

## **Digital coping: How frontline workers cope with digital service encounters**

### **Abstract**

This article addresses how frontline workers cope when dealing with digitally mediated service encounters. It draws on a qualitative study of frontline workers' experiences in an increasingly digitalised work environment in the context of employment assistance services. The material shows that digitalising service encounters leads to two overall types of change for frontline employees, and the article explores related coping responses. First, the technology leads to an increased availability of the frontline workers to the clients. This is coped with by handing over, or 'outsourcing', responsibilities to clients through digital platforms, and by reducing what is experienced as 'noise' related to incoming enquiries. Second, the technology leads to increased transparency of the service interactions, which is coped with by being careful about the content of client communications. The analysis of these changes and their related coping responses contributes to the research on digital public service encounters and highlights avenues for empirical studies and theoretical development within a topical, yet little studied, field.

**Keywords:** Labour markets and labour market policy; unemployment; social work and workers; digitalization; street-level bureaucracy; coping; service encounters; employment services;

## **1 Introduction**

This paper focuses on how frontline workers cope when dealing with digitally mediated service encounters, i.e. services provided through digital platforms. Frontline service work involves direct interactions with clients, which is in public service contexts often referred to as street-level bureaucracy. The concept of coping is central in Lipsky's (1980) account of the street-level bureaucrat, which refers to "behavioral efforts that frontline workers employ when interacting with clients in order to master, tolerate, or reduce the external and internal demands and conflicts they face on an everyday basis" (cf. also Lazarus & Folkman, 1984; Tummers, Bekkers, Vink, & Musheno, 2015, p. 1100). Since Lipsky's original work, e-government reforms have shifted service encounters from being conducted face-to-face to being increasingly digital (Dunleavy, Margetts, Bastow, & Tinkler, 2006). Examples are electronic communication platforms (e.g. chat, email or SMS) and online self-help solutions in which citizens are expected to be proactive users of digital technology.

Digitalisation can create new opportunities for frontline work, and the technology has the potential to improve interactions with service users – for example, by increasing accessibility to and participation in the services. However, digitalisation can also challenge frontline employees' service interactions and their broader administrative tasks – for example, where citizens or frontline workers struggle with mastering the technology or the digitally mediated interactions. Consequently, we may see new types of coping strategies emerge among frontline workers as they seek to deal not only with the general pressure and dilemmas of frontline service work (Lipsky, 1980), but also with the technology.

There is an increasing amount of new literature on frontline work and public services in the context of digital technology (e.g., Breit & Salomon, 2014; Buffat, 2015; Busch & Henriksen, 2018; Hansen, Lundberg, & Syltevik, 2018; Høybye-Mortensen, 2019; Jorna & Wagenaar, 2007; Lindgren, Madsen, Hofmann, & Melin, 2019; Margetts & Dunleavy, 2013). However,

while coping is central to frontline work, as thoroughly highlighted in the literature, there is little understanding of coping in digital service encounters. To the best of our knowledge, only a study by Tummers and Rocco (2015) has examined digital coping. Tummers and Rocco found that frontline workers are primarily inclined to move toward clients (e.g. bend rules, work overtime, collaborate with citizens) when coping with stress created by the technology. Their study is a useful starting point for further research on digital coping, although its point of departure is that the technology tends to add pressure and stress to already strained frontline working conditions. This may negatively impact perceptions of how technology can improve interactions. Moreover, Tummers and Rocco focused primarily on frontline coping in the context of e-government reforms, rather than studying coping related to specific technological changes in service relations. Hence, there is a need for additional research on digital coping within new digital services. They did call for additional research on coping, especially in the context of welfare-to-work programmes, given that the target groups, institutional design, and implementation context of such programmes may pose a barrier to client-centred ways of working (Tummers & Rocco, 2015, p. 824).

This paper adds to this emerging literature with an account of how frontline workers cope in digital service interactions. Empirically, it focuses on the context of employment assistance services, that is, services targeted at people outside or on the margins of the labour market because of physical, social and/or cognitive challenges (Heidenreich & Rice, 2016; van Berkel, Caswell, Kupka, & Larsen, 2017). These target groups often require extensive assistance, and frontline workers can face dilemmas and tensions when providing services and in their relationships with the clients. Traditionally, coping has been conceptualised in the context of a frontline worker's dual role as a helper toward possible employment and as a gatekeeper of welfare regulations, as well as operating in the context of limited resources and extensive

service demands. This paper explores new types of coping among frontline workers that result from the more digitally mediated nature of the interactions.

