarly work – rather challenging. D.A. ultimately merely assumes that the described activism is either completely or to some undefined extent digital (natively digital *or* digitised). As such, it is barely (and sometimes not at all) distinguishable from any other (i.e. non-digital) contemporary activism.

This is not to say that digitally-enabled activism should be separated from more traditional forms of activism (another digital dualist fallacy, no doubt); they are intricately intertwined as recent literature has confirmed (above all, Chadwick's work on hybrid media systems, 2007, 2014, 2017). However, if contemporary activism which is often spurred by digital technologies is labelled as 'being digital' when it is not necessarily so and when the 'digital' may purely be a pragmatic choice or representation of increasingly digitalised societies rather than the place of protest, it becomes debatable whether there is any meaning in the term D.A. beyond a signifier for contemporary activism. The term then merely reduces the phenomenon's scope to a somewhat arbitrary and digital dualist distinction that potentially carries little operational value beyond identifying research areas.

## 4.2 Labelling processes & social construction in digital activism

The previous section established that an immensely broad view of D.A. may be problematic in that it gives way to an assumed or implied concept, which generalises it and renders it vague. Along with other literature, I further maintained that the implied digital dualism is unfounded, if not fairly meaningless. In itself, the 'discovery' that the digital descriptor is superfluous may hold little value for researchers. After all, the distinction may be a pragmatic choice for discipline or method tagging. However, if the term 'digital' is relatively meaningless, then D.A. is subject to the connotations of this descriptor, and the label 'digital' implies a range of attributes that have been attached to social media culture: decentralisation, networkedness, flexibility, flatter hierarchies, as well as more critical views of these platforms as trivial, apathetic, vain/ shallow/ narcissistic, or ephemeral. As such, D.A. as a term is not only somewhat futile, but

influenced by how the digital and in particular social media platforms are constructed.

The foundation for this influence lies in labelling theory (e.g. Becker, 1963), which suggests that wording matters in terms of implicit label making. In essence, it proposes that a negative label informs perspectives and conceptualisations of a given object or phenomenon (see Becker, 1963). To illustrate: in his infamous example of the 'deviant' label, Becker (*ibid*) argues that deviants only become true deviants when the stigmatized subjects internalise the degraded identity. While the 'digital' is not in itself a negative label, extant uses of the term suggest it does carry a range of derogatory connotations for contemporary activism. This means that when labelled as 'digital', contemporary activism is socially constructed on the basis of what the term assumes and connotes (based on social constructivism, which assumes that what is considered reality is socially constructed, see Berger & Luckmann, 1966).

This social construction is perhaps best illustrated through the concept of clicktivism, also called clickstream activism or slacktivism. Clicktivism is a form, type, or synonym for digitally-supported activism that relies strongly or solely on brief engagements through clicks, for example the liking, re-sharing, following, or (up)voting on posts (George & Leidner, 2019) or quick distribution of mass media (e.g. Karpf, 2010a). Although the definition in itself is not critical of D.A., the term is largely seen as pejorative (see, for example, Halupka, 2014, 2018; Karpf, 2010a; Madison & Klang, 2020). It typically connotes a type of activism that is futile, trivial, inconsequential, ephemeral, low-risk, loose-/ weak-tie, low-commitment/ uncommitted/ apathetic, low-quality, and resulting in little change or success (*ibid*; examples of these constructions: Miller, 2017; Morozov, 2009; Shulman, 2009; in journalism: White, 2010). This is despite growing evidence to the contrary. A range of online campaigns have shown exceptional success rates in terms of reach and participation, donations, and achieving the desired social changes, even though they relied largely on the virality produced through frequent liking and sharing. They include the ALS Icebucket Challenge with its high participation and accumulation of immense funds (see Briones, Janoske, & Madden, 2016), and the #MeToo campaign, which resulted in the conviction of sexual predator Harvey Weinstein and a series of penalties and shunning practices. Thus, movements strongly relying on the Internet have at times shown significant success over the past decades.

Beyond success, clicktivism has also been criticised for producing a phlegmatic activism culture, which is rooted in low commitment. Clicktivism ultimately assumes that traditional forms of activism are more dedicated. For example, in his ode to 'offline activism', Gladwell (2009) writes that digital actions are not as invested due to the lack of physical risk

and strong ties. This is mirrored by McCafferty who describes the tie difference as follows:

Traditionally, (...) movements evolved from (...) “strong tie” personal connections, such as those among classmates and church members. Activism associated with social media, however, is dependent upon “weak tie” relationships, (...) Twitter followers they have never met or Facebook friends with whom they would never otherwise stay in touch (McCafferty, 2011, p. 18).

Even so, such loose ties have shown to lend themselves strongly to a viral effect as they are about 'gaining attention' (Tufekci, 2013). Thus, while certain social media platforms (e.g. Twitter) have indeed shown to rely on weak ties, this has also shown to benefit movements in terms of visibility. It is also questionable whether weak ties are necessarily a social media phenomenon as organisational campaigns do not necessarily assume strong ties (e.g. Amnesty International's global letter-writing to prisoners of conscience). While investment or commitment to a given action remains difficult to measure (regardless of whether activities take place online or offline), these views of digitally forged connections as less valuable suggests that the physical or traditional is at least to an extent romanticised.

The same can be said for the issue of risk. While it may ring true that an online post does not in itself carry significant risks, activists have been persecuted based on their online activities, as was observed under more authoritarian regimes (e.g. Arab Spring, Hong Kong protests, Gezi Park protests). As such, the consequences of clicking do carry physical risks, although these may appear somewhat later than is the case with live street protests. This is perhaps best illustrated in Karpf's (2010a) argument that these new forms of participation often show a "difference-in-degree" rather than a "difference-in-kind". Thus, despite some evidence that certain protest actions require high degrees of commitment and elements of bodily risks, D.A. is constructed as being low-risk and low-commitment.

A range of scholars have since defended clicktivism (e.g. Halupka, 2014, 2018; Karpf, 2010a; Madison & Klang, 2020) as a valid or valuable contribution to more traditional action repertoires. Although many of these texts suggest that clicktivism is a form or tactic of digital activism, its broad definition and understanding through a set of derogatory connotations suggest that it is not necessarily a type of digital activism, but a pejorative synonym of the concept, and as such a social construct. Such constructionist processes are further informed by wider critiques of social media and the generation they pertain to. Social media platforms have, above all, been associated with entertainment, trivia, vanity/ narcissism (in part already shown by Madison & Klang, 2020), as well as short-lived fashion/ fads, idealised and therefore disingenuous lifestyles, disinterest/ apathy,



mis/disinformation, and fake news - above all in the fields of media and childhood, fandom literature, online identity construction, and news consumption. This has led to a range of recommendations by different figures of authority (e.g. members of parliament or health organisations) to limit social media consumption (see Guardian articles: Hern, 2018; Waterson, 2019). Basing new activist practices on the specific technologies that are more commonly used is therefore potentially linked to social constructions of digital activism based on preconceptions or prejudices towards those social media platforms (e.g. Insta culture), practices (e.g. selfie-taking), derogatory phenomena (e.g. fake news), or general luddite sentiment, issues that inform how the concept is viewed and understood.

### **4.3 Monolithic social constructions of digital media**

Digital dualism carries the potential to exacerbate this trend due to its distinction between the 'real' and 'virtual', which assumes that different aspects of the new activism are essentially the same. Scholars presenting digital activism this way thus run the risk of presenting the web as a single entity that is "monolithic and static" rather than diverse and complex (Silver, 2003, p. 281). This allows for a reductionist view of the internet or activist tools, eradicating the complexity of the phenomenon (similar conclusions in Foust & Hoyt, 2018; Kaun & Uldam, 2018; Treré & Mattoni, 2016). Kaun and Uldam (2018) call this a "myth of universality", a view that lends itself to media determinism as it (falsely) assumes that contemporary activism is informed and even determined by the use of an all-encompassing Internet. Nielsen describes this issue as follows: "[p]eople don't use 'the Internet' for activism, rather they employ particular Internet tools for particular tasks" (2010, p. 187).

This issue is reflected in the use of other paradigms that have been used to explain contemporary activism including hybridity, network features, types of participation, and levels of integration. These paradigms better highlight new opportunities and developments in activism. While D.A. as activism that is primarily distinguished by its digitality is fairly non-descript, there are more quantifiable, measurable, and scalable – and therefore conceptually more meaningful paradigms for understanding new forms of activism, particularly given the different strengths of individual platforms. For example, Twitter caters more to reach and distribution (network features) through hashtag publics based on its platform-internal technological enablers such as hashtags, while Facebook activism is based more on community spaces that often facilitate comparatively smaller-scale (in terms of connections) but potentially deeper engagement. Along similar lines, scholars have shown the diverse ways in which different actors and

groups participate and engage across different platforms, spaces, and digital mechanisms (e.g. Bimber, Flanagin, & Stohl, 2012).

Thus, views of digitally-enabled/-assisted activism are subject to social constructions of *specific* digital technologies, i.e. a set of particular platforms and practices that are often assumed to represent the 'digital' as a whole. Labelling new activist tactics 'digital' therefore invites a range of distinctions and sentiments that are based on social constructions of digital technologies (including dualist logics and luddite sentiment), rather than evidence from the field. In their reductionist form they also portray digital media as static, monolithic, and all-encompassing, a view that lends itself to media centrism and technologically determinist views. Some work has already alluded to this trend in digital activism theory, such as Foust and Hoyt (2018), Gerbaudo (2017), Kaun and Uldam (2018), and Özkula (2021), as they argue that the focus on specific technologies in contemporary activism emphasises the 'digital' and therefore suggests media determinism. As such, the 'digital' carries little meaning for operationalising the phenomenon for social research – the distinctions are, after all, fairly arbitrary. Instead, it lends itself to the social construction of contemporary activism along common perceptions of social media platforms.

## 5 CONCLUSION

At the start of this paper I presented a range of issues relating to the conceptualisation of digital activism. Those issues included conceptual ambiguities and obscurities in digital activism study, the blurred boundaries between digital and traditional activism, and controversies concerning the efficacy and consequences of digital activism. Some of the conceptual issues derive from the digital dualist logic embedded in the phenomenon's naming and framing. The paper consequently problematized this logic as follows: (1) a lot of activism activity that includes digitalised activity today is integrated/ enmeshed/ hybrid, (2) digitality as the distinguishing factor for current activism is fairly non-descript as it merely suggests the use of some tools as part of a range of activities that are not further defined, and (3) digital activism is a very broad concept as it is based on the use of a very broad set of technologies. Thus, it was argued that digital activism as a concept is both obscure and problematic for its operationalisation. Through a discussion of derogatory views of digitally enabled activism (the clicktivist example) and universalist views of the 'digital', it was further argued that the 'digital' label is attached to a range of processes of social construction. It was therefore suggested that D.A. as a label is dysfunctional to how contemporary activism is theorised.

It is hoped that this paper has laid some foundations for further study on D.A. by highlighting and discussing a range of conceptual obscurities in

digital activism research. It is further hoped that future studies will dedicate themselves to further conceptualising the term outside of digital dualism, and in doing so, reconsider the use of the 'digital' label for demarcating contemporary activism. Arguably, activism described as 'digital' would realistically comprise at its core solely online direct action, hacktivism, and civil disobedience – actions that not only rely on, but are inherently based on technological knowledge, skill, and application. Even so, these categories would likely not escape the processes of social construction that accompany the 'digital'. As such, it may be wise to drop the digital prefix altogether in favour of less all-encompassing descriptions of activism towards destigmatising contemporary activism in both theory and practice. Above all, it is hoped that such a change in terminology would give credit to contemporary activist practices as well as the activists that take part in and drive these. After all, how likely is it that the general public people would continuously engage in an activity that is considered (in Shulman's words) merely "low-quality, redundant, and generally insubstantial commenting by the public" (Shulman, 2009, p. 26)?

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## COMPARING THE VICTIMIZATION IMPACT OF CYBERCRIME AND TRADITIONAL CRIME: LITERATURE REVIEW AND FUTURE RESEARCH DIRECTIONS

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### ABSTRACT

This paper addresses the importance of building knowledge on the impact of cybercrime victimization. Because the topic is understudied, it is unclear whether the impact of cybercrime differs from that of traditional crime. Our understanding of potential impact differences needs to be improved, considering that society and criminality are digitizing and, consequently, more people are likely to become victims of cybercrime. From a practical perspective, knowledge about the impact of different crimes is important to develop victim policies within law enforcement and other relevant agencies, and to treat victims appropriately. In this paper, a literature review is provided, as well as future research directions to address the current knowledge gap. The future research directions are divided in three topics: (1) distinguishing between cybercrime and traditional crime, (2) classifying cybercrime and traditional crime, and (3) measuring the victimization impact of cybercrime and traditional crime.

Keywords: cybercrime; traditional crime; impact; effects; consequences; victimization.

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## 1 INTRODUCTION

This paper argues that it is important to build knowledge on the impact of cybercrime victimization. Furthermore, we will demonstrate that in current literature, there is insufficient understanding of the differences between the impact of cybercrime and traditional crime on victims. An endeavour to fill this gap is called for. In this paper, cybercrime is defined as crime for which information and communication technology (ICT) plays an essential role in the execution of the offence (Domenie et al., 2013). Although cybercrime can consist of many different subcategories (e.g., from online harassment to hacking of bank accounts) (Hamby et al., 2018), the definition provides a common denominator. Moreover, there are some specific aspects to cybercrime that differ from traditional crime (e.g., the anonymity and intangibility of the offender, disappearance of boundaries in time and place, and the potential widespread dissemination and permanence of online content) (Leukfeldt et al., 2018; Nadim & Fladmoe, 2021; Suler, 2004) and that could affect the victimization impact of cybercrime. Victimization impact is defined in this study as the seriousness or severity of the effects of criminality as perceived by victims (Dignan, 2005; Groenhuijsen, 1996).

Until the 1970s, the judicial system and academic literature were centered around offenders. In the judicial system, victims were mainly seen as information sources, as opposed to being considered parties of interest (Leukfeldt, Notté, & Malsch, 2018). Since the 1970s, however, societal concerns about victims of crime have increased (Smit, Ghauharali, Van der Veen, & Willemsen, 2018; Van Dijk & Van Mierlo, 2009) and there has been a rise in the emphasis placed on the mental and material assistance to help victims process the offence (Lamet & Wittebrood, 2009). Academic attention for the impact of victimization has also risen, driven by population studies that were originally designed to measure national crime rates (Shapland & Hall, 2007). Since then, studies have shown that crime can have serious and long-lasting effects on victims (Shapland & Hall, 2007; Smit et al., 2018). For example, compared to non-victims, victims report more psychological problems and lower well-being (Lamet & Wittebrood, 2009; Shapland & Hall, 2007). In addition, they seem more distrustful of strangers and tend to adjust their daily routines (Lamet & Wittebrood, 2009; Shapland & Hall, 2007). However, the impact of crime may vary per crime form and also within crime forms (Dinisman & Moroz, 2017; Jansen & Leukfeldt, 2018; Shapland & Hall, 2007). Women, for example, often experience more or more severe psychological consequences than men, at least in offline financial crimes (Gale & Coupe, 2005; Lamet & Wittebrood, 2009).

