

Article

Caseworkers on the digital streets: Discretion in the digital decision- making process

by

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Abstract

It is an intrinsic feature of many public agencies that they are dependent on street-level bureaucrats making important decisions regarding their clients. While some have claimed that such decisions are in danger of being corrupted by the bureaucrats' discretionary powers, Lipsky argued that this discretion was necessary for the proper implication of social policy. However, the digitalization of government has altered the way in which many public servants reach their decisions. For instance, Bovens and Zouridis have argued that digitalization limits or removes bureaucrats' professional discretion when making decisions, which can have a negative effect on public services. While decisions are singular events, the process of reaching them is complex and drawn out over time. Therefore, the purpose of this article is to explore the process of decision-making in a public service context, and how digitalization has impacted caseworker discretion. The context of this study is the Norwegian child welfare service, where we have conducted focus group interviews with 26 caseworkers. Our analyses of the decision-making process uncovered several points in which digitalization has increased the need for caseworker discretion, i.e., an increased availability of caseworkers, information gathering and the admissibility of private information online. Our study demonstrates how even though digital technology such as social media presents new opportunities for information gathering, it also poses a danger for the creation of discriminatory practices toward citizens that could negatively affect the quality of service provision. Furthermore, conceptually deconstructing the decision-making process was beneficial to understanding how digitalization impacts different aspects of the case-handling process.

Keywords: digital government, discretion, street-level bureaucracy, social media, child welfare services

1. Introduction

In the last two decades, many civil servants have experienced substantial changes to their role due to the development of digital government. This has given rise to much research on how different parts of public administration have been impacted by digital technology. Part of this research is aimed at the street level of many public agencies, the level that interacts with clients, and turns policy into practice by deciding on individual cases. This research often compares digital bureaucracy with more traditional and non-digital public administration. An important contribution to our understanding of the role of street-level bureaucrats was provided by Lipsky's (2010) classic work, *Street-level Bureaucracy: Dilemmas of the Individual in Public Service*. The street-level bureaucrat is faced with many choices in how to balance the needs and desires of citizens and the rules of the organization where they are employed. Discretion is treated not as something that is wholly unwanted but, rather, as a necessity of public administration and policy. Lipsky's description of street-level bureaucracy has been impactful because it describes the role of the street-level bureaucrat in ways immediately familiar to both practitioners and scholars.

However, Lipsky's description is not as recognizable as it used to be. While computers have been used in public administration for most of the post-war era, the rapid pace of digitalization in the last two decades has profoundly changed how street-level bureaucrats interact with people in public encounters. This change was described early on by Bovens and Zouridis (2002), who argued that the increased use of digital technology in public administration has turned street-level bureaucracy into, first, a screen-level bureaucracy and, second, a system-level bureaucracy. Screen-level bureaucracy refers to the shift from caseworkers being "on the streets" when interacting with citizens and making decisions about clients, to casework revolving around computer screens, filling out electronic forms and fixed templates in various ICT systems.

According to Bovens and Zouridis, one of the most significant impacts of this digital transition has been the loss of the professional discretion used by bureaucrats when making decision. As Lipsky (2010) described the necessity of street-level bureaucrats' use of discretion to make decisions pursuant to the goals of public

policy, Bovens and Zouridis (2002) argued that digital technology would remove the street-level bureaucrat's ability to make such discretionary judgments, even to the point of removing the human bureaucrat entirely from the decision. Nonetheless, making a decision is not a unitary event; it should be understood as a social, complex and lengthy process (Simon, 1965). As such, some have argued that digital technologies impact on discretion might be more context-dependent (Buffat, 2015; Hansen et.al, 2018). With the wide application of digital technology, it is relevant to unpack the various steps of a decision-making process to see how technology is used, and what level of discretionary power is required from human bureaucrats (Ranerup & Henriksen, 2022).

The purpose of this article is to investigate how digitalization impacts the decision-making of street-level bureaucrats. Our starting point is the article by Bovens and Zouridis (2002), who argue that digitalization in the street-level bureaucracy limits and removes professional discretion. Their study was of the presence of digital systems in the street-level work environment, and how that impacted decision-making. Our research question is therefore close to one posed by Bovens and Zouridis in their article by investigating how digitalization has impacted discretionary power. However, while Bovens and Zouridis' emphasis is mostly on the legally binding final result, we intend to study decision-making as a process. In such a process, digital technology can fill other functions than locking down the final result. We are motivated by an overarching research question: *Where and how in the decision-making process has digital technology changed street-level bureaucrats use of discretion?* Like Bovens and Zouridis, we have emphasized the working environment of the caseworkers, and how digital technology fit within it. Consequently, we intend to find digital technology at work in how caseworkers make decisions, rather than starting with the digital technologies themselves. We believe our study addresses two significant gaps. First, digital technology is sometimes referred to as information and communication technology (ICT). While ICT is often discussed as a singular type of technology, it consists of a multitude of technologies. For instance, even its two main constituent technological domains – information and communication – may have dialectic impacts when they are applied in the same context (Margetts & Dunleavy, 2013). The discussion surrounding digitalization and decision-making, most notably raised by Bovens and Zouridis (2002), has

emphasized the role of information technology and how this limits discretion. In addition to ICT systems and what can be considered as state-initiated technologies, recent studies also show that social media, SMS and Google are being used by street-level bureaucrats in information gathering (Byrne et al., 2019; Cooner et al., 2020; Kvakic & Wærdahl, 2022). Our study is more sensitive to the likelihood that this information affects street-level bureaucrats in their decision-making about clients.