In this context, the paper explores and theorises frontline coping in digital service encounters, using existing analytical categories on coping as sensitising theory. Sensitising refers to theoretical constructs that guided our reading and data analysis, while alternative theoretical categories emerged from the material through analytical induction (Blumer, 1954; Gioia, Corley, & Hamilton, 2012). This is a suitable approach to researching digital coping because it is largely an unexplored field in which empirical research and further theorising is needed. Our approach enabled us to address broader theoretical and empirical gaps in the literature on how digitalisation affects public service encounters, which is raised as topical research agenda (Dunleavy, Margetts, Tinkler, & Bastow, 2006; Lindgren et al., 2019).

## **2 Digital technology and street-level bureaucracy**

The research literature on digitalisation in public services and street-level bureaucracy has centred on how new technology affects the autonomy and discretion of frontline workers (Bovens & Zouridis, 2002; Buffat, 2015; Jorna & Wagenaar, 2007; Parton, 2009; Røhnebæk, 2016; Webb, 2006). It focuses on the implications of digitalisation on internal work procedures, such as the use of standards and procedural formats in decision making and structuring of tasks. While some scholars argue that digitalisation constrains professional discretion and changes the premises of frontline work (Parton, 2009; Webb, 2006), others highlight how discretion is enabled in new, more informal ways (Jorna & Wagenaar, 2007; Røhnebæk, 2016). The debate reflects that early studies were largely concerned with the digitalisation of internal, administrative processes.

There has also been a growing research interest in digitalisation as a new mode of government (i.e. e-government) in which the service process becomes fully or partially automated. As a

result, the role of frontline workers may be challenged or even become obsolete (Buffat, 2015; Dunleavy, Margetts, Bastow, et al., 2006; Lindgren et al., 2019; Wihlborg, Larsson, & Hedström, 2016). Bovens and Zouridis (2002) used the concept ‘system-level bureaucracy’ to highlight this shift, which, in contrast to ‘street-level bureaucracy’, implies a digital self-service in which users interact with a system (e.g., automated or semi-automated) rather than with frontline employees. These technological developments imply that citizens become their own case workers (Madsen & Kræmmergaard, 2015).

Digitally mediated service encounters can offer a further category of digital change that has received less research attention. Rather than replacing the work of frontline workers, digital changes can present an alternative communication channel, used in combination with other channels, such as face-to-face encounters and interactions by phone (Madsen & Kræmmergaard, 2015). This is not a shift from human to digital services, but is a new entanglement of human and digital services and can reflect government aims for positive synergies by routing tasks and users to the ‘most suitable’ channels. The ideal of many digitalisation changes is to standardise and automatise relatively routine services and thereby free capacity among frontline employees to deal with the more complex tasks that require human interaction and discretion (Garatli Nygren, Axelsson, & Melin, 2014). Increasingly, we expect new digital technologies to be used for more complex frontline work – such as, in our case, employment services to vulnerable citizens marginalised from the labour market.

The shift to digitally mediated service encounters thus involves changing the relationship and the power dynamic between frontline worker, client and technology. For example, a digital communication can enhance the opportunities for clients to acquire information (e.g. about their case) or to increase their involvement and participation. Such changes can empower clients (cf. Carter & Bélanger, 2005). Conversely, digital encounters can alienate certain groups of clients,

for example by (re)producing a digital divide due to a lack of access or skills and interests necessary to use digital technology (Ebbbers, Jansen, & van Deursen, 2016).

Digital encounters can also impact frontline workers' creaming practices, that is, their prioritisation of services to those they believe have the best prognoses of "recovery" (Lipsky, 1980; Tummers et al., 2015; Vedung, 2015). Creaming may not only prioritise clients seen as most job-ready, but may also include those most capable of communicating or expressing their needs using the digital platforms. In addition, digital encounters may blur the boundary between a counsellor's professional domain and a client's domain, or even between work and home lives, thus causing stress (e.g., Berkowsky, 2013).

The study of coping is a fruitful approach for understanding the implications of such changes on frontline work(ers). Such studies are lacking, as previous research has focused on how frontline work is affected by the transition to fully automated digital solutions (Lindgren et al., 2019), rather than on the direct implications of frontline workers' use of systems that enable digitally mediated service interactions.

### **3 A coping approach to digital service encounters**

The research for this paper focused on how the digitalisation of frontline service work affects the coping mechanisms of frontline workers. Coping refers to behaviour that protects people from being psychologically harmed by problematic social experiences (Lazarus & Folkman, 1984). In Lipsky's terms, coping is the response of frontline professionals to mitigate the stress of limited resources, indeterminate objectives, few controls and discouraging circumstances. According to Lipsky, coping involves: (i) developing patterns of practice to limit demands on time and resources and to obtain client compliance; (ii) modifying the concept of their job, for example through (re)constructing client obligations and rights, or through routinisation; and (iii) modifying their concept of their clients, that is, through stereotyping or prioritising so that

some clients receive a service consistent with their ideal conceptions of the job (Lipsky, 1980: 82-83).