Although an increased amount of studies on the impact of crime on victims has been conducted, most of the work in this field focusses on traditional crimes such as violent crime, theft and criminal destruction,

rather than cybercrime (e.g., Aiken et al., 2015; Kunst & Koster, 2017; Lamet & Wittebrood, 2009). For instance, the first Dutch population study on cybercrime was conducted in 2011 (Domenie et al., 2013), and the resulting inclusion in the national security survey took place from 2012 onwards (Statistics Netherlands (CBS), 2013). However, society and the techniques offenders use to commit crimes have been digitizing since long before that (Stol et al., 1999). This is demonstrated by the fact that the term cybercrime has been used since at least 1990 (Brenner, 2004). Currently, computers form an integral part of people's lives. People depend on computers for almost everything, which makes them vulnerable for cybercrime victimization (Diamond & Bachmann, 2015; Reep-Van den Bergh & Junger, 2018). Cybercrime has obtained an important place within the total crime rates, although it is difficult to estimate the exact extent (Montoya et al., 2013; Reep-Van den Bergh & Junger, 2018). The traditional crime rates are declining, while cybercrime is not trending downwards (CPB, 2018; Riek & Böhme, 2018; Statistics Netherlands, 2020; Statistics Netherlands (CBS), 2018). On the contrary, cybercrime rates seem to be on the rise, and are expected to increase even further in the future (Agustina, 2015; Aiken et al., 2015; CPB, 2018; Statistics Netherlands, 2020). Therefore, studying the victimization impact of cybercrime is of increasing importance.

The few studies that focused on the victimization impact of cybercrime have shortcomings. To begin with, they only included one or a few types of cybercrime (Golladay & Holtfreter, 2017; Jansen & Leukfeldt, 2018). Moreover, a comprehensive comparison with the victimization impact of traditional crime has, to the best of our knowledge, not been made. Drawing this comparison will contribute to a better scientific understanding of victimization impact and to more accurate victim policies, as we will explain in the next section. The current digitization of crime gives us a unique opportunity to better understand the impact of victimization, and to examine whether the specific aspects of cybercrime affect the victimization impact. As Walter Dearborn stated (Bronfenbrenner, 1979, p. 37): "If you want to understand something, try to change it". The current changes in crime can be seen as a natural experiment which can be systematically exploited to create a better understanding.

The remainder of this paper starts with the relevance of comparing the impact of cybercrime and traditional crime. Then the methods of our literature review are discussed. In the results section, studies comparing the victimization impact of cybercrime and traditional crime are addressed, as well as studies considering cybercrime from a victim's perspective. Thereafter, shortcomings in current literature are discussed and future research directions are proposed. The focus of this paper is on the European context, and particularly on the Netherlands. However, at several points we

will take a broader view and our literature study is naturally international in scope.

## **2 THE RELEVANCE OF COMPARING THE IMPACT OF CYBERCRIME AND TRADITIONAL CRIME**

In criminology, cybercrime victimization is a rapidly evolving but complex field (Van der Wagen & Pieters, 2018). Cybercrime seems to challenge the principles upon which our conventional understandings of criminal harm and justice are based, because it results in the globalization of crime, new forms of victimization, extensive data trails, and changes in the organization of criminal activities (Wall, 2005). Likewise, cybercrime opened a new research area in victimology, which proves to be hard to study (Moitra, 2004). This partly has to do with new aspects of cybercrime in a victimological sense. Examples are the technology involved which makes it more complex to fathom a crime (Stol, 2020), the remoteness that allows for victimization taking place from a distance, and the potential of widespread victimization since many potential victims can be approached at once (Moitra, 2004). In order to expand our insight into this relatively new and evolving field in criminology and victimology, it is important to understand how cybercrime relates to other crimes (Wall, 2005). Determining how the victimization impact of cybercrimes compares to that of traditional crimes is an essential part of this. This comparison should take into account different types of cybercrime.

From a more practical perspective, knowledge about the impact of crimes can enhance victim policies within law enforcement and other relevant agencies. Because the relative impact of cybercrime is currently unknown, it is unclear how much weight should be given to specific cybercrimes from a law enforcement perspective (Wall, 2005). The government's responsibility to support victims of crime increases with the weight of the consequences (Leukfeldt et al., 2018). Therefore, law enforcement agencies need to consider the impact of cybercrime to establish the relative seriousness of the crime and the nature of victimization (Moitra, 2005). Prosecution and sentencing are, for instance, dependent on the harm caused by crime (Moitra, 2004). Current cybercrime laws in European countries, such as the Convention on Cybercrime (2001), seem to be implemented without much knowledge about these aspects (Moitra, 2005). It should be noted that there are exceptions within countries. Sweden for example has taken into account the unique "cyber aspects" of crimes that can affect the impact on victims when drafting new legislation. An official inquiry with an extensive literature review underpinned this. Among other considerations, the inquiry stated that online disseminated privacy-sensitive information can remain in circulation for a long time and can

always be spread further. For victims, this can lead to distrust, feelings of insecurity, and self-censorship (Statens Offentliga Utredningar (SOU), 2016). The inquiry led to a bill with proposed changes in Swedish penal law (Swedish government, 2017). This in turn led to a legislative change where certain violations of personal integrity are punished more severely (i.e., if the act, considering the content of the image or information or the scope of dissemination, is liable to lead to very serious harm to the victim) (Chapter 4, section 6d of the Swedish criminal code). However, many nation-states have no specific cybercrime legislation (Mittal et al., 2017), let alone legislation specifically taking the victimization impact of cybercrime into account.

Apart from legislation, police priorities should also be based on the impact of crimes (Domenie et al., 2013). However, police agencies appear to consider the importance of cybercrime lower than that of traditional crime such as physical abuse, and priorities might be established accordingly (Boekhoorn, 2020; Veenstra et al., 2013). This, for instance, may result in police officers spending a relatively small proportion of time on those cases (Holt et al., 2019). Those priorities seem rather based on subjective ideas or media reports than on grounded research. To determine the appropriate social and judicial response and inform policy makers, the impact of cybercrime should be guiding and therefore precisely understood (Moitra, 2005; Wall, 2005). It can be considered self-evident that in legal measures, cybercrime should be conceived differently from traditional crime if specific features of cybercrime lead to a specific impact on victims.

Knowledge about the impact of cyber and traditional crimes is also important for police and other organizations that deal with victims in order to ensure appropriate treatment (Hageman & Loeffen, 2016; Modic & Anderson, 2015). The impact of crime on victims seems to be of direct influence on their needs (Boom, Kuijpers, & Moene, 2008; Dinisman & Moroz, 2017; Leukfeldt et al., 2018; Van Caem & Hageman, 2018). Therefore, knowledge about that impact can help to meet victims' needs and to treat victims properly. The needs of victims of (specific) cybercrimes may differ from the needs of victims of traditional crimes (De Kimpe et al., 2020; Leukfeldt et al., 2018). There are two paradigms about police work relevant to this context: the consent paradigm and the control paradigm. The dominant paradigm is the consent paradigm, which aligns with the aim to meet the needs of victims. From this perspective, the police mandate is broader than crime fighting and maintaining order by repressive action, as opposed to the more narrow control paradigm (Van Dijk & Hoogewoning, 2018). Sir Robert Peel may be seen as the founder of the consent paradigm. His nine policing principles from 1829 have given direction to modern policing in the Western world (Keane & Bell, 2013). Alongside police organizations in other Western countries, the Dutch police shifted to the

consent paradigm in the 1960s, which is still in play (Van Dijk & Hoogewoning, 2018). In the consent paradigm, the police are socially engaged, and the legitimacy of the police is derived from the consent of the public. The police should be available in and for the community and – apart from crime fighting and maintaining order – focused on increasing the safety and wellness of civilians. The impact of (cyber)crime needs to become clearer to successfully apply this paradigm and to approach victims correctly.

The Dutch context and the Dutch application of the consent paradigm illustrate how it can be particularly important to consider the differences in impact of cybercrime and traditional crime. Since the 1980s and 1990s, the Dutch police strived towards being a service organization. This is reflected in several policy programs with ‘service’ in the title, such as the Service Concept which was introduced in 2012, the Service Program which was implemented in 2016 (Biemolt et al., 2012; Van Bourgondien, 2017; Van Caem & Hageman, 2018; Van Dijk & Hoogewoning, 2018), and the term Intake and Service for the police units responsible for crime reporting. According to this ‘service philosophy’, the police should be cognizant on the needs of their ‘clients’ – because policing should follow the public interest – and the delivered services are partly derived from the public’s opinion about qualitatively good policing (Van Caem & Hageman, 2018; Van Dijk & Hoogewoning, 2018). The mission of the Dutch police to be vigilant and serving (Van Dijk & Hoogewoning, 2018) also fits this service-minded approach.

In some of the latest Dutch governmental policies of the Ministry of Justice and Security, victims occupy an important position, such as the Multiannual Agenda Victim Policy 2018-2021 (Dekker, 2018). The policies partly stem from the European Union minimum standards on the rights, support, and protection of crime victims, which were implemented in Dutch law in 2015 and obviously are incorporated in the laws of other European Union member states as well (Kunst & Koster, 2017; Ministerie van Veiligheid en Justitie, 2017). One of the goals of the new Dutch policies is the recognition of victims’ suffering by society and the judicial system (Kunst & Koster, 2017; Maercker & Müller, 2004). For the upcoming period, the government has prioritized supporting victims to recover from the consequences of crimes on a financial, practical, and emotional level (Dekker, 2018). The impact of different crimes needs to be clear in order to truly recognize the suffering of those victims and to treat them accordingly. Moreover, as noted before, victims’ needs depend on the impact of the crime (Dinisman & Moroz, 2017; Leukfeldt et al., 2018). Given the socially engaged character of victim policies in the Netherlands and other countries, it is important to consider the impact of cybercrimes more closely.

### 3 METHODS

We started the literature review by combining search terms such as “comparing”, “difference”, “victimization”, “impact”, “consequences”, “effects”, “crime”, “cybercrime” and “online crime” and entering these into several academic literature search engines, such as Google Scholar, Web of Science and PsycINFO. No limits concerning the year of publication have been set because the subject is relatively new. The relevance of the literature was assessed by reading the abstracts. Publications were selected when the subject contained the impact of cybercrime or traditional crime on victims; the differences between cybercrime and traditional crime in general or classifications of both; or the role of law enforcement or victim support in relation to the impact of cybercrime or traditional crime. Selected publications were read and from these, other relevant titles were selected, using the snowball method.

To ensure that using this snowball method we did not omit any relevant publications on victimization impact comparisons for cyber and traditional crime, we added a systematic literature review. On May 4th 2021, we ran a query in the search engines Web of Science, SocIndex and PsycIndex<sup>1</sup>. We limited our search to the abstract, keywords, and title of publications. Through Web of Science, our query yielded eleven results, through SocIndex three and through PsycIndex six. Based on the title, we made a first selection of the potentially relevant articles. If the content seemed to discuss a comparison of the impact of cybercrime and traditional crime on victims, we obtained the reference and abstract for further evaluation. From Web of Science, we selected five titles of which we read the abstracts. Two of those were not about comparing the impact of online and offline crime. The three other articles, after positive quality assessment, were read in full. From SocIndex and PsycIndex, no additional relevant titles were selected.

Below, we provide an outline of the selected relevant studies. In the next section, we cover the impact of cybercrime compared to traditional crime. After that, we proceed to discuss studies that examine cybercrime from a victim's perspective.

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<sup>1</sup> The following query was used: ((impact\* OR influence\* OR consequence\* OR affect\* OR effect\* OR coping OR cope OR experience\* OR result\* OR implication\* OR aftermath OR aftereffect) AND (cybercrime\* OR “online crim\*” OR “computer misuse crim\*” OR “internet crim\*” OR “internet-related crim\*” OR “computer crim”) AND (compar\* OR difference\* OR contrast\* OR oppos\* OR diverge\* OR discrepancy OR chang\* OR deviat\* OR contrar\* distinct\* OR variat\* OR alternat\*) AND (victim\*) AND (“traditional crim\*” OR “classic\* crim\*” OR “offline crim\*” OR “conventional crim\*” OR “regular crim\*” OR “violent crim\*” OR “property crim\*” OR “face-to-face crim\*” OR “face to face crim\*” OR “F2F crim\*”).



#### **4 STUDIES COMPARING THE VICTIMIZATION IMPACT OF CYBERCRIME AND TRADITIONAL CRIME**

As noted before, a comprehensive comparison between the victimization impact of cybercrime and traditional crime has not been made in current literature. However, some studies covered findings in one or several segments of the subject, which gives a preliminary indication of this comparison. One of the previous comparisons of traditional and cybercrime victimization impact was conducted in the national victimization survey of Luxembourg. This study compared the emotional impact of card fraud or online banking fraud and a few traditional crimes (Heinz et al., 2015). Whereas the emotional impact of card or online banking fraud was higher than that of some traditional, offline crimes, i.e., consumer fraud (e.g., by a seller or craftsman), theft of personal property, theft from a car, bicycle theft, and corruption or bribe seeking, it was lower than the emotional impact of other traditional crimes, i.e., physical violence, burglary and robbery (Heinz et al., 2015). Therefore, the emotional impact level of card or online banking fraud appears to be in between that of the traditional crimes. It must be noted that consumer fraud can also take place online, but because of the way the question was phrased (“by a seller or craftsman” (Heinz et al., 2015: 17)) this is expected to measure traditional crime. The study is limited because of the restriction to one type of cybercrime (card or online banking fraud) and one dimension of impact (emotional impact). Furthermore, it seems that no attention has been devoted to comparing the cybercrime in question to the most obvious or suitable traditional counterpart, which would arguably be offline fraud.

Another impact comparison was made between offline and online bullying in a study of Campbell, Spears, Slee, Butler, and Kift (2012). Although bullying cannot always be considered criminal behavior, it is at least ‘deviant behavior’. Using a school-based survey among 647 traditional bullying victims, 187 cyberbullying victims and 140 mixed victims, the authors concluded that online bullying might have a greater impact than offline bullying. Victims of online bullying experienced higher levels of social problems, fear and depression (Campbell et al., 2012). They mentioned possible explanations relating to the characteristics of online bullying, namely the broad audience, anonymity of the bully, potential extended appearance of texts and images, and the ongoing possibility to reach the victims via the internet. It also seemed that online bullies apply severer techniques over a longer time period, possibly because they do not see the reaction of the victim and because they feel anonymous (Campbell et al., 2012).

