Ambulating, digital and isolated: The case of Swedish labour inspectors

Carin Håkansta

Abstract
The focus of this paper is the impact of digitalisation on a public sector organisation: the Swedish Work Environment Agency. Building on internal documents and interviews with labour inspectors and managers, it shows that ICT-enabled temporal and spatial flexibility increased the social isolation among the inspectors and that standardising technology negatively affected their work practice discretion. The interviewed inspectors considered these problems a managerial responsibility to solve. Management, in contrast, considered isolation a passing phenomenon and judged standardisation and replicability through ICT more important than inspectors’ discretion. This study illustrates how new technology in an organisation, although considered necessary, raises questions about how to maintain communities of practice and how to avoid negative effects on the discretion of street-level agents. It contributes to theory by introducing the concepts of Communities of Practice and street-level bureaucracy into the discussion of isolation by digitalisation.

KEYWORDS
communities of practice, digitalisation, labour inspection, professional isolation, public sector, social isolation, street-level bureaucracy, Sweden, work
INTRODUCTION

Remote e-work, enabled by increasingly sophisticated ICT, is transforming the core of work practices. It is also becoming an increasingly widespread phenomenon due to growing acceptance among employers, in tandem with growing expectations from employees to be able to decide when and where to work (Felstead & Henseke, 2017; Vilhelmson & Thulin, 2016). During the COVID-19 pandemic in 2020–2021, remote e-work became an essential component of governments’ social-distancing strategies. Unfortunately, the dramatic increase in remote e-work, as working, studying and teaching from a distance went from an option to a necessity almost overnight, was also found to have negative effects on mental health (Brooks et al., 2020). In fact, already before the pandemic, the relationship between remote e-work and social and professional isolation (Collins et al., 2016; Cooper & Kurland, 2002) was identified as one of the most problematic aspects of remote e-work (Eurofound, 2015; Eurofound & ILO, 2017; Nayani et al., 2018).

This paper builds on qualitative data derived from interviews with employees at the Swedish Work Environment Agency (SWEA) and additional documents. It is a part of a larger endeavour initiated by SWEA in 2017 to improve the capacity of the agency to respond to challenges caused by digitalisation and take advantage of its possibilities. The initiative included a literature review on how digitalisation transforms occupational safety and health and the role of labour inspection in a digitalised world of work. The paper is based on a study of how digitalisation affects the employees at SWEA based on internal documents and interviews. To obtain a richer picture, a focus group discussion with top managers and an interview with the head of the largest trade union federation present at SWEA subsequently complemented the first interviews.

Labour inspection has undergone much change in recent years due to weakened unions and the increasingly fragmented and precarious nature of the labour market (Mustchin & Martínez Lucio, 2020), an increasingly hostile environment (Piore, 2011) and diminishing resources (Weil, 2018). In Sweden, the last wave of austerity in 2006–2007 resulted in a cut in SWEA’s budget by a third. Funding and number of inspectors have since increased but are still low in historical and international comparison (Frick, 2014). Another characteristic is that the employees have a much above average understanding of working conditions, since they are national experts in occupational safety and health.

One of the contributions of this paper is that it investigates the relationship between remote e-work and social as well as professional isolation in a mobile occupation. Working in what is by definition a lonely profession, labour inspectors have become more isolated than they were before, leading to the bigger question of how to keep up the Communities of Practice – CoP (Wenger et al., 2002) in workplaces with diminishing face-to-face interaction. Another contribution is the analytical use of the concept street-level bureaucracy (Lipsky, 1980), thus adding to the limited literature on the effects of ICT on street-level bureaucracies (Buffat, 2015). CoP and street-level bureaucracy both proved useful analytical tools for understanding the results, including the diverging views of managers and inspectors in this study.

Workplace studies are important means of acquiring more knowledge about the consequences of digitalisation for the form and content of work. However, social change occurs at different speed and manifests itself in different ways depending on which part of working life is in focus. This qualitative study does not pretend to offer general results that are empirically generalisable. Instead, it presents the concrete effects of digital technology on the work of a group of labour inspectors. It pays particular attention to social and professional isolation caused by digital technology. Despite this rather narrow focus, the present study argues that the concrete effects, in this case captured through experiences, have analytical values beyond the professional group in
focus. Digital technology affects work practices and environments for an increasing number of people in a number of ways.

The disposition is as follows: the article starts with a presentation of central concepts, including street-level bureaucrats, mobile work, lonely work and social and professional isolation. Thereafter, it presents methods, findings and a concluding discussion.