Secondly, as an extension of the first gap, we believe that prior research has placed a too strong emphasis on the singular act of a street-level bureaucrat making a final decision. Several previous studies on street-level bureaucracy and digital technology have described how caseworkers handle their workday, professionalism and client interaction (Buffat, 2015; Busch, Henriksen, & Sæbø, 2018). These studies have shown how important digital technology is for many types of activities performed by street-level bureaucrats, and therefore should also impact their final decision-making. An essential component of our study is breaking down a decision into a process of several steps. To achieve this, we have relied on Molander's (2016) theoretical work on discretion in the public services. Molander's contribution offers more granularity in our arguments regarding changes caused by an increased use of digital technology throughout a caseworker's involvement, and not just at the end. In our article, we use Molander's model of warrants that contribute to inform a professional in decision-making, including the use of internet and social media in digital information inquiry.

As an extreme and revelatory case, we look at a public service that is high in both discretion and high-impact decisions: namely, child welfare services (CWS). Our particular case, Norwegian CWS, has experienced a period of rapid digitalization. However, the CWS is not unique in terms of applying smartphones, computers and the internet in their everyday work, as this may be seen in the context of an increased digital society, in which digital tools have become a natural part of communication and interaction. This includes offering more digital services and digital modes of communication for its service users. Consequently, the caseworkers in our study have seen their work environment gradually change due to the introduction of digital technologies. This change has not just entailed new digital systems specifically created for their service, but also a higher level of dependence and use of digital tools overall in the handling of cases. CWS are also interesting because of their

dependency on contact with the clients they serve. As such, it is a public service that cannot do away with the need for human caseworkers in favour of digital technology; instead, it needs to find ways to integrate technology into a people-dominated service. This contributes to the importance of this study, as poor integration and use of technology can lead to a service that is neither more effective nor efficient.

2. Theory

The theoretical framing of this study is Lipsky's concept of the street-level bureaucracy. His empirically based study on the goings-on at the level where services are created for citizens, has been hugely influential in the study of both public administrations and public policy. Due to the significance and broad nature of his work, it has been further developed in several directions (Brodkin, 2012). For instance, some developments have explored the professional perspectives of the street-level bureaucrat him- or herself (Zacka, 2017), while others have highlighted important factors to how well citizens access the street-level bureaucracy (Brodkin & Majmundar, 2010).

While the theoretical basis of our study has been Lipsky's street-level bureaucracy, we have engaged the most closely with prior works related to decision-making and discretion. This is an important part of the function of the street-level bureaucracy, and has therefore often been studied in its own capacity. The following section will begin by giving an overall review of literature regarding digitalization and the street-level bureaucracy before going over the more specific prior literature on decision-making and discretion relevant for our study.

2.1. Lipsky's street-level bureaucracy

Lipsky's (2010) work on street-level bureaucracy has become influential in the study of public services by stressing the necessity of street-level bureaucrats and their professionalism in ensuring the successful implementation of social policy. While discretionary decisions can be used to discriminate against citizens, discretion is also necessary to ensure fairness and policy outcomes that are difficult to codify in legislation (Molander, 2016). For this reason, discretion as a concept has benefitted the study of bureaucratic professionalism, turning the discussion away from how

discretion can be avoided towards how something unavoidable and necessary can be improved (Brodkin, 2012).

Nevertheless, Lipsky's original study came on the cusp of a transition that would significantly change bureaucracy: the digital revolution. Computers have been used for public administration purposes for most of the post-war era, but the last three decades have witnessed them given a far more prominent place. Before this ascension, the impact of digital technology on government received some scholarly attention, specifically in terms of its legal implications (Bing, 1994; Scharum, 1994). With the digital revolution in the 1990s, however, questions regarding the wider implications of the digitalization of public services were gaining momentum.

An important contribution to this literature was the study by Bovens and Zouridis (2002) on how digitalization impacted Lipsky's street-level bureaucracy and the use of discretion. Their main argument was that making the street-level bureaucracy more digital would lead to bureaucrats being moved away from the citizens they served and reduce their discretionary power. Similar arguments have been made elsewhere, linking digitalization to fewer opportunities for bureaucrats to use their professional judgment, and a harder time for citizens to acquire proper services (Reddick, 2005; Buffat, 2015; Busch & Henriksen 2018; Peeters & Widlak, 2018).