A different approach was used in a vignette study by Kerr and colleagues (2013). In this study, 72 respondents – victims, and stakeholders

who are involved in addressing fraud and its impact – were asked whether online fraud should be perceived differently from offline fraud. Most stated that the importance lies in the commission of a fraud offence, and to a lesser extent in the applied method (online or offline). Some respondents argued that the consequences of online and offline fraud can be similar, and therefore should be regarded and punished equally. Others replied that the impact of online fraud is smaller because it is less personal, since there is no face-to-face contact with the offender. However, some stated that online fraud might be more serious than offline fraud because of the anonymous nature of the crime. Respondents also argued that because people cannot avoid making use of the internet, it would feel impossible to avoid online fraud.

Another study, although the impact of crime was an aspect, compared the reporting of online and offline fraud (Kemp, 2020). The authors did measure the victimization impact of online and offline fraud, but the impact scores were not reported. The authors did conclude that victims of online fraud were more likely to consider this a crime than victims of telephone fraud and in-person fraud. The subject of again another study by Graham and colleagues (2019), was also reporting cybercrime and traditional crime. Although the authors did mention taking the seriousness of the crime into account, they evaluated the seriousness themselves, rather than asking respondents to rate the severity.

Like us, Hamby and colleagues (2018) noted an absence of jointly examining the impact of online and offline crime. The primary focus of their study, however, was on multi-victimization of digital and traditional crime. The authors arrived at similar effects on anxiety/dysphoria symptoms for cyber and traditional victims. However, traditional victimization was focused on childhood experiences such as child abuse and exposure to domestic violence, while digital victimization was focused on negative experiences online or over the phone in general. A comparison with broader traditional victimization did not take place.

Although the foregoing shows that there are scarcely any studies empirically comparing the victimization impact of cybercrimes and traditional crime, there are some studies that focus on the impact of cybercrime and then discuss the character of this impact. In fact, those studies implicitly compare cybercrimes and traditional crimes, based on logic or assumptions rather than empirically studying the comparison. They provide an opportunity to reflect on the possible differences between online and offline crime, which we will do in the next section.

## 5 STUDIES CONSIDERING CYBERCRIME FROM A VICTIM PERSPECTIVE

Cybercrimes and cybercrime victimization seem to have unique patterns and characteristics, some of which might heighten the impact on victims (Agustina, 2015). In this section, those patterns and characteristics are explored.

To begin with, cybercrime can be scalable, boundless, intangible and permanent. These aspects might result in longer and recurring victimization, and might recidivate the consequences (Leukfeldt et al., 2018). For instance, with online harassment or bullying, the offence has no clear end, as opposed to offline harassment or bullying (Jahankhani et al., 2014; Nadim & Fladmoe, 2021). Online harassment may cause people to become more cautious about sharing their views openly, an obvious behavioral implication of this type of crime (Nadim & Fladmoe, 2021). Because of the online aspect, the offender is able to reach the victim at any time and from any place. This might result in the victim not feeling safe anywhere (Jahankhani et al., 2014; Jansen & Leukfeldt, 2018; Leukfeldt et al., 2018). Additionally, the offender seems intangible, because he or she operates anonymous and from a distance. Therefore, from a victims' perspective, the offender can always reappear to recommit the crime (Leukfeldt et al., 2018). The wide scope on which unwanted images or messages can be spread is relevant for the impact of cybercrimes such as sextortion, online threat, harassment, stalking, or libel/slander, and might induce anxiety (Leukfeldt et al., 2018; Nadim & Fladmoe, 2021). That this content might stay online can result in a sense of permanence of the crime and therefore lead to higher and enduring impact for victims.

Another reason for the possible high impact of cybercrimes is that people regard their devices as an extension of the self, leading to cybercrime feeling as invasive as or even more invasive than physical crime. Longo (2018) states that people regard their devices as a prosthesis of the mind. Distinguishing and delimiting the real from the digital self can therefore be difficult for people (Agustina, 2015). They might feel equally wounded when their virtual self is attacked, as when their embodied self is attacked (Agustina, 2015). Van der Wagen and Pieters (2018) therefore state that computers should not be considered mere tools, but devices that people are connected to and depend upon. The same probably applies to devices with apps that are connected to certain functions of the body, such as hearing or heartbeat (Gasson & Koops, 2013). A cyberattack on those devices can be literally as invasive as, for instance, violent crime. Another variation of the interconnectedness between technology and the human body is people being present in the digital world in the form of an avatar or a digital representation of the human body, which representation can be violated or

attacked (Stol, 2020). The impact this might have on the person behind the representation, and if such a violation can or should be seen as crime, is as yet unclear (Strikwerda, 2014).

The impact cybercrime victims experience might be heightened due to victim blaming and stigmatization, which occurs relatively often. Victims are not always recognized or acknowledged appropriately because society is less familiar with and knowledgeable about cybercrimes (Jansen & Leukfeldt, 2018; Leukfeldt et al., 2018). Studies suggest that law enforcement, the victim's social environment or unknown people on the internet relatively often blame victims of cybercrime for their victimization (Cross et al., 2016; Kerr et al., 2013; Leukfeldt et al., 2018; Whitty & Buchanan, 2016). Furthermore, the police may not prioritize crimes such as online fraud, because they sometimes consider them self-inflicted (Leukfeldt et al., 2012). This might have to do with victims often actively contributing to the crime. Victim blaming and stigmatization can result in victims not feeling taken seriously. This is especially relevant considering receiving recognition seems to be one of the most important needs of crime victims (Boom et al., 2008; Van der Vijver, 1993).

Although the aforementioned studies indicate that the impact of cybercrime on victims might be severe compared with traditional crime, they do not provide a comprehensive understanding of this impact, due to several limitations. In the next section, the shortcomings in current literature on the impact of cybercrime and crime in general are discussed.

## **6 SHORTCOMINGS IN CURRENT LITERATURE ON THE IMPACT OF CRIME**

Although cybercrime is currently recognized as an important topic of research, a well-established, nuanced view on the victimization impact of cybercrime is lacking. There are relatively few studies on cybercrime victimization, let alone studies providing a deeper understanding about cybercrime victimization (Diamond & Bachmann, 2015). The prevailing image about the impact of cybercrime seems to be based on anecdotes, one-sided hypes or news messages (Henson et al., 2013; Moitra, 2005). An unfounded public opinion because of media sensationalizing should be prevented, as this may lead to misplaced, exaggerated or understated demands for policies of criminal justice agencies (Wall, 2005). This calls for a more nuanced, scientifically sound view on this topic.

The lack of research on cybercrime victimization manifests itself in studies being offence-centered instead of victim-centered and in a lack of focus on the impact for individual victims. Most studies focus on the committed offences and on how to prevent or fight these, rather than on their consequences for victims (Riek, 2017; Sarre et al., 2018). The impact on

the individual victim is often ignored in the studies that do focus on the consequences of cybercrime, many of which are limited to the broader economic impact in terms of monetary losses (Canetti et al., 2017). The few studies on individual cybercrime victimization often solely address victim characteristics, or vulnerability factors for victimization (Jansen & Leukfeldt, 2018; Reep-Van den Bergh & Junger, 2018; Riek & Böhme, 2018; Van der Wagen & Pieters, 2018).

The studies that do focus on individual cybercrime victimization impact fall short when it comes to certain impact and cybercrime types, as well as the comparison with the impact of traditional crime. Studies on individual victimization impact tend to focus on financial impact (Reep-Van den Bergh & Junger, 2018; Riek & Böhme, 2018). As Li and colleagues (2019) have identified, other forms of victimization impact, namely emotional or psychological, behavioral or social and physical impact, are largely insufficiently studied. Moreover, existing studies usually focus on one or few types of cybercrime, failing in establishing a comprehensive overview (Leukfeldt et al., 2018; Riek, 2017). For instance, little attention has been devoted to the victimization impact of financially motivated cybercrime, such as identity theft and online fraud, as was concluded earlier by Hamby and colleagues (2018). Most importantly, virtually no attention has been given to the comparison of cybercrime and traditional crime (Riek, 2017), which is also demonstrated by the results of our literature review. Cyberbullying is an exception, which is relatively well-studied and often compared to the offline counterpart (Canetti et al., 2017; Hamby et al., 2018; Henson et al., 2013; Smith et al., 2008). However, bullying cannot always be defined as crime, and only juveniles are included in those studies (Smith et al., 2008). The impact of online harassment and online hate speech has been relatively well studied, but as Nadim and Fladmoe (2021) note, a comparison with the impact of offline harassment and hate speech is lacking. Moreover, similar to bullying, harassment and hate speech cannot always be considered crimes.

The lack of research on the impact of cybercrime may be due to the perception that cybercrime victimization is less serious than, for instance, street crime victimization (Henson et al., 2013). Traditionally, the severity of crime is often derived from the physical impact on the victim (Lamet & Wittebrood, 2009). For most cybercrimes, no physical contact takes place between perpetrator and victim, and in the case of online banking fraud, victims are often compensated for financial damage. Because victimization impact cannot be measured based on physical injury and not always on actual financial damage, the impact of cybercrime seems to be underestimated, or cybercrime is even considered a victimless crime (Button et al., 2014; Cross et al., 2016; Henson et al., 2013; Jansen & Leukfeldt, 2018). Contrary to this perception, previous studies have

indicated that crimes can be impactful for victims despite a lack of physical violence (Button et al., 2020; Golladay & Holtfreter, 2017; Jansen & Leukfeldt, 2018; Lamet & Wittebrood, 2009). Previous research suggests that the victimization impact of cybercrime may even be comparable to the impact of severe violent crime (Henson et al., 2013; Jansen & Leukfeldt, 2018). This is illustrated by a victim who claimed that online banking fraud can be compared to domestic burglary, which is considered to be a “high impact crime” by the Dutch police, or hacking victims comparing the experience to rape (Button et al., 2020; Jansen & Leukfeldt, 2018). However, these were just single observations; the victims’ responses to domestic burglary and rape were not measured, and no comparison to the victimization impact of traditional crime took place. The next section covers possibilities for future research that take into account the limitations in current research.

## **7 FUTURE RESEARCH DIRECTIONS**

Based on the aforementioned shortcomings and to establish the field of future research, we present some future research directions. As was previously clarified, the impact of cybercrime can be serious and comparable to or even more profound than that of traditional crimes. However, there is insufficient insight into the impact of specific cybercrimes (Leukfeldt et al., 2018). Cybercrime in itself might seem like a specific subject, but it contains many different forms of victimization (Van der Wagen & Pieters, 2018). Moreover, there is little insight into the impact of specific cybercrimes compared to traditional crimes. The research directions are divided into, firstly, distinguishing between cybercrime and traditional crime, secondly, classifying of cybercrime and traditional crime, and finally, measuring the victimization impact of cybercrime and traditional crime.

### **7.1 Distinguishing between cybercrime and traditional crime**

First of all, an acceptable boundary to distinguish between cybercrime and traditional crime is a prerequisite to compare the impact of both. In establishing this boundary, opinions from academics and practitioners about an acceptable demarcation should be taken into account for the results to be accepted and acted upon. This presents some difficulties, because of an ongoing discussion about the definition of cybercrime and its different forms (Riek & Böhme, 2018; Stol & Strikwerda, 2019; Yar, 2005). Current literature suggests that the boundary between digital and traditional crime is narrow and not always clear (Correia, 2019; Montoya et al., 2013). Many crimes contain both offline and online components (Lamet

& Wittebrood, 2009; Montoya et al., 2013). This can be the case with, for instance, stalking, harassment, fraud, and threat (Leukfeldt et al., 2018; Montoya et al., 2013). Moreover, because of the omnipresence of cybercrime in daily life, the question is sometimes raised whether cybercrimes should be seen as a separate category of crime, or if it is more accurate to consider them ordinary crimes in a digitized society (Jansen et al., 2013). A lot of cybercrimes seem to be electronic parallels of a traditional counterpart (Henson et al., 2013). Some authors state that traditional crime merely developed and has been made easier because ICT is now used in the execution of the offence, while the fundamentals, such as how they are committed, motives and consequences such as victimization impact, have not significantly changed (Correia, 2019; Kerr et al., 2013; Yar, 2005).

The foregoing indicates how some authors argue that distinguishing between online and offline *modi operandi* is not of great importance and will not influence victimization impact. From this point of view, comparing different cybercrimes to traditional crimes would not even be necessary. However, this opinion is unsubstantiated as long as the potential difference in victimization impact is not comprehensively studied. Other authors are therefore undecided and raise the question if certain cybercrimes are an old problem through a new medium, or qualitatively and quantitatively new problems (Mitchell et al., 2007). Additionally, authors such as Henson, Reyns, and Fisher (2016), state that now technology and the internet advance, cybercrime victimization should be seen as a unique form of victimization and therefore treated as such. This is supported by the unique characteristics which are known to be associated with cybercrime (Leukfeldt et al., 2018; Nadim & Fladmoe, 2021; Suler, 2004). Research comparing the impact of cybercrime and traditional crime should shed light on which view comes closest to reality, which still requires an acceptable demarcation.

Yar (2005) distinguishes between defining cybercrime as a distinct crime form, and classifying cybercrime. According to Yar, ‘defining’ means that one tries to establish a general theoretical definition for cybercrime, while ‘classifying’ means producing an overview of the crimes that fall under the concept of cybercrime. We argue that it is unnecessary to have an exact academic definition of cybercrime and traditional crime (defining) to compare the impact of both. Instead, it seems sufficient to establish a working definition of cybercrime, and to subsequently signify a range of different crime types falling under the definition (classifying). Classification was, for instance, undertaken as part of the Convention on Cybercrime, without giving a definition of cybercrime (Council of Europe, 2001). To compare the impact of cybercrime and traditional crime, the definition of cybercrime might only be used as a temporary concept, as Blumer (1954) would call a sensitizing concept, necessary to indicate what kind of crimes

we are talking about and to study them. A sensitizing concept is not clearly linked to its exact content, but gives a general sense of where to look and what is relevant (Blumer, 1954). This aligns with what Yar (2005) calls a working definition of cybercrime. Montoya and colleagues (2013), as well as Domenie and colleagues (2013), have already proposed to distinguish between cybercrime and traditional crime by following a working definition of cybercrime. Pursuing this approach, every crime form can be assessed on the conformity with the earlier mentioned 'sensitizing concept' of cybercrime as crime in which ICT plays an essential role in the execution of the offence. To subsequently make a comparison between the impact of cybercrime and traditional crime, it is important to classify different subtypes of both in a meaningful way. In doing so, the sensitizing concept cybercrime is further specified. This classification will be discussed in the next section.