There are many types of coping, and Tummers et al. (2015) distinguish three broad “families” of coping. First, “moving toward clients”, or pragmatically adjusting to client needs, is coping for the clients’ benefit, which involves: bending rules to provide additional service for clients (Maynard-Moody, Musheno, & Musheno, 2003); deliberately breaking rules (see e.g., Anagnostopoulos, 2003), or using personal resources beyond those specified in their job descriptions to assist clients. Second, “moving away from clients” involves avoiding meaningful interactions with clients – for example routinising, that is, dealing with clients in a standardised way – or rationing services, for instance making it more difficult to access services (see e.g., Triandafyllidou, 2003). Third is “moving against clients”, such as rigidly following rules, the excessive use of sanctioning (Caswell & Høybye-Mortensen, 2015; Soss, Fording, & Schram, 2011) or by being aggressive, verbally or non-verbally.

Coping is a useful theoretical perspective for studying changing conditions in frontline workers’ digital service encounters because it draws attention to: (i) the actions undertaken by frontline workers to handle challenges stemming from the encounters; (ii) the implications of these actions on service relations between frontline worker and client and, by extension, how the quality of these encounters has consequences on whether the client receives the right services.

The concept of coping is similar to the concept of “sensemaking” (Weick, Sutcliffe, & Obstfeld, 2005), which highlights “the ongoing retrospective development of plausible images that rationalise what people are doing” and how this impacts decision-making. Both concepts focus on how people, such as frontline service workers, handle difficult work situations. However, whereas sensemaking focuses on the processes of rationalising difficult decisions, coping focuses on how people handle the strains, shortcomings and possible effects of such decisions.

A central assumption in our approach is the sociotechnical (Bijker & Law, 1992) context of coping in which technology is not seen as isolated material artefacts that (frontline) workers employ in more or less similar ways, but as entangled with organisational and social practices. In this manner, the digital technology used in the service encounters under study, while having some basic common components, may be used in a variety of ways depending on the organisational and social context of the service interactions. Studying digital encounters in frontline work from the perspective of coping allows us to explore digital entanglement and to examine the various aspects of digital technology, whether perceived as positive or negative.

## **4 Method**

### 4.1 Research context

This study was carried out in the context of frontline implementation and enactment of welfare-to-work policies in Norway – more specifically in the Norwegian labour and welfare administration (NAV). Unlike labour market authorities in many other countries, which have separate administrations for employment services and social services, NAV has the mandate to include a broad spectrum of vulnerable and hard-to-place jobseekers in the labour market. This means that NAV employs workers with diverse professional backgrounds, including social work, healthcare and social sciences.

Specifically, this study focuses on a new digital follow-up system called *Modia*. The system was seen as state-of-the-art digital technology at the time of writing, designed to facilitate online communication between frontline workers and clients. Clients can log into their personalised website and view information about their case, they can write their own accounts about their experiences, and can communicate with their counsellor via a chat function. The system is linked with applications and systems used for internal administrative tasks, so that client interactions (frontstage) and internal administrative tasks (back office/backstage) are increasingly integrated. *Modia* is becoming increasingly familiar to frontline workers and to



citizens as more and more NAV services and tasks are being implemented in Modia or being moved to it from other digital platforms.

Most relevant to this study is that Modia enables communication between counsellor and client around what is called an “activity plan”. This is a central document, or contract, that specifies the client’s tasks and responsibilities for obtaining a job. As this paper shows, the use of Modia and the digital activity plan implies that the user is invited to take a more active part in administrative processes that used to be in the hands of the frontline workers. For example, clients are required to agree to changes in the activity plan, to suggest possible new activities, and to log activities they have carried out. Frontline workers are responsible for making summaries of all conversations between NAV and clients (e.g. phone calls or meetings), thus giving clients information about and increased access to their own cases. This means that all follow-up information is documented in the same system, regardless of who is working on the case, and that the information is visible to the client through the user interface.