2.2 Discretion and decision-making

The argument that digital technology can create a system that is rigid and lacks common sense flexibility is at the forefront of many studies of street-level bureaucracy. Yet, digital technology has also been found to create opportunities for public administrators to create flexible organizations (Wang, Medaglia, & Zheng, 2018), and for people to create personalized opportunities to generate value in their life (Alam, 2021; Lee, Kim, Park, Park, & Oh, 2018; Lember, Brandsen, & Tönurist, 2019). The benefits derived from digital transformation are somewhat tempered by the understanding that many people are unable to seize the opportunities presented to them by digital technology (Madsen & Kræmmergaard, 2016; Madsen, Lindgren, & Melin, 2021). This double-edged view of digital technology as both restrictive and

liberating to people is somewhat lacking in the research on digital technology and street-level discretion.

An important exception to this is the theoretical work by Buffat (2015) in the exploring of the potential dialectical effects of digital technology on discretion. Buffat maintained that digital technology can be both inhibiting and enabling when discretion is changed by digital technology. However, in Buffat's work, discretion is enabled when the bureaucrat creates opportunities in their work despite the digital system, or when they "manipulate" the digital system in unintended ways. For instance, a skilled bureaucrat knows how to counteract the limitations of the digital system to obtain results deemed appropriate (Buffat, 2015), or how to avoid scrutiny from their supervisor when their work is less observable on digital platforms (Jorna & Wagenaar, 2007). While there is a clear distinction between the inhibiting and enabling consequences of digitalization on discretion, the above examples illustrate a separation between instances in which digital systems are used as intended, as well as those in which discretion is used by caseworkers to find opportunities to circumvent or manipulate them.

Lipsky's (2010) description of the typical perspective taken on decision-making in a street-level context emphasizes the act itself and its social context. Other theoretical approaches have taken a more procedural view of decision-making, which is more relevant to our study. Decision-making, including within public administrations, is an act that can span significant time and include complex sub-operations along the way (Simon, 1965). Simplified conceptualizations of this process often include several steps – identifying the problem, gathering information, analysing the information, and constructing arguments and conclusions – before reaching a final decision (Lunenburg, 2010; O'Sullivan, 2010; Simon, 1965).

In an attempt to further describe the anatomy of discretion, Molander (2016) applied Toulmin's (2003) description of reasoning. In Toulmin's work, the simplest form of reasoning has three elements: data that forms the basis of a conclusion supported by a warrant (see Figure 1). In Molander's (2016) view, a weaker warrant gives more room for discretion. Considering the work of public servants, the data consist of the information available to them, while the conclusion constitutes their decision. The

warrant has to do with the many regulations and guidelines that caseworkers must consider when making their decision.

Figure 1: The basic elements of a decision



However, as noted by Molander, there are potentially several warrants, each affecting different parts of the caseworker's decision-making. Molander identified two types of warrants used by professionals. First, when deciding the nature of a case and, second, when deciding its outcome. Partly employing medical parlance, Molander labelled the first warrant as the identification of rules resulting in a diagnosis, and the second warrant as a treatment rule that results in a treatment. Bovens and Zouridis' (2002) approach to discretion does not dissect quite as much as Molander's; even so, their argument can be understood within the same framework. While they consider the decision-making process in its entirety, their main argument describes how digitalization narrows the opportunity for discretion because the warrant that connects the input data to the decision has become less open to interpretation.

3. Background and context

CWS, like other street-level bureaucracies, are characterized by caseworkers operating within a wide discretionary space when conducting and assessing cases. This space is needed to meet service users' individual needs in a responsive manner. Child welfare workers conduct investigations in cases where citizens report concerns regarding a child's care situation. The professional's role is to investigate, assess, evaluate, make decisions and carry out measures with the child's best interest in mind according to the Child Welfare Act. This role puts professionals in dilemmas where they serve as helpers depending on the level of collaboration with children and parents, as well as controllers and law enforcers (Järvinen & Mik-Meyer, 2003).

The Child Welfare Act provides clear guidelines on dealing with certain parts of case management, such as time limits for assessing and concluding a case. Still, when it comes to how to investigate a case and how and where to obtain information about a child's care situation, there are few clear national guidelines. Therefore, it is primarily up to each municipal CWS and their caseworkers to decide how each case is to be conducted. This practice has largely been criticized due to differences in assessing and concluding similar cases across municipalities (The Norwegian Directorate for Children, 2016).