## 7.2 Classifying cybercrime and traditional crime

The literature on this topic shows that victimization impact differs for different cybercrimes and traditional crimes, as well as for individual victims (Kunst & Koster, 2017; Shapland & Hall, 2007). Therefore, it is not possible to make an overall comparison between cybercrime and traditional crime. A division in subcategories is required to study cybercrime because it covers so many different illegal activities (Correia, 2019). Up to now, many different divisions and typologies of cybercrime types have been developed, which is also the case for traditional crime. An accurate perception of the different types therefore has become difficult. There is an overlap within the distinguished subcategories of cybercrimes, such as hacking and online fraud (Anderson et al., 2013; Furnell, 2001; Moitra, 2005; Tsakalidis & Vergidis, 2017). On the other hand, the chosen divisions result in omissions (Furnell, 2001). Within a crime such as fraud, there are a lot of different categories, which differ in severity of the crime (Moitra, 2005; Tsakalidis & Vergidis, 2017). A division should therefore be sufficiently specific, meaning at least, not so broad that oversight is lost (Moitra, 2005).

This contribution has shown that different types of cyber and traditional crime need to be compared to each other, which demands a meaningful division in crime groups or pairs. The crime types that are added to the comparison need to be chosen prudently. In previous research, crimes have been often grouped by the offender's motive (Domenie et al., 2013; Leukfeldt et al., 2018; Leukfeldt, Kentgens, Prins, & Stol, 2015; Neufeld, 2010; Sabillon, Cano, Cavaller, & Serra, 2016). Although this appears to be a viable option to decide which cybercrimes to compare with which traditional crimes, the motive could influence the victimization impact. This would therefore lead to a dependent variable being added as



an independent variable, infringing statistical standards. In other words, ideally speaking, crimes must be selected on the basis of the role ICT plays in the execution of the offence – an essential role or not – and nothing else.

Classifications from existing research can be used to determine suitable pairs or groups of crimes. For instance, for traditional crime, the International Classification of Crime for Statistical Purposes (ICCS) can be used (UNODC, 2015). Because the focus in this classification is less on cybercrime, it should be supplemented by the different types of cybercrime as described in previous research (Furnell, 2001; Hulst & Neve, 2008; Reep-Van den Bergh & Junger, 2018; Tsakalidis & Vergidis, 2017). We therefore propose comparing the most prevalent cyber-enabled crimes – crimes for which ICT plays an essential role in the execution of the offence (Domenie et al., 2013; Riek, 2017) – with their traditional counterpart. Comparing crime pairs that have many similarities allows for assessing what the unique aspects of cybercrime imply about the impact on victims. Cyber-dependent crimes – crimes in which ICT plays an essential role in the execution of the offence and which are also focused on ICT (such as a hack or DDoS-attack) – might be treated as separate categories, because an obvious counterpart does not exist. Another option is to select a defensible traditional counterpart for comparison; for instance, DDoS-attacks versus vandalism, and hacking versus burglary.

### **7.3 Measuring the victimization impact of cybercrime and traditional crime**

Once suitable groups or pairs of crimes have been selected for comparison, measurement methods for victimization impact need to be established. Comparing the severity in the judicial sense will not suffice. Research shows that high-penalty crimes do not always greatly impact victims, while low-penalty crimes can greatly impact victims (Lamet & Wittebrood, 2009). It is therefore important to have a clear picture of the factors that victimization impact can be broken down into.

Literature shows that victimization impact can roughly be divided into psychological/emotional, financial/material, social/behavioral, and physical impact (Dinisman & Moroz, 2017; Huys, 2012; Kerr et al., 2013; Lamet & Wittebrood, 2009; Riek & Böhme, 2018; Shapland & Hall, 2007). The different types of impact might overlap, or might be dependent on each other (Kerr et al., 2013; Lamet & Wittebrood, 2009; Modic & Anderson, 2015). To establish a comprehensive insight of the different types of victimization impact, they need to be clearly defined and measured, and the overlap and dependency has to be taken into account. Earlier studies, for instance, recommended measuring emotional and behavioral reactions to cybercrime in tandem, because the reactions influence each other (Li et al.,

2019). Therefore, different types of impact should be studied simultaneously to establish a more comprehensive view of victimization impact.

Previous research also clarifies that impact should be measured over time, because the impact consists of different stages (Jansen & Leukfeldt, 2018). Crime victims live through a first phase, lasting hours to days; a second phase, lasting three to eight months; and a last phase, in which they eventually learn to successfully cope with the crime (Frieze et al., 1987; Jansen & Leukfeldt, 2018). Victimization impact manifests itself differently during those phases. For instance, shock often remains for a short period of time, while loss of trust in people can remain for years (Shapland & Hall, 2007). Also, the duration of victimization impact apparently varies for different crimes (Shapland & Hall, 2007). Therefore, longitudinal research on victimization impact is advised, or at least the time of occurrence of the offence should be taken into account. An interesting first longitudinal study in this area is performed by Sipma and Van Leijsen (2019). They discovered that victims of cybercrime experienced increased fear of cybercrime and took more protective measures. According to their study, the mental health of the victims did not deteriorate after the distinguished cybercrimes, except for victims of online threat.

A subsequent step for measuring the impact of cyber and traditional crimes is establishing the determinants influencing this impact. Those determinants include the characteristics of the crime, and personal and social factors. Most of the determinants are established in general literature on the victimization impact of crime, which is not focused on cybercrime. This is important to note, considering the previously mentioned argument that cybercrime might challenge existing theoretical frameworks (Borwell et al., 2021; Van der Wagen & Pieters, 2018). Furthermore, determinants influencing the impact can be specific to cybercrimes, such as the anonymity, permanence and geographical independence (Leukfeldt et al., 2018; Nadim & Fladmoe, 2021; Suler, 2004). Because of this, new theoretical concepts such as that of cyborg theory might be applied in future research. The idea behind this concept was introduced in section 4, and states that users of devices such as smartphones and computers have become a blend between human and machine. Those people may therefore be seen as transformed into a new sort of organism which Haraway (1985) called 'cyborgs' for short. This is expected to result in a disappearance of the experienced or actual boundaries between technology and the self in the event of an attacked device (Longo, 2018; Van der Wagen & Pieters, 2018). Some theoretical frameworks developed in the literature on the impact of traditional crime could also be successfully applied to the victimization impact of cybercrime. These include, for example, firstly the Shattered Assumptions Theory, which states that crime victimization leads to

impairment of positive basic assumptions about life, such as controllability, predictability, and righteousness (Janoff-Bulman & Frieze, 1983; Vanderstraeten et al., 2012); and secondly the General Strain Theory, which assumes that crime victimization produces 'strain' that leads to negative emotions and behaviors (Agnew, 1992; Hay & Ray, 2019).

To successfully compare the victimization impact of cybercrime and traditional crime, hypotheses based on studies about the determinants of victimization impact should be developed. The characteristics of crimes that, according to previous research, might influence victimization impact of crimes in general are 1) the intrusion into private or daily life of the victim; 2) the unpredictability, uncontrollability and intangibility of the crime; 3) the intentionality and purposefulness of the perpetrator; 4) the potential social distance between offender and victim; and 5) the degree of victim contribution to the crime (Agnew, 1985; Benight & Bandura, 2004; Borwell et al., 2021; Burgard & Schlembach, 2013; Dinisman & Moroz, 2017; Jahankhani et al., 2014; Jansen et al., 2013; Kunst & Koster, 2017; Lamet & Wittebrood, 2009; Leukfeldt et al., 2018; Moore, 2016). Those characteristics, as well as general theoretical frameworks, provide a resource to derive expectations about the victimization impact of different crimes and to explain established empirical results. In addition, they are the causal mechanisms explaining the victimization impact of different crimes, and thus form an opportunity to further study the applicability of those mechanisms. If necessary, they can be enhanced or developed when it comes to the victimization impact of cybercrime.

Personal and social factors are also related to victimization impact, and therefore need to be controlled for when measuring the impact of crime. Firstly, personal factors such as demographic and socio-economic factors, coping skills, personality, but also important life events such as previous victimization might influence victimization impact (Borwell et al., 2021; Button et al., 2014; Cross, 2015; Dinisman & Moroz, 2017; Golladay & Holtfreter, 2017; Lamet & Wittebrood, 2009; Li et al., 2019; Shapland & Hall, 2007). Therefore, the same crime can have varying effects for different victims, and the impact of a particular offence on an individual victim is hard to predict (Jansen & Leukfeldt, 2018; Shapland & Hall, 2007). Secondly, social factors are of influence on victimization impact, such as the degree of social support and the reaction of a victim's partner, social environment or law enforcement (Cross, 2015; Lamet & Wittebrood, 2009; Leukfeldt et al., 2018; Whitty & Buchanan, 2016). Victim blaming, mentioned earlier, can also be seen as a social factor that might heighten the victimization impact (Cross et al., 2016; Kerr et al., 2013; Leukfeldt et al., 2018; Whitty & Buchanan, 2016).

## 8 CONCLUDING REMARKS

This paper highlighted the importance of comparing the victimization impact of cyber and traditional crime. Based on a literature review, we gave an impression of the current state of literature on the subject, and what is yet to be discovered. It became clear that cybercrime can severely impact victims, while this impact seems to be underestimated and not thoroughly studied. Moreover, a comprehensive comparison with the impact of traditional crime has not been made. Cybercrimes have unique aspects that could affect the impact those crimes have for victims (Leukfeldt et al., 2018; Nadim & Fladmoe, 2021; Suler, 2004). The digitization of crime provides a unique opportunity to better understand the impact of crime on victims. Recommendations for future research were provided in order to address the gaps in the current state of literature. These are 1) distinguishing between cybercrime and traditional crime, 2) classifying cybercrime and traditional crime, i.e., determining what crimes can meaningfully be compared, and 3) measuring the victimization impact of cybercrime and traditional crime.

Ultimately, as long as the victimization impact of cybercrime compared to that of traditional crime is unclear, a nuanced and grounded discussion about the societal consequences of cybercrime and about policies that help victims to recover from the negative events they have experienced is deemed impossible.

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**CROWD SCIENCE INFUSED LEARNING:  
CONNECTING ONLINE TEACHING AND  
CROWD SCIENCE IN THE SOCIAL SCIENCES**Isabell Stamm<sup>a</sup>, Michael Weinhardt<sup>a</sup>, Marie Gutzeit<sup>a</sup>, Matthias Bottel<sup>a</sup> and  
Johannes Lindenau<sup>a</sup>**ABSTRACT**

In this article, we reflect upon the combination of crowd science and online teaching, which we refer to as Crowd Science infused Learning. We discuss Crowd Science infused Learning's conceptual design and its viability in sociology and related disciplines. For this purpose, our research project 'Data Traces' serves as an empirical case. In the project, we developed an online platform that provided a 45-minute teaching unit, training students in using different forms of digital data: websites, newspaper articles, and administrative register data. Afterwards, students were assigned to predefined, small-scale research tasks contributing to a real-world research project on the social relations in entrepreneurial groups. By completing the tasks, the students could apply their knowledge, gain insights, and contribute actively to an ongoing research project. This combination links students' learning experience with the collection of data for research purposes. We also implemented game elements in the platform's design to support students' motivation. After a brief outline of the Data Traces Project's chronology and key conceptual decisions, the article focuses on a critical discussion of the combination of crowd science and online teaching. Despite significant challenges, we believe that Crowd Science infused Learning is a promising approach and identify opportunities and conditions for a successful combination of crowd science and online teaching.

Keywords: citizen science; online learning; blended learning, digital sociology.

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## 1 INTRODUCTION

Since its beginnings, digitalization has been linked to the postulate that it would enable new forms of social participation and thus ultimately contribute to a democratization of many aspects of our social life (Dickel & Franzen, 2016; Marres, 2018). However, this was not empirically realized. It became apparent that the establishment of digital infrastructures instead led to a gradual expansion of the traceability, analyzability, and manipulability of participation (Marres, 2018, p. 158). While the cultural and political ideal did not materialize, the concrete forms of participation possibilities changed (Marres, 2018, p. 158).

These changes impact the field of science and lead to the question: what is the digital future of the social sciences (Halford et al., 2013) and the associated demand for a 'digital sociology' (Marres 2018). The new modes of participation are relevant for sociological research in two ways: on the one hand, they produce new data on the participation of individuals in societies, and on the other hand, they open up new possibilities for participation in the production of knowledge about societies (Marres, 2018, p. 159). A specific mode of this knowledge production is called crowdsourcing, citizen science, or crowd science; in the following, we refer to crowd science. Following Franzoni and Sauermann (2014), crowd science methods usually have two characteristics: participation in a project is open to a large number of possible participants, with intermediate inputs (such as data or codes) being made available for these participants to work on. Crowd science in this sense may be understood as a specific type of online-organized citizen science. It focuses on the aspect of contribution of research participants in the form of data collection or classification. Well-known examples of such crowd science approaches can be found mainly in the natural sciences, e.g., 'Foldit' or 'Galaxy Zoo'. This procedure also has been applied several times in the digital humanities (Dickel & Franzen, 2016; Franzoni & Sauermann, 2014).

Current crowd science approaches focus primarily on a logistical aspect of participation: participation in science is organized via a digital platform, thus opening new dimensions of scalability and outreach. Participants are expected to take on pre-defined knowledge tasks of which the content and horizon have been previously defined by a scientific research team (Dickel & Franzen, 2016). In this respect, they are understood as knowledgeable subjects, but they are not expected to make an active epistemic contribution to the accumulation of knowledge (Hackley, 2013). Thus, the participants are integrated as research workers, but less as authors of new knowledge (Marres, 2018, p. 168). In all, crowd science methods can help make previously inaccessible knowledge resources accessible. The opportunity to participate directly in current research has a motivating

effect (Franzoni & Sauermann, 2014, 11ff). Simultaneously, crowd science methods pose organizational and technical challenges. It is necessary to bring together the relevant projects and people willing to participate and motivate them to define tasks and integrate participants' contributions (Franzoni & Sauermann, 2014, 13ff; Scheliga et al., 2018).

Crowd science can also be a valuable learning experience for the participants (Vallabh et al., 2016). This experience is not limited to the research object but extends to participating in the research process itself. Participants are given insight into a pre-formulated research question, the selected data material, how the data was collected, the quality of the data, the processing of the material, and, in some cases, the results obtained. Participation in scientific knowledge production in the form of crowd science, therefore, includes a didactic aspect. In fact, this aspect very much resembles ideas of inquiry-based learning, a specific didactic method often applied in the social sciences in which students can actively place themselves within a research situation (Atkinson & Hunt, 2008; Pedaste et al., 2015). However, the didactic component in crowd science needs moderation in order to grow into a digital version of inquiry-based learning.

In this article, we suggest that by coupling crowd science and online teaching, a digital version of inquiry-based learning can be created, which we refer to as Crowd Science infused Learning. Crowd Science infused Learning opens new opportunities for research and for teaching. Learning through research aims to awaken and train students' scientific curiosity, ability to reflect, and methodological-analytical thinking (Huber, 2014; Pedaste et al., 2015). This digital variant of inquiry-based learning can be flexibly integrated into different course formats and be anchored in university teaching. At the same time, Crowd Science infused Learning offers scalable access to conduct various types of research and to process various types of data. In our Data Traces Project, we explored precisely this connection between crowd science and online teaching. Specifically, we developed a platform on which students were trained to handle digital data and subsequently deal with such data in a research assignment. The task was linked to an ongoing research project to which the students actively contributed through a crowd science approach.