#### 4.2 Data collection

The paper draws on data from different studies. The primary study was conducted between March 2018 and May 2019. Its focus was counsellor use of and experiences with Modia in follow-ups of vulnerable jobseekers. One researcher conducted interviews with 32 counsellors and managers in two NAV offices. The study also consists of observations of client meetings and of how counsellors used the digital systems during five visits to the NAV offices. The offices had about 200 employees in each and were situated in relatively large cities/municipalities in south-eastern Norway that had similar demographics. While there are differences between the offices (for example, how they are organised internally), the provision of digital services through Modia is mandatory, with limited local leeway. Therefore, for the purposes of this paper, the digital service encounters in the offices are comparable.

The counsellors had diverse professional backgrounds; most worked on the more intensive follow-ups of vulnerable citizens, some worked mostly in the reception area of the NAV offices (providing general information and overseeing and facilitating citizen use of the computers). Some of the managers were middle managers in the offices with some administrative responsibilities in addition to their case portfolio, while a few held full-time managerial positions. All the informants used Modia in their work. The majority of interviewees were female, which reflects NAV's overall gender composition. We obtained written consent from all informants. Nearly all the interviews were transcribed; where a transcription was not made, notes were used.

The study also drew on three studies on digitalisation of frontline work in NAV conducted by the authors. These studies were: (i) how counsellors and users experienced the implementation of the digital, self-service platform for information and service provision in connection with a retirement pension reform (see e.g., Breit & Salomon, 2014); (ii) a six-month ethnographic field study in a local NAV office involving digital frontline work (Røhnebæk, 2016); and (iii) experiences from a research-based evaluation of NAV's frontline services in 2014 (Fossetøl, Breit, & Borg, 2014), which was followed up 2019 (Fossetøl, Breit & Borg, in press). These studies are drawn on as background material, as a form of "pre-understanding" (Alvesson & Skoldberg, 2009), of the role of digital technology in NAV's frontline services.

#### 4.3 Data analysis

There is a vast amount of data of different types, collected from different contexts, and a variety of topics and ideas emerged from the data. To make sense of the material, we were influenced by the "synthesizing inductive analysis" of Gioia, Corley and Hamilton (2012, pp. 20-22). Based on Strauss and Corbin's analytical framework for developing "grounded theory" (1998), Gioia et al. distinguish between different analytical processes: first order terms and second order categories, and (if possible) a third process of aggregate theoretical dimensions.

The first order analysis involved open coding, which is a systematisation of how informants use labels and concepts. The second order analysis involved searching for concepts and for relations between concepts, to make sense of the terms from the first analysis. Given the lack of prior empirical analyses and theoretical concepts to draw on, we developed our own work concepts – for instance, outsourcing responsibilities, noise reduction (taken from several informants), and digital cautiousness. These concepts indicate how we drew on the language counsellors used to describe their practices to make sense of the larger pool of data. We also searched for underlying causes to the coping responses. This distinction between causes and ways of coping coincided with Lazarus' original distinction between people's perceptions of threat and the resulting coping response.

This paper presents key findings from this analysis: first, what caused a need to cope, as experienced and articulated by the frontline workers; second, the coping responses.

## **5 Causes of coping: Frontline workers' experiences with digital service encounters**

### 5.1 Increased availability of frontline workers' service attention

A key term mentioned by the informants was that Modia made them more available to clients. There is no data on the objective degree or magnitude of this availability, therefore these findings denote the counsellors' perceptions of having to be increasingly available to their clients. These feelings of increased availability connect to the blurring of boundaries between a counsellor's professional domain and a client's domain. The preceding information system for employment services (called Arena) was designed so that the counsellors initiated contact with citizens, not the other way around. Generally, clients could only leave a message for their counsellor via a general number in NAV and were called back. Whereas Modia is designed for clients to contact counsellors directly, through a chat function in the digital program.

On the one hand, this new availability was described by counsellors and managers as a chance for clients to take a more active part in the dialogue about their case. One counsellor noted that: “Before, a counsellor would write a note from a meeting in a closed room, in a closed system, to which the client had no access. Now, they can see and comment on it immediately.” Others emphasised how it could give clients more responsibility, for instance: “[Modia] enables us to hit the ball into the client’s court, making them more responsible for the process.”

On the other hand, this availability was described as a new challenge. Counsellors expressed a need to “reduce the noise from the clients” or to “put the brakes on”. Several counsellors mentioned new service challenges from clients who expect extensive contact, in the sense that the increased availability led to a rise in the number of minor questions and requests. Another example was clients expecting quicker replies when the Modia chat function was available:

“Before, we got a question ..., which we replied to, then it took a while before we got a reply. Now we reply and almost before we make it home, we receive another question. It’s like, ‘Oh shit, now I have to do this too’.” (counsellor)

The increased availability made possible by Modia’s technology has blurred the boundary between counsellor and client, which had been clearer in the previous system. There were examples of how this led to feelings of anxiety among the counsellors.