**Labour inspectors: street-level bureaucrats and experts**

The objects of this study, the labour inspectors, are professional, front-line workers with a long history. Piore (2011) describes how agents in organisations that are under outside pressure and operate in hostile environments fall back to each other for support and protection. In labour inspection organisations, the spread of neoliberal philosophy in recent years has produced such environments as employers have become increasingly hostile to regulation and the person monitoring it, that is the inspector or regulator (Piore, 2011). The work of labour inspectors involves close contact with employers and requires skills to deal with pedagogical and conciliatory elements as well as sanctioning and deterrence. In addition, inspectors must be flexible and have the skills to deal with constantly evolving workplace risks. Changes in the composition of the labour force have affected the focus of inspections so that it is now less on traditional health and safety risks in for instance manufacturing and more on psychosocial risks in for instance service jobs. Sweden was one of the pioneers in 2015 when a provision dealing with organisational and social work environment risks (AFS, 2015:4) was adopted after many years of discussion between the social partners. For the inspectors, the new provision led to a much greater focus on informing about and regulating psychosocial risks. Although this is good news in relation to digitalisation and stress, the regulatory framework in Sweden is in general ill-adapted to the effects of digitalisation (Håkansta, unpublished 2017). At the organisational level, labour inspectorates face a complex set of goals which, making the situation even more complex, vary depending on the political and economic climate (Piore, 2011).

A street-level bureaucracy is a public sector organisation where the civil servants have direct contact with members of the general public. These street-level civil servants enforce or carry out actions required by law in areas such as safety, security and social services. Michael Lipsky coined the concept of street-level bureaucracy, arguing that policy implementation in the end comes down to those who actually implement it, and that the street-level agents have considerable discretion in how they execute their work and make decisions (Lipsky, 1980). This is certainly the case with labour inspectors, who must be flexible and skilful when weighing alternative means to achieve (often competing) ends (Piore, 2011). At the same time, there is often a preoccupation of the government and senior management to ensure standardisation and replicability and avoid individual and idiosyncratic solutions to regulatory problems (Piore, 2011). There are thus two conflicting sides of the matter: the flexibility and pragmatism of the street-level agent versus emphasis on the rule of law. The introduction of e-government has effects on the content and organisation of work in street-level bureaucracies, including the contact between front-line agents and citizens. Despite this, only a limited number of studies have looked at how new technology affects the policy discretion of street-level bureaucrats (Buffat, 2015). Buffat (2015) describes a division in the literature between the ‘curtailment thesis’, which claims that e-government reduces or eliminates front-line policy discretion and the ‘enablement thesis’, which claims that ICT opens up new possibilities for action to street-level bureaucrats.
Remote e-work: a mobile concept

Remote e-work consists of work that, aided by digital technology, takes place outside of the physical workplace. The meaning of the concept has evolved as technology, habits and norms have changed work (Allen et al., 2015). Halford (2005, p. 19–20) speaks in terms of ‘hybrid workspaces’ when trying to understand how the merger of spatial dimensions affects work practices, work organisation and management. Vartiainen and Hyrkkänen (2010) use the concept ‘mobile multi-locational work’, when investigating mental load at work carried out in various locations. Like Charalampous et al. (2018), this paper uses the term ‘remote e-working’ rather than for instance teleworking, telecommuting, hybrid work, remote working, nomadic work, eWork, virtual work or distributed work. The reason is that remote e-work includes mobile workers, such as employees working from customer sites (Allen et al., 2015) and, as in our case, labour inspectors.

Remote e-work has been growing at a fast pace during the last decades (Eurofound & ILO, 2017; Hislop & Axtell, 2007), and around one-fifth of employees in the EU were engaged in remote e-work before the pandemic, either occasionally or regularly, with levels ranging from 8 per cent in Italy to 38 per cent in Denmark (Eurofound, 2020, p. 25). In Sweden, Denmark and the Netherlands, remote e-work has increased most since the millennium shift, with a third or more of the workers doing it often or sometimes (Eurofound & ILO, 2017). The phenomenon is also spreading to additional sectors of the labour market. In Sweden, it is most common among workers in the advanced services sector, where levels went up from 23 per cent in 2005/2006 to 34 per cent in 2011/2012 (Vilhelmson & Thulin, 2016). Interestingly, the increase was higher in sectors outside of advanced services, from 6 to 14 per cent during the same period (ibid), indicating that remote e-work is spreading into more sectors and occupations on the labour market. Since the outbreak of the COVID-19 pandemic, remote e-work has grown exponentially as a result of governments and employers actively encouraging employees to work from home if they can. A survey with 715 respondents showed that 36 per cent of workers in Sweden, and 52 per cent in Swedish cities, had worked elsewhere than in their regular workplace between March and May 2020, and that a fifth would prefer more remote e-work after the pandemic compared with before.