We use our experience from the Data Traces Project as an empirical case to reflect on the connection between crowd science and online teaching, i.e., Crowd Science infused Learning, and its viability in social research. As Bonney et al. (2009) observe, “developing and implementing public data-collection projects that yield both scientific and educational outcomes requires significant effort.” It is the goal of this article, to introduce our approach of Crowd Science infused Learning and to critically highlight the challenges in designing both for research and didactic

outcomes simultaneously. On the grounds of our empirical project, we derive conditions and give indications of central decisions necessary for the design of such a digital version of inquiry-based learning. We suggest that Crowd Science infused Learning requires strong support through teachers as intermediaries, a fit with the local teaching context and the formulation of a task that takes learning and research effects equally into consideration. Although we recruited fewer participants than we had hoped for, we suggest that the current push towards digitalization of teaching and learning under the pandemic makes Crowd Science infused Learning a digital variant of inquiry-based teaching even more attractive.

## 2 INTRODUCING CROWD SCIENCE INFUSED LEARNING

### 2.1 The didactic aspects of Crowd Science

For the discussion of a didactic aspect of crowd science, we can draw on insights from previous research into the element of learning in the vast field of citizen science. Indeed, citizen science is often seen as a tool to foster science knowledge and scientific literacy in the general population (Bonney et al., 2009; Trumbull et al., 2000). Scientific literacy may be broken down into several components, such as general science knowledge, scientific processes and methodology, but also expert knowledge about a specific field of study (C. Phillips et al., 2018). However, learning may go beyond the scientific literacy and various typologies and frameworks exist to classify the content of what may be gained and learned through participation in a citizen science project (Jordan et al., 2012; T. Phillips et al., 2018). For example, participation may result in a better understanding of the specific topic under study (topic knowledge), and skills to fulfill the requested research task (such as collecting and interpreting data or classifying information), but also general skills and knowledge, such as computer skills, writing experience, and general digital literacy as well as other generic knowledge (Aristeidou & Herodotou, 2020).

Findings into the learning effects of citizen science remain inconclusive, however. They may also differ between projects conducted offline in the field or online through digital means (Aristeidou & Herodotou, 2020). Crall et al. (2013), for example, found improvements in science literacy and knowledge when using context-specific measures in an offline project targeting invasive species. Masters et al. (2016) report a positive relationship between forms of active engagement with Zooniverse projects in a project specific science knowledge quiz, but no relationship with general science knowledge. In an experimental study of learning in an online citizen science project, J. L. Dickinson and Crain (2019), find that

volunteers showed increased content-learning, even though this was more a result of an overall interest in the project rather than the outcome of active participation. As Philips et al. (2018) put it, “most projects have yet to document robust outcomes such as increased interest in science or the environment, knowledge of science process, skills of science inquiry”. This lack of suitable research into the learning effects of crowd and citizen science is even more pressing in the social sciences where learning experiences may differ from the natural sciences. The topics being studied are quite different and the approaches to research may also be very different, beginning from the data sources to the ways of extracting and analyzing the data that has been collected. Hence, learning experiences participants make due to their research participation may vary as well.

There have also been a couple of instances where citizen respectively crowd science has directly been integrated into the teaching of students in higher education settings (Karlin & La Paz, 2015; Mitchell et al., 2017; C. Phillips et al., 2018). Crowd science, in this context, is a means to fulfil a didactic goal, which is somewhat different from how learning is conceptualized in the above-mentioned studies of citizen science, where learning happens as “byproduct” of fulfilling the research task. It allows to align the participatory aspect of research with didactic goals defined in the curricula of university courses or other educational institutions. Despite these attempts, the idea to implement citizen or crowd science directly in the context of formal curricula in higher education together with students and teachers at a university is still in its infancy. Moreover, research into learning effects of citizen and crowd science in the context of formal higher education is lacking (Aristeidou & Herodotou, 2020). The research that exists seems to suggest that students enjoy this form of hands-on science education (C. Phillips et al., 2018; Ryan et al., 2018). Mitchell et al. (2017) report their offer of combining of university teaching with citizen science to first year students as an authentic research experience and an opportunity to broaden their environmental and scientific knowledge. Students self-reported increases in topical knowledge on indigenous species as well as more awareness for the process of data analysis, presentation, and scientific publication.

We suggest that the didactic aspect of crowd science in higher education could be expanded and thereby increase learning effects. For such a didactic framing of crowd science, an online teaching format is intuitively suitable (Clark-Ibáñez & Scott, 2008; Driscoll et al., 2012; Kergel & Heidkamp, 2016; Pearson, 2010). We refer to the connection of online-learning and crowd science as Crowd Science infused Learning. Student-Learners use a digital infrastructure to flexibly consume knowledge units in terms of time and place (Carliner and Shank 2008; Kepser 2010). These online-learning units not only convey knowledge, but also prepare the



students for the learning experience resulting from the active participation in research; they sensitize students to the research process and its context and qualify them for the task at hand. Such an online teaching unit allows - at least in theory - to maintain the inherent demand for scalability and fits into the corresponding digital platform environment.

Crowd Science infused Learning allows students to participate in solving an authentic research task and thus offers a digital variant of inquiry-based learning. Students immerse themselves in parts of the research process – they have to adopt the research question, conduct data and critically reflect about the quality of the data. As such, Crowd Science infused Learning has the potential to foster research and problem-solving competence. In difference to classic formats of inquiry-based learning in the social sciences, which often take the shape of a full-course, Crowd Science infused Learning has a shorter duration and can be added on or plugged into an existing curriculum. The teachers become providers of digital knowledge units, topics, and search requests and take on the role of contact persons and moderators for the online community. The questions of defining the boundaries of a task and organizing participation are different since it is now necessary to create a connection between the teaching unit and the research task, integrate very different motivational backgrounds, and finally implement the learning and research possibility technically. Ideally, the positive effects of crowd science can add to learning effects, and participants can benefit from the experience of applied research. In the worst case, participants feel overstrained by the additional learning effort. A feeling of exploitation may arise, especially if their own interests and learning success do not outweigh the required cooperation (Euler, 2005). In the next section, we offer a brief chronological outline of the Data Traces Project in order to present our empirical basis for the following discussion of a connection between crowd science and online teaching.<sup>1</sup> The following critical discussion of the implementation of Crowd Science infused Learning in the Data Traces Project, not only emphasizes the promises and challenges of this approach, but also allows to derive key conditions under which Crowd Science infused Learning can be successful.

## 2.2 The Data Traces Project

We conducted the Data Traces Project from 2017 to 2019 as part of a research group on entrepreneurial group dynamics based at the sociology institute of a major German university. The idea for this project was born several years earlier and represented a potential solution to a pragmatic research

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<sup>1</sup> We hope that future applications can benefit from our experience and therefore provide a detailed project report on our website <https://www.datenkunde.org/>, our platform as an illustrative object as well as the resulting instructional videos, the latter can be used in teaching after consultation.

problem: information on entrepreneurs should be researched from different sources available publicly and online (e.g., company websites, newspaper articles, social media, and registry data) and then combined into a robust data set. Even in times of computer-assisted procedures, automation of such a demanding task is only possible to a limited extent due to non-standardized formats and the need to interpret the data. Therefore, we planned to realize the task using a crowd science approach. Simultaneously, this task is suitable for understanding the special features of digital, process-produced data, such as reflecting on their quality and usability for social science research and learning research techniques. Thus, we defined students of the social sciences as 'crowd' for this task and made Crowd Science infused Learning the subject of a separate project, which explored crowd science as a form of digital and inquiry-based learning.

At the beginning of 2017, we initially focused intensively on the collection and reliability of a wide range of process-produced data. In a pilot study, we were able to use case studies to test how different sources and data formats were beneficial for our case research. We have experimented with different access routes and research techniques and consulted experts in law for data protection and ethical research guidelines. Simultaneously, we offered seminars on 'process-produced data', in which we critically examined the different types of data, their contexts, and suitability for research together with students. In these seminars, we informed them about our plan to create a platform of our own to combine crowd science and online teaching, working with them to design a research task. The student feedback about their learning experience was essential for the task's final design. At the beginning of 2018, we developed and produced a video-based teaching unit, which proved very time and resource consuming. For the seven videos, which eventually comprised 45 minutes, several months were spent writing the script, designing, producing, and editing the videos.

Meanwhile, we created the technical foundations for our crowd science platform. A market review showed that no existing platform solution could integrate instructional videos, assign tasks randomly, and enter information. Therefore, we used and adapted a web-survey panel software and developed a multi-level website as the user interface in an elaborate process. Several months were invested in the creation of the website. A functional platform was available in the summer of 2018. The platform was tested intensively and revised based on the feedback of two consecutive focus groups.

The final product functioned as follows: students could inform themselves about the project on a specially created website and register if they were interested. This initial step was followed by a 45-minute video-based online teaching unit on the topic of digitally process-produced data. The students then selected a research case and received information on the

names of people who have collectively founded a company. The task was to research the social relationships between these people on the company website and in newspaper articles. The sources and information found should then be entered into a corresponding 'data entry form'. Organized as a competition, they received points for their researched information. The students with the most points won cash prizes according to their ranking, with a total of € 3,000 prize money.

We began to advertise for our platform in autumn 2018 with a project booth at the German sociology association's congress. There, teachers and students could inform themselves about the project and try out the platform directly on a laptop. Subsequently, 150 chairs in sociological methods and entrepreneurship were contacted by mail. After that, we followed up in two rounds - via e-mail and telephone - to further explain our project. Meanwhile, press releases and news feeds on our university's social media channels were published. We also personally presented the project in lectures at four local universities. We had conversations with lecturers who showed great interest in integrating of the platform into their teaching. We also distributed flyers and hung up posters at local higher education institutions to address students directly. Furthermore, we posted corresponding articles on our own Facebook page and shared them in Facebook groups of relevant departments of colleges and universities nationwide. We placed ads on Facebook and tried to reach out to students via student council mailing lists.

Teachers and students were invited to participate in two phases from January to March and from May to July in 2019: After the online teaching unit, students were able to take on a self-selected number of research tasks for the duration of two weeks, i.e., they collected information for our data set and gathered points for the competition. Teachers from twelve German universities found interest in our project, most of them agreed to announce our project in their courses for students to participate if they are interested (as add-on), one of them integrated the project directly into their course syllabus (as a 'plug-in' online teaching unit that can flexibly be integrated into a classroom course on social science methodology). For many teachers, the integration into the course (as plug-in) was not possible due to bureaucratic challenges and time constraints. During the first phase, a total of 44 students registered; twelve of whom completed the online teaching unit, including the test. Eventually, six out of this group took on research tasks. Due to the lack of competition, all participants in the first round received one of the prizes from the competition. In the second phase, 52 people registered to participate, 39 of whom researched tasks, of which we distributed prizes to ten people with the most research points. Within four weeks, 96 students participated in the online training. A total of 300 cases (out of 1,500 available cases) of entrepreneurial groups were researched.

### 2.3 The Connection of Online-learning and Crowd Science

Conceptually, our approach of Crowd Science infused Learning combines a research component (crowd science) and a learning component (online teaching). In both components, we made key decisions that ultimately manifested themselves in our platform's design. Figure 1 summarizes the course of our conceptual decisions, which we will discuss individually below.

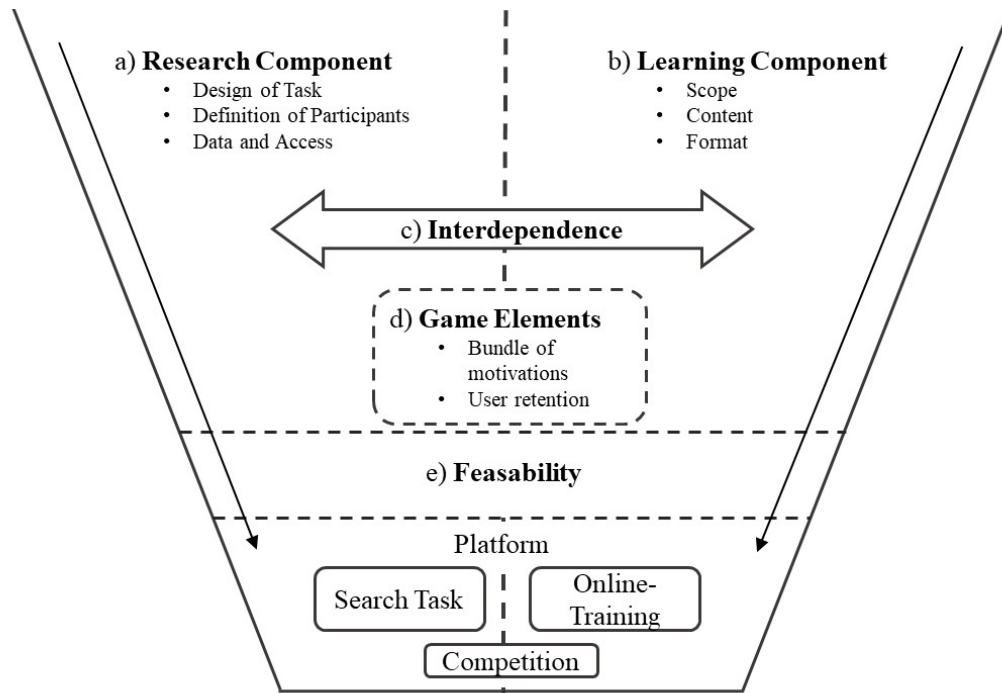


Figure 1: Decision-making moments in the combination of crowd science and online teaching

#### (a) Research component

Regarding the research component, we defined the nature of the task as a research task, including the types and accessibility of data used, and have specified the potential participants for our project (Scheliga et al., 2018). Our research aim was to identify typical development paths and central transition moments in entrepreneurial groups (Ruef, 2010; Stamm et al., 2019). Within the scope of our research, we aimed to build up a longitudinal data set based on commercial registry data, which allows us to identify such entrepreneurial groups at the time of new registration and track changes within the group (Weinhardt & Stamm, 2019). However, the commercial register data itself contains only limited information on the group members' social relations. A crowd science approach was used in order to supplement this information.

Specifically, we designed the task so that participants should research information about the group members' social relations at the time of founding (e.g., relatives, friends) in various publicly accessible sources. It was also important for our research that participants document the research process to be able to check the data later. They should record the link of the found source and corresponding text passages in a result form.