## 5.2 Increased transparency of digital interactions

The informants expressed how Modia created a new transparency to the interactions between them and their clients. A transparency that is akin to what Dunleavy, Margetts, Tinkler and Bastow (2006) labelled “open-book government”, in which citizens can access case files and thus have a greater opportunity to intervene in service processes. In Modia, all text produced

during interactions, such as case notes, documentation, conversation summaries and messages, is stored in the system and cannot be edited nor deleted.

On the one hand, counsellors stressed the positive implications of the transparency, for example, they appreciated how their work was documented if clients complained. Counsellors also emphasised how the transparency makes it easier to transfer cases between counsellors, as they have digital access to all the information relevant to a case (a practice that has typically been a challenge to organise because many interactions have not been documented). Furthermore, written interactions were described as more professional and efficient than verbal ones, not least because it made it unnecessary for counsellors to have their own “private” notes and assessments – as they were used to having when working in the former digital system (Arena).

On the other hand, counsellors stressed that they were keenly aware of the information being “out there”, and beyond their control, and that it could be used against them. Some counsellors mentioned clients who had copied information to social media to publicise their case. Counsellors acknowledged the democratic benefits making one’s situation known to others, but they were worried about this new lack of control of information on specific cases.

## **6 Coping responses to new service relations**

Frontline workers developed a range of coping responses to the challenges of availability and transparency in digital service encounters.

### **6.1. Outsourcing responsibility to clients through digital channels**

One coping response counsellors described was to outsource digital tasks and responsibilities to clients. A term used by several counsellors was “digital upbringing”, referring to the effort required to make clients behave digitally, that is to self-help as much as possible:

“It is an upbringing we have to do. It has always been like that with the changes we have to make. You have to train the person, or NAV

client, to make them realize what we can and cannot help them with.”

(counsellor)

Counsellors describe the outsourcing as “supporting” citizens to use digital technology. For instance, when a citizen comes to a NAV office asking for help, support can be helping them to log in to their personal online account, or showing them which chat to use for different questions. In the more substantial follow-up work, examples are making jobseekers do work online that was previously carried out by the counsellor, such as a job match search of a database to match the client’s expectations and qualifications with available vacancies.

The outsourcing is generally based on a counsellor’s discretionary assessment. On the one hand, it is based on a desire to reduce the counsellor’s service workload. Counsellors describe how they weigh up what a jobseeker can do for themselves, what they can do with help from the counsellor, and what the counsellor should do for them. On the other hand, the outsourcing aspires to make the client more responsible and independent; rather than giving them the answer, counsellors teach clients how to find it out on their own:

“Many [clients] are so used to others doing things for them, that they become very pampered. This pampering will soon be gone, because now we have sort of ... A part of our job is to enable them to take care of themselves.” (counsellor)

Counsellors felt ambiguous about outsourcing and achieving a balance between disciplining and helping clients. This was evident not only among individual counsellors, but also among managers designing office service levels:

“It’s challenging for us because we have been used to providing a certain level of service and now we are supposed to tone it down. [...]

So finding that level, finding the appropriate level of service for the NAV office, that's something we have to learn." (frontline manager)

## 6.2 Noise reduction

The counsellors are more available through the chat function than in traditional service desk encounters, as the communication is direct and without intermediaries. While counsellors mainly respond to messages during working hours, the 24/7 technical access to the chat means that tasks can be generated around the clock. The increased availability also means more enquiries from jobseekers. As a result, counsellors described how they seek ways to protect themselves from what they regard as "less important" enquiries, in order to prioritise what they see as their core task: labour market-oriented counselling. Examples of less important enquiries are when clients provide what frontline workers regard as too much information during the interaction, and clients who require extensive information during the chat.

One way of coping with this new digital availability is what some counsellors labelled as "noise reduction". By this they meant limiting interactions they see as (unproductive) noise:

"We cannot be that available. In a perfect world we would be available. We would have cell phones through which counsellors could be reached. But it cannot be like that. It would be too much.

Therefore, it is a way of filtering out requests." (counsellor)

Counsellors expressed different ways of limiting the interactions. Some would answer all enquiries equally – as a form of routinisation – based on the assertion that all client requests are legitimate. Others would tell jobseekers that they did not have to update them that often, or that they could not grant all their requests. Still others mentioned how they bent procedural rules and answered questions outside their area of responsibility because it seemed more efficient and less time-consuming than routing the client to the right person and department in the

system: “it still happens that I tell them their application is being processed or things like that because ... Well, it simplifies our working day to just reply to that request.” (counsellor)

This last example shows that noise reduction is not only about reducing availability or lowering client expectations, it can also be counsellors choosing the most convenient channel for communication. In this case, the correct procedure would be to call the client, but clarifying questions in the chat was found to be more effective because a phone call is seen as more time-consuming and as a trigger for new requests and tasks.