As for now, the main ICT tools that caseworkers have at their disposal are smartphones, laptops/computers, tablets, SMS, email, digital mail and telephones, most of which have been introduced to the professionals by the organization. Due to privacy and confidentiality reasons, social media networks such as Facebook, Snapchat and Instagram are not recommended for communication with service users. Consequently, the Internet and the social services it provides have been adopted by caseworkers themselves (Byrne et al., 2019; Cooner et al., 2020; Spilsbury et al., 2022). While the technology itself has been made available by the CWS agencies, the more informal digitalization of services can thus be viewed as a bottom-up initiative due to the overall societal development of an increased use of digital tools such as smartphones, social media, online search engines, SMS and the like.

4. Interviews and analysis

The findings reported in this article are based on four focus group interviews with caseworkers from four larger municipalities in Norway, totalling 26 caseworkers. The interviews were conducted between October 2019 and February 2020, and lasted for 60-90 minutes. The analysed interview data was collected as part of a PhD project on digitalization's impact on professional work practice in child welfare services.¹

¹ The project was approved by the Norwegian Centre for Research Data (Sikt) with reference number 362643.

The caseworkers were recruited via email through one of the staff members who worked as a link between the author conducting the interviews and the caseworkers. To assure diversity in the discussions, the interviewer asked for a group consisting of caseworkers who were young and had little work experience with the CWS, in addition to older, more experienced caseworkers. Their work experience in child welfare, including experience with the use of discretion and decision-making in child welfare cases, ranged from a few months to over 30 years. The total number of participants was a result of the recruitment process undertaken by the staff members and the inclusion criteria that the groups would consist of five to eight participants. The caseworkers were asked open-ended questions regarding their experience with digitalization in their services. Hence, the interviewer did not focus on any particular digital tools, and the caseworkers themselves were the ones who brought up discussions regarding their exercise of discretion and the use of various digital tools when performing their job.

Our analysis was inspired by Braun and Clarke's (2022) step-by-step guide on conducting a thematic analysis: 1) familiarizing oneself with the data, 2) initial coding, 3) searching for themes, 4) reviewing themes, 5) defining and naming themes and 6) reporting. Thematic analysis is a flexible method for analysing qualitative data, and identifying themes and meaningful patterns across a data set. Guided by our overarching research question, the data material was read by both authors, discussed and sorted after the informants' revelations about the use of digital technologies in the process of making decisions. After reading and coding the material, several themes and categories emerged as relevant in answering our research question. Both authors were involved in the sorting and categorizing of codes into themes. Subsequent to the coding and categorizing, the authors discussed the categories of greatest relevance to answering the research question. We discovered how digital technology impacted three aspects of discretionary decisions in the work practice of street-level bureaucrats: *digital availability*, *information gathering* and *information admissibility*.

4.1 Ethical considerations

The interviews were conducted according to the National Research Ethics Committee's guidelines for social sciences and the humanities. All participants gave their oral and written consent for participating in the research project. Even though the project was conducted in accordance with formal ethical guidelines, there were still some ethical concerns that were closely considered by the authors, and that are necessary to address, particularly in relation to informants conveying about the covert use of social media and the internet in searching up client information, and the use of fake Facebook accounts for this purpose.

The consequences of exposing caseworkers' and CWS' clandestine online practices could put practitioners, and CWS as a whole, in a negative light, and were thus carefully considered by the authors. We do acknowledge that the caseworkers' digital practices, as described in our findings section, could be considered controversial. Given that CWS practitioners' use of digital tools and social media are of current interest, and an underexplored research field, we found that our findings could not be left out. Especially given the fact that the caseworkers' digital practices could have an impact on the services the families in contact with CWS ultimately receive. Also, we have chosen to keep the four participating municipalities anonymous, even though all had given their consent in using their names in the research. Keeping out the municipalities' names contributes to maintaining the informants' anonymity.

5. Findings

Each of the three categories of issues related to discretion in the decision-making process are presented below in distinct sections and exemplified by quotes from the interviews, to better convey how the caseworkers described their experiences.

5.1 Digital availability

The caseworkers expressed how the use of SMS, smart phones and email made them more available to their clients, making it easier for clients to reach them, even when they were out of the office. They described the various benefits of ICT and availability: These factors made it easier to communicate with clients and build a better relation and connection with youth and made their work more efficient. They

deemed it faster and more efficient to send an SMS than make a phone call. Even though the caseworkers knew that SMS and email were unsafe communication tools to use when interacting with clients, as they can lead to privacy violations, they maintained that these were the most efficient and accessible communication tools. Formal communication tools, such as letters and digital mail, were considered inconvenient and outdated. The use of social media also emerged as a communication method that was considered available and convenient, particularly in terms of being in contact with younger clients. Even though very few used Messenger, Snapchat or other social media for communicating with clients, several would have liked to use social media to further increase their availability to clients.