We selected sociology and management (entrepreneurship) students as potential participants in this task. Strategically, we did not attempt to build a new community but rather mobilized what we believed to be an existing professional community (Scheliga et al., 2018). For the task's design, we focused especially on achieving a fit between our research interests and our target community's interests. We increasingly simplified the task throughout our extensive pilot and test phases and limited the sources to be used down to two: company websites and newspaper articles. We provided access to a digital newspaper archive to carry out the research. The time required per case ranged from a few minutes to one or two hours, depending on the amount of information found.

#### *b) Learning component*

We defined the topic, scope, and format of the online teaching unit for the learning component. Regarding the topic, we focus on a social science data lore of process-produced data (Baur, 2009; Bick, 1984), defining and discussing this form of data and their relevance for social science research. We developed the online teaching units content based on the current state of research and discussions with colleagues specialized on this topic at various universities, refining it several times. The unit begins with an introduction to social science data and its principles, which are explained and exemplified based on three data types (websites, news articles, and registry data). Students gain insight into the variety of process-produced data and the data traces preserved in them. They are also familiarized with the evaluation of data sources and quality. Finally, we offered a reflection on the possible applications of such data.

To keep it concise, the scope of the online teaching unit should not exceed that of a single regular in-person classroom session. The result consists of seven self-produced educational videos with a total duration of 45 minutes. Most of these videos were designed as 'explanatory videos', i.e., a person is shown explaining a certain subject from the front, with terms and graphics displayed to support the explanation. An outside camera-shoot, interviews, and various image materials make the online teaching unit varied and attractive. The script for these videos is based on established design elements in online teaching (e.g., short sentences, rhetorical stylistic devices, repetitions, and summaries) (Kepser, 2010; Pearson, 2010).

The result was a 'plug-in' online teaching unit that can easily and flexibly be integrated into a classroom course on social science methodology and be offered either instead of a single session or in conjunction, thereby, creating a blended learning situation (Auster, 2015; Luna & Winters, 2017). The format enabled students to gain direct access to up-to-date research knowledge in the field of process-produced data and is useful for teachers and students as a contemporary and relevant supplement to methodological training. Typically, reactive methods (qualitative interviews, survey methods) take up a large part of the already very extensive curriculum. A critical examination of process-produced data seemed a much-needed supplement when we started our project. Our unit thereby offered a useful addition to the existing curriculum of social science methodology regularly taught at universities.

*c) Interdependence of the components*

Combining a research and learning component (as described above) makes it necessary to reflect that every decision made concerning one component might impact the other component and vice versa. For example, the decisions made on selecting learning content were linked to qualifying the participating students for the subsequent research task. Thus, in the online teaching unit, we only present those data types that we use within our research (i.e., register data, websites, and newspaper articles). Conversely, the formulated task should serve our research-strategic goals and allow students to experience the internet as a research space, practically apply learned knowledge, and develop related competencies.

The challenge now was to design a research application that students could handle competently and reliably in terms of extent and complexity, which would train them in the handling of process-produced data and at the same time produce valuable information for us. The task we have chosen is relatively complex. The research required a high degree of independence, skill in dealing with the search platforms used and the respective sources, and the interpretative ability to evaluate statements. In principle, this provided a good basis for the learning processes, especially in contrast to the simple, repetitive tasks of narrow range that often dominate crowd science projects (Scheliga et al., 2018). A didactic added value could be achieved on at least three levels: First, regarding the use of process-produced data, which in our case were used as sources; second, regarding content issues such as business start-ups and group processes; and third, regarding a part of the social science research process.

*(d) Game elements as additional incentives*

Our considerations revolved around what we thought the students could and should be expected to do, what incentives we could provide, and how

to motivate them (ideally) to participate continuously. As the literature on online teaching and crowd science (Franzoni & Sauermann, 2014) shows and problematizes, various motivational factors, some of which may be conflicting, must be assumed. Intrinsic motivations result from participants' pleasure of taking part in the required activity as such, including personal interest or enjoyment (Nov et al., 2011), the chance to learn more about a certain subject, and the fulfilment of discovery (Raddick et al., 2010). Extrinsic motivations are based on the desire for achievements or incentives external to the actual task, such as social recognition or financial rewards. Other sets of motivations have also been described in the literature. For example, volunteers exhibit altruistic motivations ranging from a general desire to help, a desire to contribute to science or the public good, and a desire to help one's community (C. Phillips et al., 2018; Raddick et al., 2010). These overlap with social motivations such as the desire to socialize, interact with others, and to be recognized as part of a community (Bowser et al., 2013; Nov et al., 2011). Especially for designing crowd-science projects, it is also important to recognize that the initial motivations for taking part in a project may differ from those motivations for continued engagement in a project (Rotman et al., 2012, Tinati et al., 2016).

In our considerations, we realized that our possibilities to utilize typical extrinsic incentives expected in a university teaching context (such as credit) are limited. We thus decided to emphasize play as a way to increase participant motivation and engagement (Rejane Spitz et al., 2018). In addition to the promise of learning something and contributing to research, we set out to create additional extrinsic incentives through game elements (Deterding et al., 2011, p. 10). This idea was supported by the fact that game elements had already been used and researched frequently and successfully in other prominent crowd science contexts (Koivisto & Hamari, 2019). Gamification is viewed as a powerful design technique that has the ability to improve user experience and transform mundane, repetitive tasks into engaging experiences (Franzoni & Sauermann, 2014), thereby motivating and retaining participants (Bowser et al., 2013; Bowser et al., 2014; Iacovides et al., 2013; Pedersen et al., 2017). Such game elements include for example rewards, online gaming badges, leaderboards, or competitions (Simperl et al., 2018). Gamification may encourage people to take part in a project or help to sustain engagement, or both (Rotman et al., 2012; Simperl et al., 2018). Similarly, communication tools and community elements may help to sustain engagement over time, by allowing participants to interact through recognizing their achievements as meaningful (Iacovides et al., 2013; Tinati et al., 2016). At the same time, gamification in citizen science has been met with criticism and even warnings against its usage (Graber & Graber, 2013). Games and science, for example, may be viewed as independent and even contradictory activities

(Ponti et al., 2015). The design of gamification elements in crowd science must balance the demand for participant engagement and enjoyment with scientific relevance and methodological rigor (Ponti et al., 2015).

In the design of our Data Traces project, we acknowledged gamification is most effective when it is used to stimulate real, intrinsic motivations (Deterding, 2012). Hence, elements and extrinsic rewards such as points and badges may be used as way to support intrinsic motivators to recognize thematic contributions and expertise (Iacovides et al., 2013). We thus linked the students intrinsic motivation to learn and to contribute to a scientific project to gamification elements. The result was a points system in a competition for individual players and groups, introducing additional financial incentives. Students received points for entries on the user interface (both from source references and data), which were displayed on the website besides a ranking of the best-placed students. For those participants who scored the most points within two weeks, we distributed substantial cash prizes of up to € 300 per individual. Thus we wanted to tie into the concept of ‘idea competitions’ known in economics (e.g., business plan competition, case study competition). With this technique, we hoped to address yet another possible motivational factor for students in order to increase their willingness to participate and create stamina to keep going (Deterding et al., 2011, p. 9).

#### *(e) Feasibility*

Not all conceptual ideas could be realized due to time, financial and technical restrictions. Furthermore, decisions made during the conception phase led to path dependencies, whereby some decisions turned out to be disadvantageous. Technical possibilities in particular proved to be limiting. For example, we would have liked to make the website more dynamic or use game elements that focused more on participation instead of implementing a purely points-based competition (e.g., by addressing participants directly as part of a virtual research community).<sup>2</sup>

### **3 THE CONNECTION OF THE COMPONENTS AT TEST**

A central goal of the Data Traces Project was to develop and test the application of Crowd Science infused Learning. While the combination of crowd science or citizen science with teaching in a formular setting has been explored before settings (although not too often, for examples see Karlin & La Paz, 2015; Mitchell et al., 2017; C. Phillips et al., 2018), our project was unique in several ways. First, our project was situated in the social sciences

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<sup>2</sup> Their critical reception within sociology and game studies we had taken note of (e.g. Fuchs et al. 2014).



rather than the natural sciences in which there is much more experience in this regard. Second, we developed a ‘plug-in’ format that could be used not just in the context of our institute, but also by other teachers at other universities. This potentially allows for a greater usage of the teaching materials we developed as well as a greater reach of participants to achieve a critical mass of research volunteers (in this case, students). Third, in line with other crowd science projects, we used points and a leaderboard as gamification elements in our project, but we also ran a competition and offered monetary prizes. This kind of prize competition is a setting in which seemingly no previous experience has been obtained so far.

A central goal of the Data Traces Project was to develop and test the application of Crowd Science infused Learning. Therefore, a reflection and evaluation on our project must specifically address the connection between crowd science and online teaching. It seems to be of central importance to reflect on the form and context of participation which such a concept generates and demands. During the Data Traces Project, we implemented multiple reflection sessions within the research team, received evaluations from two seminars, conducted two focus groups and four semi-structured interviews with participating students. We further collected emails and comments we received on social media by students, teachers, and multipliers. The protocols, interview transcripts, evaluations and other documents serve as basis for the following reflections.

### **3.1 Participation in the research process**

While the aspect of contributing to research is present within the framework of our Crowd Science infused Learning project, it is limited at the same time, as the task is designed to be fulfilled within a very limited amount of time (a few minutes). Students could not participate in the research question's design, the selection of the theoretical framework, or the selection of cases. Instead, they were asked to research data on a specific issue, so their contribution may also have felt 'small'. Nevertheless, the research was perceived as productive and the given freedom in the task was evaluated positively. Finding information was described as a positive experience: first, because a certain fulfillment could be found in searching as such, and secondly, because it is 'nevertheless, of course, also a contribution to research' (Interview 1: 27). However, the research task we set also entailed the risk of not finding any information about a given case and thus not coming to any tangible result. If this was the case, some students had doubts about whether their procedure was correct. Others perceived the difficulty and personal improvement in finding data as part of the learning process on the types of data used as well as their respective limitations.

As in other crowd-science projects based on voluntary participation, fun and fulfillment play a key role (Raddick et al., 2010; Reed et al., 2013). The probability of participation increases if one succeeds in awakening interest in the topic and making the task tangible and feasible, for example, by pleasing satisfactory research tasks (Bonney et al., 2009; Franzoni & Sauermann, 2014). In our case it is therefore necessary to critically question whether we have chosen a suitable topic for the task at hand. In an interview, a student told us that it was *'kind of cool to find out about companies you don't know. You feel like a little spy (laughs slightly)'* (Interview 1: 27), yet the low participation rate could also be an expression of a lack of topical interest. In any case, it should be noted that not every topic is equally attractive, and not every task may seem equally pleasant.

Furthermore, the participation in our Crowd Science infused Learning application is guided by the teachers on-site, who are researchers themselves. In our approach, the teachers are mediators who assess the research's seriousness and quality, such as how well the topic suits their students' interests. Teachers may even compete with the providers if research interest's overlap, or students are recruited to work on their own research. This adds a whole new level to the design of the project, which now not only needs to appeal to the volunteers doing the research work, but also the fellow university teachers who are envisaged to promote the project in their classes. Hence, their motivations and conditions of participation must also be taken into account. As this set-up is something new and previously untested, no experiences or recommendations existed as guidelines on how to approach this challenge.

Finally, students' participation in research is also subject to some restrictions for the researchers who offer the project themselves. In contrast to other formats of crowd science, we can rely on a minimum of previous knowledge, but due to the complexity of the task, we must have confidence in the students' competence. An example of this is the extraction of the desired information from relevant text passages. This information first had to be identified in newspaper articles or websites and often required additional interpretation later on. We demanded a series of protocolization steps for the necessary quality assurance and methodological comparability. Even though these steps reduced the task's attractiveness, at the same time, they supported this research-relevant step didactically.

### 3.2 References to familiar teaching contexts

Within the framework of our Data Traces Project, we have created the possibility of a digital experience of inquiry-based learning. Ideally, our online teaching unit could easily and flexibly be integrated into a classroom course on social science methodology. As we offer a teaching plus research

unit that we ask teachers to integrate into an existing curriculum, we speak of a 'plug-in' format. While some projects have experimented with the idea of offering inquiry-based learning through participation in citizen science projects settings (Karlin & La Paz, 2015; Mitchell et al., 2017; Oberhauser & LeBuhn, 2012; C. Phillips et al., 2018; Ryan et al., 2018), our digital 'plug-in' format is a genuinely new idea that, to our knowledge, has not been realized before. The evaluation of our offer by students and teachers focused on the specificity of this learning experience in the digital space. One student explained in an interview:

"I found the videos very good. They were also very instructive; I thought the example was quite good. And with the platform itself, with this participatory action, I found it quite cool how it was divided up with the easy, medium, and difficult tasks." (Interview 1: 37).

And one teacher wrote to us:

"The feedback from the students was clearly very positive. [...] In general, this would be a great example of successful blended learning. Even though most of them had hardly had any contact with the topics so far, they found the approach very exciting and 'finally something new.'" (Teacher's e-mail).

The offer thus stands out above previously familiar forms of digital teaching.

However, this digital learning experience remains connected to the context of classroom teaching through its 'plug-in' format. As providers of this format, we intervened as unknown third parties in institutionalized interactions between students and teachers. We decided for a plug-in format strategically in order to approach a specific community and to be able to draw on the usual resources (namely, the structure of a course and the social capital of the teachers). However, we did not sufficiently consider the consequences of this intervention and, above all, the context of the participants; especially in sociology, a teaching and learning culture is widespread, which - with great justification - relies on the discursive exchange between students and teachers. Our offer of Crowd Science infused Learning gives teachers a completely different function. They do not propose the basis of discourse anymore; moreover, they are no longer intended as discursive participants. Instead, teachers are assigned a gatekeeper function: they must now assess the quality of the teaching content that others have selected and prepared, decide whether it meets their requirements and whether the content fits into the rest of the teaching program. As a consequence, teachers may view the demands of plugging Crowd Science infused Learning into their formal curriculum as an encroachment on their autonomy of course design.

In this constellation, we underestimated some central aspects: firstly, a relationship of trust is needed between the providers of Crowd Science infused Learning and the teachers on site. Thus, it is no coincidence we had collegial connections to all teachers who referred to our project in the first round, or with whom we had a personal exchange about the teaching curriculum contents and the research task. This is also true for the teachers who invited us to their classes or ultimately participated with their entire course. Secondly, we have considerably underestimated the fact that – at the time – online teaching was regarded with great skepticism. Possibly, teachers feared that an online-format undermined a discursive learning culture. The collective experience of online-teaching during pandemic circumstances certainly affects the willingness to try out online teaching formats. Thirdly, we underestimated the time and effort required to incorporate such a teaching format into the respective teaching curricula, which are relatively standardized, especially in terms of methods.