Essentially, counsellors perceive noise reduction as a way to free up time for their core task of assisting the most vulnerable citizens into employment. Therefore, coping strategies that entail moving away from certain clients can be seen as strategies for moving toward other citizens (cf. Tummers et al., 2015). For example, the chat is used as a tool for planning and structuring physical meetings so that simple or misdirected, but time-consuming, requests can be addressed beforehand.

However, counsellors and managers are not united on the issue of what kinds of requests are noise.

### 6.3 Caution in text production

Increased transparency in services leads to new challenges for counsellors regarding how to control or protect information. Counsellors were worried about case information being publicly available. Examples of risks for counsellors are clients: who disagree with a chat summary; who use the case write-up in a complaint against a counsellor; who share a counsellor’s messages on social media; or who go to the press with case notes.

One way that counsellors cope with transparency is by being extra careful in the digital interaction. A chat is a new type of communication that is saved in the system, and which is not based on predefined templates, as were commonly used to structure letters sent by mail. In



addition, the text could also use symbols, such as exclamation points or even smiley faces, which are not always easy to interpret (correctly). As a result, some found it difficult to understand whether they were understood correctly (or indeed whether they understood the client), as in the following example:

“The user answers and includes several exclamation points. Then I think he is angry, right? But he is actually not angry at all ... Or writing in capital letters. Wow, he is angry with me. No, actually he just forgot to turn off Caps Lock.” (counsellor)

Some clients find it hard to write about sensitive matters, such as health issues, personal/family affairs or suspected substance abuse. The counsellors underlined how these issues require careful writing about, as a client can read, react to and re-use the counsellor’s formulations.

Some counsellors were worried that their written communications could be used as documentation and brought as evidence against them if a case resulted in a complaint, investigation or court case.

Therefore counsellors exercised caution when documenting their work, to avoid ambiguous messages and to account for the reader’s experience. For example:

“Regarding the way I express myself, I am conscious of how this person will read it. Therefore, it is a different way of thinking. You are more concerned with being considerate in the way you express yourself.” (counsellor)

“I am very aware of how I express myself. That I am a public person. That we are not going to become friends.” (counsellor)

We also noted new internal discussions in employment agencies about proper digital language use. One example was whether a counsellor can use smileys in communications with clients, or whether they are too colloquial and unbureaucratic. Another discussion was whether to use such words as “you” and “I” instead of “user” and “NAV”. Some informants explained how this was a difficult issue in their digital work:

“The day we shifted from using ‘we’ to ‘I’ in our replies to users, I had to work a bit with myself. It is so easy to hide behind ‘we’.”  
(counsellor)

Hence, digital language and forms of communication have become another realm in which counsellors have been required to develop new coping responses and ways of handling digital interactions with clients.

#### 6.4. Summary of the findings

This section identified causes of coping (increased availability and increased transparency) and coping strategies (outsourcing of digital responsibilities to clients, noise reduction and caution in text production). The analysis showed that the coping strategies of outsourcing and noise reduction emerged in connection with challenges of increased availability. Caution in text production is most predominantly related to challenges of increased transparency. An overview of the key attributes of the coping responses and causes, and the relations between them, is provided in Figure 1.

<Figure 1 here>

## 7 Discussion

While the frontline workers in our study were largely positive about the new system and the features that enabled digital interactions with clients, they also described new challenges, dilemmas and trade-offs that spurred coping responses. This section draws together the findings

of the different digital coping strategies identified in the study. It highlights the causes and dynamics of these coping responses and discusses their implications for new research on the digitalisation of public service encounters.

First, the issue of availability in digital service interactions highlights that, even though frontline workers do not have to respond immediately, there is increased visibility of how they respond (or do not respond) vis-à-vis their clients. Also, while clients cannot formally pressure frontline workers to respond through the system, workers emphasise how they nevertheless experience such a pressure. Clients could use several channels to gain a counsellor's attention, for example both telephoning and sending messages. Moreover, the direct contact of a chat is an ongoing conversation rather than isolated messages, and which requires additional attention from the counsellors. This feeling of pressure was also triggered by management expecting swift responses. Hence, digitalisation fosters a new kind of close relationship with clients that frontline workers feel they have to manage and cope with.