However, the availability instantiated through digital tools did not seem to be problem-free, and could cause dilemmas for caseworkers. One of the most discussed dilemmas involved which ICT tools to use in case handling. The caseworkers could not point to any clear (service) guidelines regarding which ICT tools to use in communicating with clients. The lack of guidelines extended their room for manoeuvre. One caseworker expressed this as follows:

But I think the digital is a bit... it's a bit ... I think the discretion [room for discretion] is a bit big. And if you are talking to different people about what you do if you respond to an email to a parent, should you respond [to it]?

Arguably, because of unclear or lacking service guidelines regarding which ICT tools to use and how and when to use them, the caseworkers' communication preferences seemed to be guided by their choice of communication tool. This increased their need to use discretion regarding making themselves available to their clients and on which platforms. This, in turn, resulted in different practices and coping strategies among the caseworkers. Here, the level of discretion was the need to either decide whom to give this access to or potentially reject clients who seek it. While a caseworker cannot bar eligible clients from entering their offices, they can be selective as to who is allowed into their more private digital places, even when they conduct public business in the same place for other clients. A caseworker commented as follows:

I can say that I am very strict regarding email. I don't give my email address to parents. Eh... I can't stand that fuss. Or mobile phone [number]. But I do give it out to our partners [employees from other public services].

The increased discretion that caseworkers experience regarding availability made some of them withdraw from digital communication because of the increased workload attached to documentation demands. Nevertheless, other caseworkers seemed to compensate for their unavailability by extending their availability with the help from digital tools. Some even involved themselves emotionally:

(...) we who work with more acute cases... If I had just moved a young client in an institution [public care], I would probably feel the need to bring my [work] phone with me at home and be able to send him an SMS, like, "Are you ok?". It's about following up on the youth, and for me to be able to sleep at night, knowing that he's okay and safe.

Another caseworker expressed her emotional involvement in the following way:

... then, she [a parent] can call me back tomorrow. It's something about calming down a situation, for example, for a stressed parent, that they [can] get hold of us. Because we are unavailable.

The possibility of digital interaction seemed to extend the caseworkers' choices regarding how they meet their clients. Digital interaction allows caseworkers to have a closer and less workplace-bound relationship with some clients (Simpson, 2017), which could make them more positive towards their clients when making decisions. In the excerpt below, we show how relationship building can be accommodated by sending an SMS to check up on a client:

"How are you feeling after the previous call..." for example... Because they don't always want to be called up. Many refuse to pick up the phone and consider it [a phone call] very intimate. Then, it's better to give them that distance, like "ok, so we had a difficult conversation the other day; how are you doing now? Are you feeling better?" Until our next meeting. I don't know... I think that's caring.

As this quote shows, the introduction of these types of ICT seems to have extended the potential for public encounters outside of governmental offices and into new spaces street-level bureaucrats can "meet" with their client in the comfort of their home or interact with their client from their office while the client is at home or work. However, as this quote illustrated, some caseworkers either resolve not to use these options, or might be selective as to who they choose to interact with in this manner.

5.2 Information gathering

The groups revealed a new space for information gathering in case handling through the availability of ICT tools: social media sites. The caseworkers used Facebook to search for client information that could prove crucial in decision-making in a child's case. They were familiar with fictitious Facebook accounts administered by a CWS

worker in either their current or previous workplace. These accounts were used by some CWS departments, and not all caseworkers were familiar with them. The profiles enable caseworkers to log on and monitor client activities on Facebook without the client's knowledge. The caseworkers explained that they had found important information about a child after a Facebook search of the child's parents:

I have another example where there was a case with a mother and father, where the mother absolutely should not have been with the father. The father was a drug addict, and they had separated, something the mother officially said in a meeting [with the CWS] (...), then we heard that these two were... suddenly back together. And then, I know that someone checked Facebook and saw that it said that they were in a relationship. But at the same time, you can't go into a meeting [with a parent] and say "we checked your Facebook".

Digital sources can be used both before and after more traditional means of information gathering, and can provide justification for the actions and choices of caseworkers, e.g., "We heard/someone told us that the mother and the drug addict father were back together; it could be/was a matter of the child's health and safety, so we had to/chose to use Facebook to gather information". Hearsay that is not usable in decision-making can prompt a caseworker to look online for usable and case-relevant information. One caseworker expressed it as follows:

I have received quite important information from Facebook profiles and documented it, for example, that a mother is back together with a violent father. She tells us "No, I'm not with him", and then you go [on Facebook] and find a picture that was posted the day before [of them together]. The police also have an anonymous Facebook profile that they used to investigate, and it is public [information]. As long as you haven't hidden it [made the account private], then it's public.

As demonstrated through this quote, the caseworkers had several examples in which social media was used for gathering information that proved crucial in assessing a case. The caseworkers used the information gathered from social media to assess children's welfare, exposing factors that could inform professionals about a parent's ability to provide care or the child's overall care situation.

5.3 Information admissibility

The possibility of finding case-relevant information online also caused further uncertainty regarding how to use the information in a formal and legal way. They expressed a lack of clarity regarding what they should consider as publicly available information and private information online. Some caseworkers perceived Facebook

accounts with a public (not private) setting as publicly available information that anyone could use, including public officials.