After all, students frequently asked us what they would gain from participating in our crowd science project. However, it was not our decision, but rather the teachers' decision on-site, whether our project became part of their course, including the awarding of course credit. We were only able to offer a relatively insignificant certificate for the successful completion of the online teaching unit. Due to the lack of accreditation of the online teaching unit, it was all the more necessary to convince the teachers as mediators.

This may point to an overall problem of using students in a standard university setting. Usually, with 'traditional' citizen science volunteers, the initial, intrinsic motivation to participate in a science project, such as an interest in the topic or science more generally, is replaced by the university teachers' request to take part. Hence, it is unsurprising that the question of benefits and rewards arises and probably needs to be addressed differently than in other projects. As initial intrinsic motivations could be lacking among the students (when they are told to participate as part of their university education), it seemed promising to offer other motivating factors, such as game elements in the form of points, leaderboards, prizes and competition in order to stimulate students' motivation (see discussion below).

Although we were aware of the problems and importance of addressing both students and teachers, we underestimated the effort involved and probably overestimated our ability in the art of communication. As university-integrated researchers and lecturers, it was obvious that we were able to anticipate the needs and interests of our colleagues and students relatively well. However, it became clear that the range of services offered by Crowd Science infused Learning, although in

itself a meaningful unit, must be more closely aligned to the teaching context.

### 3.3 Ambivalent effect of game elements

Our use of game elements in the form of a competition with prizes aimed to provide further incentives in addition to purely research-based learning and offer some compensation for the students' time. On the students' level, the effects proved to be quite positive. For instance, several students described how the combination of points and competition motivated them to participate longer without completely overshadowing their interest in the research activity. One student reported:

"I would say my goal, in the beginning, was simply to participate. Or just to see what's there [...]. The goal, somehow in the middle of the action was, yes, I just want to have more points [...], in the end, it was a little bit like this [...] maybe if I spend another half an hour there is something else I haven't seen before?" (Interview 2: 18).

In this respect, our calculation to give the students feedback on their performance through points and keep them in the competition for a longer time worked out very well. It was particularly evident in the students' final sprint during the second phase. This finding is in line with previous research indicating that initial participation is largely driven by the desire to learn and participate in scientific research, but that sustained engagement may be supported by game elements (Simperl et al., 2018).

However, the game elements, especially the financial incentives, were viewed rather critically by some local teachers and multipliers (student councils, magazines), even though they were complementary and optional. This quickly led to an implicit or explicit rejection of our project as a whole. For example, our e-mail inquiry to a sociology student journal asking whether we could publish a call in their journal was rejected because it was seen as 'neoliberal' with critical reference to the competition's financial incentives. Particularly because financial incentives to participate in surveys or idea competitions are well established in other subjects, it is obvious that the explanation for these reactions can be seen in the role of sociology as a science reflecting about the social conditions of production. The sociological debate on the subject of gamification has so far focused almost exclusively on it as an instrument of control (e.g., Rey, 2014; Whitson, 2014). While we tried something new with our offer, at its core, it was based on the expectations of inquiry-based learning. However, the critical perception of our (purely optional) competition dominated, especially within the group of gatekeepers in the field. In summary, the game elements' specific design had ambivalent effects on the perception of

and participation in our project. While the game elements were viewed critically by some colleagues and gatekeepers, they helped motivate students to participate and engage in the research task without completely overshadowing the research and learning incentives. This in line with parts of the literature on gamification in citizen science where some argue for the benefits of gamification, while others emphasize the dangers involved. For example, intrinsic motivation might be replaced by extrinsic motives (Deci et al., 1999; C. Phillips et al., 2018), which may boost participation in the short term but could prove detrimental to engagement and the scientific cause overall in the long term. Our project was designed to offer a range of features with different attributes in order to appeal to different audiences with varying interests and motivations (after all, we wanted to attract students from sociology as well as entrepreneurship classes). However, it is possible that some of these features overshadowed others, reducing the overall appeal of the project to participants. In our case, for example, it could be that some students interested in the science behind our project may not have participated as they may have been put off by the competition element. Thus, while appealing to different user groups through different design elements still seems to be a good strategy to maximize participation, project managers must be careful how these are communicated and presented to audiences so that each audience is attracted by those features which are tailored towards them.

#### **4 OPPORTUNITIES, CONDITIONS, OUTLOOK**

In our Data Traces Project, we used large human and personal resources to test the connection between online teaching and crowd science. Despite technical challenges, criticism from the field and the fact that the number of participants was ultimately low, we consider the idea to be principally viable. We would like to motivate people to continue experimenting with this format. From our perspective, Crowd Science infused Learning holds at least three interesting opportunities.

Firstly, the format allows integrating a new variant of inquiry-based learning to established teaching formats such as seminars or lectures, even beyond specified methods courses or student research projects. In this way, the teaching experience - described as predominantly positive - can be extended to gain practical insights into partial steps of the research process. Secondly, the online teaching unit gives students access to expert knowledge and provides the opportunity for repeated consumption of the teaching unit. Teachers on-site can use this format flexibly. Thirdly, Crowd Science infused Learning allows to formulate relatively demanding tasks and access data types that are otherwise difficult to access or to interpret relatively complex data. In this respect, according to our own experience

and critical analysis, Crowd Science infused Learning holds considerable opportunities for research and teaching in the social sciences.

Simultaneously, the critical-analytical view of the connection between online teaching and crowd science has shown how many preconditions must be met before it can become successful. To sum up, we can formulate three conditions under which Crowd Science infused Learning can be sustainable: (1) an establishment of a culture of mediation, (2) a fit with the local teaching context, and (3) the formulation of a task that takes learning and research effects equally into consideration.

(1) Crowd Science infused Learning, as proposed here, is integrated as a sub-element in an existing course. Thus, it requires the willingness of local teachers to take on a mediating role. Therefore, it is important not only to acquire an interest in this format among teachers of sociology (or other disciplines) but also to convince them of the quality of the content and the benefits for their students. Only if courses are large enough or a critical mass of teachers agrees to implement this format into their teaching, participation can be scaled. This would then justify the effort to produce the online teaching unit and its platform and generate a sufficient number of tasks to be worked on for research. Such a culture of mediation cannot be realized within a few months but requires a considerable amount of time. However, likely, this community of experts would also be easier to mobilize to work on other tasks. This, in turn, argues in favor of anchoring Crowd Science infused Learning in a permanent digital infrastructure, which could then be filled with interchangeable content.

(2) In our reflection, it also became clear that Crowd Science infused Learning needs to fit in with the teaching context on site. On the one hand, this concerns integrating this format into existing curricula. A moderated exchange on the respective teaching content with the teachers on-site seems necessary first. On the other hand, the learning performance for the respective course should be credited, at least partially. Without this official recognition, Crowd Science infused Learning remains a purely voluntary activity, which does not necessarily justify the focus on students as the crowd. In this respect, creating the ability to fit in with the respective teaching context also means addressing and applying existing incentive structures.<sup>3</sup>

(3) A task must be developed that allows the knowledge from the teaching unit to be applied in research and considers the learning effect of the students as well as the interests of the offering researchers equally. Assignments of medium complexity such as data research (as in our

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<sup>3</sup> Accordingly, we would argue from our experience that other incentives, such as those that can be generated by game elements, should only be used cautiously.

example), the interpretation of texts, or the recording of short audio or video sequences are conceivable.

The complexity of these conditions shows that Crowd Science infused Learning's possibilities are not easily realized. Nonetheless, we can imagine at least one scenario in which an adapted concept could be implemented. In this scenario, an association of lecturers at universities within sociology and the social sciences jointly commit themselves to Crowd Science infused Learning's further development. They exchange information about the online teaching unit's quality standards, use synergy effects in the production of the online teaching unit and the construction of the platform, and agree to regularly incorporate the format of digital inquiry-based learning into their classroom courses. The task following the online teaching unit could then be exchanged over time. Within such a circle, a culture of mediation could be established. The ability to fit into the teaching context could be set up, and changing tasks could be formulated that take the teaching and research interests of participants equally into account.

Such a culture of mediation would mostly encompass social scientist and researchers working together to achieve the common goal of establishing the desired research and teaching platform. Together, they might form a more or less institutionalized network to keep the platform up and running by sharing and collaborating on research tasks, teaching content and the recruitment of students and volunteers. This is somewhat different from collectives and communities of citizen science volunteers that have developed in some of the existing, long-standing citizen science projects based on the possibilities of participants to communicate and cooperate with each other as they perform the requested research tasks (Tinati et al., 2016). Such volunteer communities can foster the research process as volunteers help each other through the exchange of tips and tricks on the research tasks, but also through developing gamification elements of their own, setting up their own research puzzles objectives which are shared and recognized by other members of the community (Greenhill et al., 2014). However, these two communities, researchers and volunteers could very much overlap and benefit from each other. Through ongoing engagement, volunteers could develop a say in the design of research tasks and teaching units. For volunteers, on the one hand, this could mean a role change from “merely” contributing to fully cooperating or even co-creating citizen science projects in conjunction with researchers. Researchers and scientists, on the other hand, could benefit from such a devoted pool of research volunteers and participants as recruiting new participants for a newly established citizen science project always is a challenge.

Finally, we like to note that the current teaching environment needed to be radically adapted during the COVID 19 pandemic (Gillis & Krull,



2020). The integration of Crowd Science infused Learning as an online teaching unit and a digital form of inquiry-based learning seems less challenging when integrated into online learning environments than when we tried to integrate it into analog classroom settings. While it is still too early to see what the long-term effects on the collective experience of sociology teachers and students in terms of learning will be, Crowd Science infused Learning certainly offers online courses on sociological methods or other sociological sub-disciplines (in our case, organizational or economic sociology) to link research and teaching in an innovative manner.

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## REVIEW ESSAY: UNRAVELLING DEMOCRACY'S ANTI- DEMOCRATIC MACHINE

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### ABSTRACT

This review of two recent books, with further discussion of a third, addresses questions of the direction of democracy and the impacts of media circulation and data extraction on democratic culture. The reviewed books are Selena Nemorin (2018); *Biosurveillance in New Media Marketing: World, Discourse, Representation*, and Dipankar Sinha (2018); *The Information Game in Democracy*, with discussion also of Peter Csigo (2016); *The Neopopular Bubble: Speculating on "the People" in Late Modern Democracy*.

Keywords: information; democracy; biosurveillance

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What is there in democracy itself, which tends to subvert its core ideals from within' (Sinha, ix)? That is the question with which Dipankar Sinha, Professor of Political Science at Calcutta University, begins his searching and deeply thoughtful book. The answer, he contends, lies in information, and already here Sinha moves far beyond most mainstream political science. For Sinha is that rare political scientist who reads and takes seriously the communications literature, and the causal significance of 'mediation'.

The irony, Sinha notes, is that we have independent, large literatures on 'information society' and the development of democracy, but relatively little work on the fate of information *in* democracy – until perhaps the past few years when concerns about social media platforms have become strident. Sinha's book, written before the Cambridge Analytica scandal broke and before the recent scandals over WhatsApp usage by populist politics in India, can be seen as a broad harbinger of this recent shift in debates, but one from which there is still a great deal to learn.

Sinha's core argument in the first two-thirds of this richly theorized book is that the workings of information in democracy have lain largely unexamined in mainstream political science, and in particular the shaping of information by power relations whose 'exclusionary politics' undermines the 'inclusionary promise of representative democracy' (xiii). Too often, he says, the flow of information needed, as Robert Dahl long ago argued, for anything like democracy has been taken-for-granted, in part because the very word 'information' appears to be neutral. It is all too easy therefore to neglect the *politics* of information, which is highly misleading, since 'such politics is based on steep asymmetrical relations' (5). Here lies the oligarchic engine at the core of democratic politics. Sinha's concept for this struggle over information is 'the information game'. This game is becoming both more extensive and ever more in need of disguise, lest the legitimacy of democratic systems starts to collapse.

Sinha's major contribution is to see that the politics of information is a deeper and more intractable problem than the problem of 'representation' that is standardly regarded as the weakness of democracy institutions. But the problem of information is worsened by academia's generally defective approaches to analysing practices of information themselves. As a political scientist, Dipankar Sinha is visionary in insisting on the need for a *socially grounded* approach to the production of information and, just as important, the production of the *trust* needed for quality information to flow effectively. Trust is an 'invisible institution', that is difficult to sustain and constantly liable to negative feedback loops, made worse by the increasing commodification of information and the growing dominance of corporate power in information's production.

Sinha pursues these concerns in three central chapters which unpack how inadequate standard treatments of information in democracy are. His first target is the discourse, so pervasive from the 1990s, on ‘governance’: remember that Sinha writes from India, where development discourse is something still regularly imposed on local understandings. Drawing on Boaventura de Sousa Santos’ deep critique of neoliberal logics, Sinha shows how ‘governance’ discourse, while *appearing* to democratize the policy-generating practices of centralized states, always lacks a practical model for how communication might actually include citizen populations. This discourse ignores persistent inequalities in access to information and communication skills, and, even more dangerous, ignores the need, always, for effective *local* processes of access to, and participation in the production of, information. Rhetorics of ‘information’ and ‘networks’ won’t help us, Sinha insists, when we fail to ask ‘whose society is it’ that is being described (55). But Sinha is no default pessimist: he sees potential ways forward in new digital forms of connection that, in principle, could generate ‘dynamic, pluralistic, reflexive, and democratic [forms of] governance’ (58).

This however takes us to Sinha’s second target, which is our broader understanding of the practical role of information in digital societies. He grounds this critique in a review of early theories of the ‘information society’, siding more with the later scepticism of Scott Lash than with the apparent optimism of those early theories. He also is sharply critical of what once seemed radical attempts to develop a policy framework for democratizing the ‘information society’: The WSIS (World Summit on Information Society) meetings of 2003 and 2005. The problem, Sinha plausibly argues, is that their discourse never went far enough, always leaving unquestioned ‘the privatization of information and communication’ (84). In a strikingly pessimistic conclusion to chapter 3, Sinha argues: ‘information as the captive component of the ICT-led Information society is thus the gateway to . . . the high-tech and highly technocratic notion of the Network Society and, on a broader scale, to the reductionist and corrosive vision of democracy’ (86).

This, in turn, sets up the boldest chapter of the book (chapter 4) which not only offers a trenchant critique of Manuel Castells’ theory of the network society (and informational capitalism), but also provides its own rich account of how information works in democracy. Although early critiques noted Castells’ causal reductionism (giving overwhelming prominence to technological change, while trying to deny this), they have not stopped its wide influence. Sinha’s book therefore is salutary for insisting, once again, on the technocratic nature of Castell’s argument, for example, in how it reads political resistance. For it ‘not only subscribes to technotopia, but also goes on to strengthen it by [its] way of explaining information generation, processing and transmission’ (96). True, critiques



of Castells' general argument are easy to make, but Sinha goes further, noting how Castells fails to pay attention to the actual complexity of information dynamics and how information endures socially through processes of 'reality-creation' (96). The reason is that Castells ignores the 'epistemological dimension' of practices which not only disseminate information, but *construct* ways of thinking and acting. Sinha's initial example is Amazon's construction of new digital market-places, which appear *prima facie* to democratize market functioning, but actually are deeply exclusionary (99). The result of the practices of Amazon and many other platforms is not only that market processes are massively intensified, but that non-commodified communication becomes ever more difficult (here Sinha endorses much of Jodi Dean's (2009) analysis of communicative capitalism).