While previous studies highlighted the need for further knowledge on how citizens develop the skills and competence to make use of digital services (Ebbers et al., 2016; Grönlund, Hatakka, & Ask, 2007; Lindgren et al., 2019), this study shows that there is also a need for more knowledge on how frontline employees experience and cope with new forms of availability and transparency caused by digitalisation. This research also indicates that coping needs to be understood as interlinked with the way clients experience, perceive and use the technology. We found that frontline workers' coping involves communicating with clients about how to interact digitally in purposeful and suitable ways.

Second, the new experiences of transparency found in this study, reflect broader shifts in power that challenge deep-rooted asymmetries characteristic of traditional relations between public officials and clients (Lipsky, 1980; Lindgren et al., 2019). The actions and behaviours of counsellors become more transparent and exposed because they are increasingly documented

in writing and that text is accessible to the client. The more verbal communication in traditional service encounters gave counsellors the power to present clients in writing behind closed doors. Whereas in digital encounters, clients have access to this documented representation and they can oppose, question and contribute to the text production.

One shift that challenges the old power asymmetries that dominated service encounters is frontline workers' perceptions that written communications required by digital encounters are "permanent" and "everlasting" and can thus be spread across informal networks, in the media or can even end up in court. While this can be seen as strengthening the legal protection for clients and as enhancing service accountability, it also creates dilemmas and risks that frontline employees need to cope with. For example, new questions arise regarding the type of written language to be used, and we found that frontline workers need to rethink and shift between different styles of language, in the context of their interaction.

Third, as shown by the identified coping strategies, frontline employees have more options for outsourcing tasks and responsibilities to clients by channelling requests and needs for interaction to digital platforms and self-help solutions. By outsourcing tasks, frontline employees give clients more participation in the administration of their own cases, compared to previous manual, paper-based systems. Thus, digital technology increasingly allows individual clients to co-produce services with the service provider (Nabatchi, Sancino, & Sicilia, 2017; Osborne, Radnor, & Strokosch, 2016) and with the digital technology (Røhnebæk, 2014). This outsourcing and channelling toward more digitalised service provision can empower certain clients, but can be unsuitable, complicated and estranging for others (see also Ebbers et al., 2016; Lindgren et al., 2019)

Fourth, while this study of coping indicates that digitalisation can free up capacity and allow frontline employees to better manage caseloads and attend to complex cases, it also finds that digitalisation can be demanding and resource intensive on frontline workers, which needs a new

coping strategy, termed noise reduction. When a technology makes the frontline worker more accessible through online communications (e.g. chats) they can be flooded with requests, some of which are urgent and need to be addressed, and others that are less important. The sum of requests may create a persistent noise that prevents frontline employees from capturing pertinent requests. Therefore, strategies to reduce the noise will ensure that they can tell the difference. Noise reduction may also involve a form of digital upbringing, that is, instructing clients how a chat should be used, for instance, by drawing a line under frequency and highlighting time limits regarding responses.

Fifth, the final coping strategy identified in this research links to how frontline employees become more available and exposed through digitally mediated services, as shown by the production of text. There used to be clearer boundaries between different types of text: that for internal, administrative purposes; that for communicating formal decisions and information on legal rights and obligations to clients; and the more informal verbal communication used in personal meetings or in other settings, such as over the phone. The boundaries between these different types of text become more blurred in new digital systems because written language is also used for more direct, informal communication (through chats). This is also linked to the blurring of boundaries and service overlaps between frontline and back office work that come with digitalisation.

These coping strategies and their causes are important because they involve a rethink of the relations and boundaries between frontline workers and clients in the context of digital technology. Their identification points to new questions for future research (for an overview see Table 1).

<Table 1 about here>

We believe this paper provides some important indications of how, and on which dimensions, digital coping is different from coping in a traditional (non-digital) context. One example of such differences can be found in the concept of creaming. Creaming has traditionally been regarded as cherry-picking clients, that is, those with the most favourable prognoses. However, digital technology provides new opportunities for outsourcing work tasks to clients through self-service. This means that those clients served by frontline workers are not necessarily those with the best prognoses. On the contrary, by enabling clients that are suited to self-help and are capable of handling digital interactions and administrative tasks online, frontline employees may obtain additional capacity to devote attention to those clients in need of more personal interactions, counselling and help when using digital tools.

However, it is important to emphasise that while our study sheds light on several topical issues regarding digitally mediated services, the findings and their implications as described here are preliminary and must be supported by additional research. Future research should include the perspectives and experiences of both frontline employees and clients in order to gain a more elaborate understanding of how availability is expected, negotiated and shaped from both sides in digital service interactions. Furthermore, because we only examined these dynamics from the point of view of frontline workers, this study could not systematically investigate whether such synergies take place, but the material shows that frontline employees do see this as a result of the digitalisation processes they are dealing with.