However, as the previous discussion about ethicality illustrated, going online to prepare a case is not done without apprehension. Individual caseworkers are left with the responsibility to decide whether, what type and under which conditions it is acceptable to use information from social media and similar public sources online. Facebook or online observation can guide caseworkers towards questions to pose to clients, and what to “search after” in a case. One caseworker explained it in the following way:

Sometimes, you can say in the conversation that, “I have heard that there are groups online that talk about... have you heard of it? Do you know anything about it?” We can use it more in that way. To ask open-ended questions to get into topics that one would otherwise not have known about or... that I hadn't thought about asking the youth about otherwise.

Similarly, findings based on online information that cannot be used in deciding a case can prompt lines of inquiry by more traditional means. The caseworker must use their professional judgment to determine how to integrate digital information gathering with more traditional means of collecting information. The caseworkers could not agree on whether or not online information was public and could be used to assess a case. Their opinion on this matter was divided. Searching up clients online, especially on Facebook, was common. For this purpose, the caseworkers used their private profiles and, in some cases, fake accounts, as mentioned earlier.

The structured and standardized information used in the typical screen- and system-level bureaucracies does not include such subjective and accidentally acquired information. Even so, with the influx of information potentially coming from online sources, caseworkers need to decide how to use this information in their decision-making, and what weight to give it. The caseworkers discussed this in terms of whether this information could be used officially. Many argued that they searched up clients only to see what they looked like, whether they knew each other and what their online self-representation was, as well as out of pure curiosity. Those who were against such a practice said that it not only intruded on people's personal lives, but also contributed to a change in attitude or behaviour towards the client, as shown earlier in the previous section. The examples used were lightly clothed images of a

client or a client's political stances. They also discussed how accidental observations of clients outside of their office, on the street or in a shopping mall had now moved to the much more accessible digital "streets": namely online and on social media. Here, the caseworkers discussed how they used and assessed information about a parent's alcohol abuse from their Facebook images:

CW3: I think that the... one thing is that you can't use [document] the [Facebook] image itself, but there's something about how they communicate [when they deny alcohol abuse]; my evaluation is that they're not speaking the truth.

CW4: Yes, but then it's like, then we sit in a meeting, and they also say "no, we never drink alcohol", and they deny alcohol abuse. And you sit there knowing what you have seen in a picture [on Facebook] where they're all obviously drinking together.

CW3: Yes, so their credibility is lost.

The widespread use of Facebook demonstrates a new space for information gathering that can impact a caseworker's discretion when deciding on a case, such as assessing a parent's ability to provide care. Considering the new types of opportunities for interaction and information collection discussed above, caseworkers also need to consider the admissibility of their discoveries in their decision-making. Thus, they are presented with dilemmas as to whether, and how, to make the information they have gathered online relevant to their individual cases.

6. Discussion

The research question posed in the introduction of this article was as follows: *Where and how in the decision-making process has digital technology changed street-level bureaucrats use of discretion?* Our interview material revealed several instances where our informants described how digital technology had altered their decision-making process. CWS is a public service that relies on a high level of interaction between a caseworker and client as well as the substantial use of discretionary power. By extending our scope from not solely considering the bureaucrat's final decision, but also including multiple important steps along the way that were relevant and consequential for the decision, we found situations where digital technology had an important impact. Unlike previous case-study findings showing a reduction of discretionary power due to the digitalization of public services, our study has shown an opposite trend. Lipsky's description of the street-level bureaucracy thus seems

equally relevant today, mostly changed by the fact that some of the streets are now digital and require discretionary decisions appropriate to this context.

However, the public service in our study has always been considered highly discretionary, and with a high demand for human interaction. Digital technology has seemingly served as a catalyst to heighten some of these characteristics. Consequently, some parts of the street-level bureaucracy described by Lipsky, such as more formulaic case-handling systems and automation, might reduce discretion, while other advances, such as those related to communication and cooperation, might increase it. While these effects pull the level of discretion in different directions, a bureaucrat might experience a net increase in viewing the process as a whole. For instance, as shown by Bovens and Zouridis, digital systems might enforce certain rules and guidelines when making decisions based on what data is entered into the system. However, if the caseworker has far more opportunities to collect data before making the decision, the guiding hand of the system in making the decision makes it less important. In other words, even if the decision-making is entirely automated by the system based on the entered data, a caseworker might still decide when to stop collecting data to achieve the desired outcome.