So what are the implications of this enriched political science approach for our understanding of contemporary politics? This is where I found the book a little disappointing. It would perhaps be too much to expect a book published in 2018 to offer a detailed deconstruction of the politics of information in Modi's India (Narendra Modi having been elected as Prime Minister only in 2014); in any case, it seems that Sinha's intention is to write a book for a general international audience, rather than for analysts of Indian politics. But I had expected Sinha to offer a more fully developed account of the strengths and weaknesses of contemporary information politics (which he calls the information 'game-in-game'). The broad moves of the final chapters are valuable: to go beyond general capitalist critique and challenge the specific problems of 'digital rationality'; a suspicion of proposals simply for more transparency or for crude 'digital' solutions to democracy's long-term problems. But Sinha's concept of 'programmed democracy' (our irredeemably digital democratic world) needs, I suggest, more expansion, even if I agree with his insistence on the enduring importance of face-to-face elements. Similarly chapter 6 on Mediatization stays perhaps too close to existing debates on the mediatization of politics, though Sinha does make one important point: that recent arguments for the overwhelming importance of social media in democratic decline may underestimate the continuing importance of traditional media in countries such as India where traditional media still command very high levels of trust.

Nevertheless, it is Sinha's final question that resonates most powerfully, when he asks 'to what extent . . . [often digital] popular mobilizations . . . are capable of reorienting the highly asymmetrical information order in a democracy' (191). Without serious attention to the costs *for voice* of today's 'asymmetrical information order', 'democracy', Sinha concludes, 'can have no arrival' (195). This, by itself, is enough to

unsettle the standard debates on digital democracy in the West which assume so often that democracy is something that has already arrived.

### Deepening the democratic puzzle

To extend our understanding of the puzzle of democracy's anti-democratic elements, it is worth turning briefly to a book published just over a year before Sinha's: Peter Csigo's *The Neopopular Bubble*, one of the most brilliant and original books on political communication of recent years. Csigo like Sinha starts from the question of what is undermining democracy from within, but in a way that challenges the assumptions of the mediatization of politics literature that Sinha assumes as a reference-point. For Csigo challenges the assumption, deep within the mediatization literature, that politics *really is* being transformed by an increasing pressure to *conform* political practice to what political consumers (and the media that represent them) want. But what if no one knows what political consumers want, and what mediatization practices respond to is not any reality, but the image that political actors have of what other political actors think about people want?

The result would be not a political process closer to popular instincts, but rather an unending speculative expansion that continuously chases the unknowable, while telling itself that it is getting ever closer to satisfying 'the people's' desires. There is, perhaps, an echo here of Slavoj Žižek's deconstruction of 1990s Balkan nationalism (Žižek 1990) as a Lacanian fantasy whose subjects compete in circling around an object of desire that can never be defined. However, Csigo's theoretical reference-points are not psychoanalysis, but economics, in particular John Maynard Keynes' explanation of market speculation where traders speculate not on what will be popular, but on what other traders' *believe* will be popular. Csigo's great originality is to propose that such speculative bubbles, which are unmoored from any underlying reality, have taken over mediated politics as well as economics.

What Csigo and Sinha have in common is to bring out the epistemological issues that underlie the problems of information flow in democracy. For Sinha, it is a matter of a corporate-driven reconstruction of the types of information that matter in economy and society. For Csigo, it is matter not so much of epistemological construction, as of error, a false assumption that populism addresses what 'the people' actually want, but with the added subtlety that academics compound that error by taking mainstream political actors' beliefs about their relation to the popular at something like face value.

From these perspectives, the problems of digital democracies are becoming ever more difficult to disentangle: there is a convergence, for

sure, of many deep underlying issues of inequality, representation, and uneven information flow, but each are crossed by powerful new discourses that claim to speak for deep political interests, or, as Sinha discusses, to reconfigure the terrain of economy and society in ways that reshape people's interests.

At this point, enter stage right a new form of business discourse that claims to have direct access to consumers' and voters' brains and minds.

### **Neuromarketing's Motivated Fantasies**

Neuromarketing attacks the problem of information in liberal democratic societies – indeed all societies – from a radical new angle. In direct opposition to Sinha's socially grounded approach to how meaning is made through information, the industry discourse of neuromarketing offers a top-down technique for bypassing the human subject's informational processing and knowing *directly* how the consumer – and potentially also the citizen – will act. Even more alarmingly, it claims to have on its side both technical neuroscience and the latest thinking in psychology (Kahneman) and philosophy of consciousness (Damasio). While some of neuromarketing's claims might seem outlandish, they are becoming normalized in everyday business practice. The task of deconstructing those claims before they become fully dominant is what motivates Selena Nemorin's excellent book.

As she makes clear at the outset, neuromarketing is not just a technique for nudging responses to ads through neuroscience, but the project of 'extracting marketing-relevant information from the consumer's subconscious' (Nemorin, 3). Why? Put bluntly, because of neuromarketing's belief that 'people often do not know their own minds' (Clint Kilts of the Brighthouse Institute, quoted 4). In the hands of a malevolent dictator, such claims would seem obviously dangerous and self-servicing; so too in the hands of a populist politician who appeared a friend of democracy, the type of politician that both Sinha and Csigo are worried about. But from the mouths of marketers, playfully working, it seems, at the edges of imaginative technologies of persuasion, few alarm bells have rung outside debates in specialist articles. That is why Nemorin's thorough expose of neuromarketing as a practice is of exceptional importance.

Nemorin takes care to build her critique on three foundations. First, a thorough analysis of texts from the neuromarketing industry over two decades (1998-2018), including conference speeches, papers, and patents. Second, a sophisticated theoretical model for interpreting the frameworks through which neuromarketing makes sense of the world and for comparing these frameworks with those that normally guide how we interpret human action. Third, close attention to the important debates in

economic psychology and brain science on which neuromarketing seeks to build its claims.

The result is a compelling case for limiting the role of neuromarketing in public and daily life. It works because Nemorin takes, as seriously as does Sinha for informational discourse, neuromarketing's project for reality creation or, as she puts it, its project of creating 'a cultural media environment within which realities are shaped and revealed by those in power' (7). To grasp that project, we must take seriously neuromarketing's epistemology: its goal of building 'a new epistemic knowledge that ultimately instrumentalizes consumers for material gain' (15) (again the parallel with Sinha's argument is clear). The criticism of marketing is of course not new, nor is it new to criticise marketing for extracting consumer data (see eg Turov 2011). But neuromarketing represents something more concentrated and sophisticated, and so requires a more particular critique. For Selena Nemorin, neuromarketing is a form of 'biosurveillance' that extends the Foucauldian notion of biopower within a specialized bioeconomy focussed on generating what she calls 'biovalue', that is, value direct from life itself (27).

Nemorin is herself not the first to analyze the bioeconomy, but she is one of the first to grasp its huge implications for the framing of politics and, as she puts it, for 'the potential of democratic communicative action' (4). The book's other great strength is to detach itself from the anti-normative scepticism that often accompanies Foucauldian approaches: I'll return to Nemorin's normative position shortly. But right away I would argue that her critique is effective only because she addresses head on the potential normative power of neuromarketing's own framework.

First, Nemorin contextualizes the emergence of neuromarketing within a broader 'neuro-cultural turn' of recent decades that has come to 'privilege neurobiological explanations over psychological theories of behavior' (5): compare Rose and Abi-Rached (2013). Here material technologies such as brain imaging (fMRI and EEG) are crucial. So too are new scientific ideas: the massive popularity of Daniel Kahneman's recategorization of human thinking in terms of 'fast' and 'slow' processes', with fast, instinctive thinking shown to have a greater role in economic decision-making than neoclassical economists had ever believed, and of Antonio Damasio's subtle arguments that emotion plays a much greater role in general thinking and decision-making than previously believed. All these developments converge to authorise, or so it seems, neuromarketing's claims both to be able to use neuroscientific techniques to know what consumers want better than they know themselves *and* to seek to influence the consumer brain at the pre-conscious level, bypassing the reflexive and conscious decision-making that neuromarketing indeed believes is less important.

In four central chapters, Nemorin explores the discursive world of neuromarketing in detail, finding at its core some key assumptions that appear to justify its audacious interventions. For example, the assumptions, first, that customers do not know, or have access to, the truth about themselves, not at least through verbal reflections alone; second, that consumers cannot be trusted to behave rationally; third, that algorithms can know consumers better than they know themselves, enabling, in turn, predictive tools that bypass the old marketing technique of asking people what they think about, for example, brands. Yet, this new approach to marketing runs counter to key assumptions of democratic culture, that people can vote based on knowing why they act and why they think what they do; indeed it does so, while apparently also servicing a key freedom (market freedom) that is supposed to be a necessary support of democratic culture.

In her boldest move, Nemorin uses Heidegger's account of how humans frame the world as a world to understand the limits of neuromarketing's own thinking. Through careful analysis, she unpacks how, rarely, neuromarketers treat consumers as having a sophisticated engagement with the economy that marketers must somehow try to work round. More often, they regard consumers as having a limited grasp on what drives their economic decision-making, being like the dumb animals that Heidegger characterizes as being 'poor in world'. And often neuromarketers treat consumers more like the stones that Heidegger called 'worldless'. Although this Heideggerian framework might seem a little top-heavy as a deconstructive technique, it is in fact a very effective way of taking neuromarketing seriously, while revealing its instrumentarian and dehumanizing logic.

Listen, for example, to Christophe Morin, executive at SalesBrain in his lecture 'Is There a Buy Button in the Brain?' which Nemorin discusses extensively:

[neuromarketing provides] cutting edge methods for directly probing minds without requiring demanding cognitive or conscious participation (...) [such methods] do so by removing the biggest obstacle facing conventional advertising research, which is **to trust that people have both the will and the capacity to report how they are affected** by a specific piece of marketing (quoted Nemorin 140, NC emphasis).

So neuromarketing recognizes, but seeks to override, people's possible indifference to marketing, by claiming people's either can't report what they think, or, if they can, they might want to! These however are not the outlandish ravings of wild eccentrics, but the stuff of which many lucrative patents in the field of emotional AI and neuromarketing are built. Nemorin

only hints at the implications when such approaches are applied to the general social media landscape, but she does allude in passing to Facebook's notorious experiment on how misleading material can spread like wildfire on social media networks (169).

Perhaps not surprisingly the weakest chapter (chapter 8) is where Nemorin tries to allow that there might be some marketers who do take the reflective richness of consumers seriously: she seems to find few examples of this, though she has no problem showing the subtlety of writers such as Kahneman and Damasio from which neuromarketing borrows some of its simplified recipes. Nemorin is more comfortable exploring neuromarketing's less respectful ways of addressing consumers, an overall approach she sums up as 'augmented animality' (216).

To her credit, Nemorin does not shy away from the normative conclusions that flow from her deconstruction of the neuromarketing industry. At this point – and this is potentially a disadvantage of her theoretical model – she is not comfortable for obvious reasons with using Heidegger as the source of her normative framing, given the other associations of his thought. Instead, she relies on a combination of political economy (the broad tradition of critiquing the bioeconomy plus more recent critiques of surveillance and datafication) with a Deweyian concept of democracy as free communicative action. Affirming that freedom is a 'primary social value' (220), Nemorin argues that neuromarketing cannot be seen other than as a 'breach of [the] self' that underlies the possibility of freedom. As she vividly writes neuromarketing amounts to a 'breach of self [that] occurs the moment the inward space where we have freedom to choose is wrenched open to disinhibition and external manipulation, rendering our neurophysiological data into biovalue' (225).

But, to conclude, I want to ask: how should we think about Nemorin's explicit normative stance?

### **Taking a Stand**

Nemorin is not alone among commentators in taking an explicit normative stance on the digital social world. Other examples include Sherry Turkle's (2011) work on young people's use of digital technologies, Mireille Hildebrandt's drawing on the concept of autonomy (Hildebrandt 2015), Shoshana Zuboff's (2019) interpretation of surveillance capitalism as a denial of freedom, my own work with Ulises Mejias on how data colonialism undermines 'the space of the self' (Couldry and Mejias 2019), and, just translated into English, Beate Rössler's work on autonomy (Rössler 2021).

How far we have travelled, it seems, from the unease against normative position-taking that for long characterized the Foucauldian

tradition on which Nemorin's analysis frequently draws and which characterized indeed Foucault's own work, as Charles Taylor brought out in an important essay (Taylor 1986)! It is only two decades ago that it seemed radical for prominent Foucauldian Nikolas Rose to write, in his provocatively named book *Powers of Freedom*, that 'one must discard the presupposition that one can criticize regimes of power to the extent that they falsify and distort human subjectivity and utilize the extent of this falsification as a yardstick by which power can be evaluated.' For 'power . . . acts through practices that "make up subjects" as free persons' (Rose 1999: 95). 'Freedom', Rose concluded resoundingly, 'is *the name we give today* to a kind of power one brings to bear upon oneself, and a mode of bringing power to bear upon others . . . freedom is particularly problematic when we demand to be governed in its name' (Rose 1999: 96). Without for one moment minimizing the importance of the critique of neoliberal appropriations of freedom to which both Foucault and Rose contributed, it is clear that Rose's position was intended to go further: to *disarm* freedom as a normative concept for interpreting and challenging social power.

Can such abstinence from normative uses of values such as freedom and autonomy be adequate in our 'today', in a world where, from many directions, explicit projects to undermine or discount human beings' capacities for free action and reflection are under way? Can we safely abandon the term freedom and still address the anti-democratic dynamics of today's 'democracies'? The answer of Selena Nemorin and Dipankar Sinha would seem quite clearly to be 'no'. And that is one wider significance of these two books: as evidence of the normative turn which characterizes critical communications research and critical social science in these deeply troubled times.

## BOOKS REVIEWED

Selena Nemorin (2018). *Biosurveillance in New Media Marketing: World, Discourse, Representation*. Basingstoke: Palgrave MacMillan. 234 + ix pp. US \$64.99: ebook. ISBN: 978-3-319-96217-7.

Dipankar Sinha (2018). *The Information Game in Democracy*. London and New York: Routledge. 218 + xviii pp. £33.29: ebook. ISBN: 978-0-429-50766-3.

Also discussed:

Peter Csigo (2016). *The Neopopular Bubble: Speculating on "the People" in Late Modern Democracy*. Budapest and New York: Central European University Press. 409 + xvi pp. Euro 60: hbk. ISBN: 978-963-386-167-7.

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