## **Conclusion**

The digitalisation of public services has emerged as a topical, yet relatively understudied research field (e.g., Buffat, 2015; Busch & Henriksen, 2018; Høybye-Mortensen, 2019). This paper contributes to the literature by examining how frontline workers cope with new forms of digitally mediated service interactions, in which the technology complements and is entangled with traditional forms of communication. By showing the details of these coping strategies, it

contributes with novel empirical knowledge on the implications of digitalisation at the level of service interactions. The paper also calls for a broader debate linked to how digitalisation could enable public services to be co-produced in new ways by street-level bureaucrats and clients (and the technology). While digitally mediated services provide vast new opportunities for better and more targeted services – not least as many routine services are increasingly automated – the study also highlighted new challenges and dilemmas for frontline workers that may emerge from these developments, and suggests ways to study and approach these in the future. This could lead to further improvements of the services to clients, and the (digital) conditions under which the services are provided.

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Figure 1: Summary of coping strategies and their causes

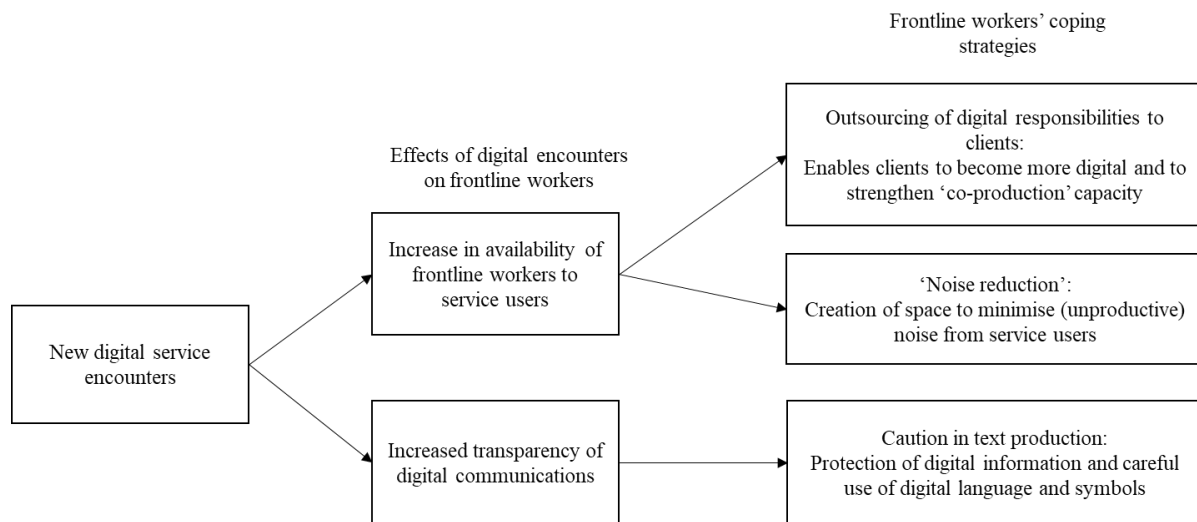


Table 1: Overview of coping variables, assumptions/hypotheses and suggestions for future research

Coping variable	Key assumption/ hypothesis	Suggestions for future research
Availability	Digital technology leads to new forms of availability, which creates a need for coping responses	How do frontline workers and clients experience availability in different digital settings? Under which conditions is availability made more intense for frontline workers (e.g. pressure from management or clients)? How do frontline workers and clients shape and negotiate the availability?
Transparency	Digital technology leads to increased transparency of the dialogue between frontline worker and client, which creates a need for coping responses.	How do frontline workers and clients experience transparency in different digital settings? On which dimensions is “digital communication” (e.g. chat) different from traditional written and oral communications.
Outsourcing of digital responsibilities to clients	Frontline workers cope with availability by outsourcing tasks to clients.	To what extent does outsourcing digital tasks enable clients to help themselves? How do frontline workers and clients perceive and negotiate which tasks clients can undertake?
Noise reduction	Frontline workers cope with availability by reducing “noise” from client input	To what extent does noise reduction enable frontline workers to free up time for addressing all clients equally, or does it involve creaming?

		How do frontline workers and clients negotiate and shape what is perceived as “noise” in their communications?
Text production	Frontline workers cope with transparency through caution in text production	Which conditions of transparency create caution in text production? What are the implications of such text production in service relations with clients?