By applying the theoretical framework suggested by Molander, it was possible to find situations where digital technology introduced situations in which discretion had to be used. These situations were not independent from the act of making a decision, but instead led up to it. It is evident that the digital technology made available to the caseworkers in our study introduced new requirements regarding personal considerations, which again resulted in the need for some level of discretion in deciding on cases. While many applications of digital information technology follow this pattern, creating distance between caseworkers and citizens and removing discretion in the final decision, digital technology can also have the opposite effect. Our respondents used the Internet as both a means for interacting with their clients and, especially with social media, to gather a more comprehensive view of them. These findings are similar to those of other studies, in which social media has been shown to present caseworkers with new decisions that need to be resolved (Andersen, Medaglia, & Henriksen, 2012; Dekker, van den Brink, & Meijer, 2020).

These encounters and auxiliary sources of information can be made available for the case decision if the caseworker so chooses. Digital venues are less formalized than more traditional public encounters, and as such, caseworkers have greater flexibility in how they use them. Some scholars have drawn a distinction between formal and informal discretion (Bastien, 2009; Warren, 2003). This distinction highlights the difference between discretion that is formalized in law and policy, and discretion that forms an implicit and informal part of the decision-making process. Drawing on such a distinction might make informal discretion seem less relevant. Nonetheless, so-called informal discretion is as equally important as formal discretion to the decisions made. Furthermore, it matters little to the eventual decision if any discretion used in reaching it comes from a formal or informal source.

In some respects, our findings are interesting, both in terms of what they included, but also what they did not include. The main argument of Bovens and Zouridis (2002) in describing the three levels of digitalization was how digital technology reduced or removed discretion in decision-making. Similar findings have been highlighted in other studies (Røhnebæk, 2016; Wihlborg et al., 2016). However, the experiences of the caseworkers in the presented findings did not include the feeling that their professional judgment was curtailed by the digital system. Still, some of our findings were curiously comparable to those of the bureaucrats discussed in Bovens and Zouridis' (2002) article, where they described caseworkers who met physically with clients could use information from these interactions in their decision-making. For instance, there was an example where a client's car, visible from the caseworker's office window, became a factor in their decision. Caseworkers with digital tools are faced with similar dilemmas. In the age of social media, photos of the client's car might be available online. A caseworker might make the decision to go look for such images during their decision-making process. In Boven and Zouridis' example, a client's nice car was then used to disqualify them from receiving support, as discretion was exercised in deciding on eligibility. The potential information available online about a client is both more substantial and private, but just like that car parked outside, caseworkers can take photos found online into account when deciding on a case.

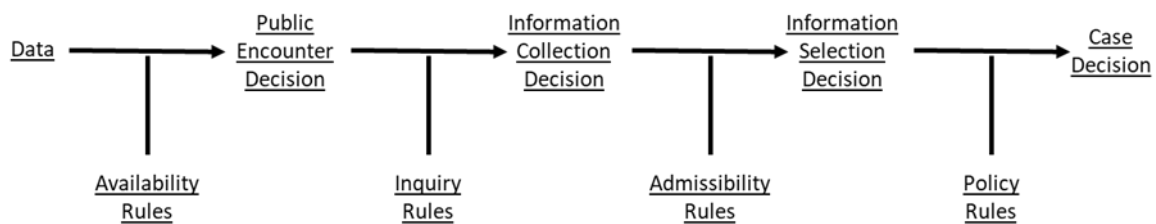
While a rejection based on the applicant having a nice car may seem arbitrary, digitally acquired information can potentially create a fuller picture. It is nevertheless just a small representation of a person's life. Caseworkers need to make sense of the meaning of this information if they intend to make it relevant to the decisions they make. The result is an increased risk of confirmation bias, in which the caseworker may include findings in their decision that supports opinions they have already formed.

Within that perspective, we observed a fourth contradictory level in addition to the levels pertaining to the street, screen and system: web-level bureaucracy. This is not a fourth stage of development or an advancement of system-level bureaucracy. Rather, it appears when certain conditions are present. In this web-level bureaucracy, the traditional trappings of the public encounter are blurred as the caseworker and citizen are continuously available to each other. Moreover, the caseworker's communication with the citizen and the citizen's digital footprint become sources for information that the caseworker can utilize in their decision. With the need for human caseworkers and discretionary judgments, the web-level bureaucracy shares more similarities with Lipsky's concept of the street-level bureaucracy than Bovens and Zouridis' system-level bureaucracy. Yet, the opportunity for human bureaucrats to gather information about a client online is a new and ethically complicated issue.

While Bovens and Zouridis' framework might be accurate on an overarching level, there is still much room for nuance. In many instances, decisions become less a matter of discretion when digital systems either replace human caseworkers or support their work. However, many activities do lead up to decisions which are also impacted by digital technology. Returning to Molander's (2016) description of discretion, it is evident that the three themes found in this study represent procedural decisions leading up to the final and definitive decision. Each of these decisions comes with their own rules, practices and regulations – warrants in Toulmin's (2003) and Molander's (2016) terminology. First, a caseworker was guided in how available they should be to their clients. These warrants were interpreted by them, resulting in some caseworkers being more available than others. The second decision caseworkers needed to make was how to use digital tools to gather data for their decision. While there were some rules in place, there was still uncertainty in how far

they should go, and what situations warranted a closer investigation by digital means. This decision regarding information collection had a great deal of impact based on their continued handling of the case. Finally, the caseworkers also had rules and guidelines for how to formulate their final decision. In doing so, data had to be collected properly to be admissible. Again, caseworkers need to decide how and when to make data relevant for the case they were handling. All these decisions eventually led to the caseworker's final decision, which then had a real and tangible impact on the client. Since these warrants are affected differently by digital technology, it is prudent to separate them (see Figure 2). Such a deconstruction of the decision-making process has been attempted in theoretical work on decision-making (O'Sullivan, 2010; Simon, 1960, 1965), and could be used to inform studies of discretion.

Figure 2: The decision-making process



A similar separation between different types of professional discretion has been found in other works. For instance, Buffat (2015) found a widening of the warrant associated with how digital systems are used, either in terms of working around the limitations in the system, or in avoiding supervisor scrutiny. Even so, it can be helpful to consider different types of discretionary use as they relate or lead to a decision. While discretionary power can be reduced by digital systems, as described by Bovens and Zouridis (2002), there might still be an overall increase of discretionary power if caseworkers have more authority in deciding how to acquire and apply the information that goes into the decision. A true system-level bureaucracy, as described by Bovens and Zouridis, needs to have all the warrants narrowed to limit the discretionary leeway of decisions.

From a theoretical perspective, deconstructing decisions into points where discretion might be applied could be beneficial to other questions related to digital government. For instance, the use of data-driven digital services to create user-centred or context-sensitive services (Janowski, 2015; Lember et al., 2019) can be analysed by identifying what decisions are changed, and the limitations of the underlying warrant. This goes well with studies exploring the limiting effects of digital technology on public services, for instance, how information architecture impacts the services digitally received by citizens (Peeters & Widlak, 2018). Furthermore, as some studies have outlined how digital technology has placed additional burdens on some citizens in acquiring public services by increasing the demands of self-service (Madsen et al., 2021; Widlak & Peeters, 2020), it seems relevant to add the decision of whom caseworkers help and not help to the list of decision points and warrants.

These findings present both risks and opportunities for public administration. On the one hand, it shows how digital technology can contribute to a digitalized public administration not becoming deterministic and callous in how it renders services, and instead allowing human professionals to provide personalized and appropriate services with the help of digital tools. On the other hand, as our interviewees described, the need for discretionary decision-making while gathering information online has raised uncomfortable ethical questions (Byrne et al., 2019; Cooner et al., 2020). Many of the caseworkers interviewed also expressed a lack of organizational guidance on how to use the new technology. This challenges the framework presented above, as the rules and warrants that go into a decision can be understood as partly created by the public organization and the individual. Such discretionary decisions present a danger for the creation of discriminatory practices towards citizens, which could eventually reduce the quality of public services and increase corruption (Smart, 2018). While some citizens might be subject to prejudicial scrutiny from their caseworkers, others could get away with more if they avoid exposing themselves online. As such, governmental scrutiny would be biased against those who are digitally active. Lipsky's emphasis on the street-level bureaucrat's ability to interpret social policy, and put it into action, presents a vision of the possibilities of street-level bureaucrats to enact social change. The system-level bureaucracy lacks these possibilities, but can still be a positive change by taking away tasks that are simple and mundane from street-level bureaucrats, and instead

allow them more time for other activities. Nonetheless, there is a danger that social policy that requires a human caseworker to be effective, as described by Lipsky, is left to digital systems, or that social policies themselves are designed with the intent to be implemented digitally, which may lessen their social effectiveness.

As this case has presented some counterexamples to the growing empirical literature on how digitalization impacts discretionary decisions, it is appropriate to end with some suggestions for future research. First, breaking up a decision-making process into various steps, for instance, as Molander (2016) did in his work on discretion, could offer a more nuanced view of how digital technology both increases and decreases discretion in different places in the process. Second, the case presented in this paper considered a decision-making environment that is already high in client interaction and discretionary power. Depending on the nature of such characteristics, digital systems may have varying impacts on public services. A more comprehensive and theoretical description of these factors would also make an important contribution to the field.

7. Conclusion

In this article, we explored how street-level bureaucrats' use of discretion in decision-making increased with the introduction of digital technology. By using theoretical contributions by Molander regarding discretion in the decision-making process, we identified several situations where discretion was used. While much previous research emphasized how the standardization of work processes and the removal of direct client interaction limited the need for- and use of discretion, our findings showed that the same technology has created new needs for caseworker discretion in decision-making. Meeting clients through informal channels online or looking up clients on social media leaves caseworkers with choices regarding how to use the information gathered from these sources when making decisions. While this may raise ethical questions, it also brings back the potential for public officials to use their professional competency in carrying out their function.

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