In Sweden, the concept ‘distance work’ preceded remote e-work. Essentially, distance work was IT-supported work taking place at home, but only half of the Swedish distance workers used a computer and fewer still had access to an Internet connection (SOU, 1998:115, p. 52). Two decades later, the phenomenon had become more common in Sweden and in the rest of Europe, illustrated by Eurofound (2015, p. 72) in their definition of ICT-based mobile work as:

...work arrangements carried out at least partly, but regularly, outside the ‘main office’, be that the employer’s premises or a customised home office... Work takes place wherever and at any time it suits the work activities, task, business schedule and lifestyle of the worker, not necessarily at a specific place but also ‘on the road’....

As a consequence, ICT-based mobile work happens in ever-changing situations, but with a need to collaborate with other workers or clients, hence the requirement to be connected...

Messenger and Gschwind (2016, p. 203–204) speak of three generations of mobile work. The first generation is characterised by a division of work between two locations: the workplace and the home. ICT consists of a fixed telephone line and a stationary computer. During the second generation, work increasingly takes place at several locations, for example in a café, on a train, on an
airplane or in a waiting room. Mobile telephones and laptops replace stationary computers, enabling access to communication and information anywhere. The third generation of mobile work is characterised by growing spatial and temporal mobility. Telephones become smaller, lighter and smarter, enabling them to store information and act as a communication tool at the same time. Consequently, people are able to work between places, such as in elevators, on the way to the bus and during a walk. Messenger and Gschwind describe how mobile work, through the three generations outlined above, has gone from the home office, via the mobile office, to the virtual office.

**Changing attitudes and the need to connect**

Technology and access to the Internet may be essential to mobile work, but so are attitudes. Felstead and Henseke (2017) show that British employers have accommodated changing norms and expectations, thus becoming more receptive to remote e-working. Positive attitudes to remote e-work in Sweden contribute to the significant increase in the phenomenon mentioned earlier (Vilhemson & Thulin, 2016). However, despite more positive attitudes, a survey about remote e-work from Gothenburg University showed a drop in the share of respondents who were positive to working from home from 28 per cent in 2001 to 20 per cent in 2016 (Futurion, 2017). One explanation could be that what was initially perceived as a possibility, that is working at home, was increasingly perceived as pressure to be available at all hours (Ibid). More recently, the COVID-19 epidemic produced a debate in Swedish media about remote e-work and isolation. In the previously mentioned Swedish survey, half of the 715 respondents felt lonely and missed the social interaction with their colleagues.

The broader context of isolation and remote e-work is the flexibilisation and individualisation of working life. Already in 1999, Allvin et al. described the decoupling or disconnection of individuals in the emerging ‘jobs without boundaries’ situation, in which some appreciated the feeling of freedom and autonomy, whereas others felt excluded, isolated and lonely. Research about the effects of digitalisation on work has shown that spatial mobility affects interpersonal relations; spontaneous interaction between colleagues disappears and meetings have to be planned instead (Hislop & Axtell, 2007). Digital technology and connectivity have enabled this disconnection from the workplace to be both spatial and temporal (Flecker & Schönauer, 2016). In other words, workers who are connected and available at all times in terms of digital presence are not necessarily connected in the physical and social sense.

Isolation brings negative effects on health and the ability to function because of the human need to interact and create social bonds with other people (Baumeister & Leary, 1995). Vega and Brennan (2000) compare ‘isolation by digitalisation’ with a modern form of alienation that makes employees feel disconnected and distanced from the organisation and colleagues, experience less control over their work, as well as reduced contact with and feedback from managers and colleagues. Swedish legislation related to workplace isolation (AFS, 1982: §1) focuses on risks due to the physical isolation of workers unable to use a technical communication aid at the workplace and the social isolation of workers who cannot count on other people for assistance in critical situations. Despite distinguishing between social and physical isolation, it focuses on safety aspects and not the psychosocial aspects of not having contact with supervisors and colleagues. Literature on new technology and work uses similar concepts but sometimes, confusingly, with other meanings than what is denoted in Swedish legislation. One example is Bartel et al. (2012) who use physical isolation in relation to remote e-working in the same meaning as social isolation in the Swedish provision mentioned above.
Responding to social and professional isolation

The common cause of professional and social isolation is that there is not enough contact between remote e-workers and their colleagues and supervisors. The difference between the two types of isolation lies in the consequences. Whereas professional isolation relates to negative effects of isolation on promotions, rewards and personal development (Cooper & Kurland, 2002), social isolation is caused by a lack of social support relationships (Collins et al., 2016), which may have negative effects on workers’ well-being (Charalampous et al., 2018). Cooper and Kurland (2002) list three types of developmental activities that remote e-workers risk missing: firstly, interpersonal networking within the organisation; secondly, informal learning related to work-related skills and information distribution; and thirdly, colleagues and superiors acting as mentors.

Some people are better than others at dealing with perceived social isolation (Beauregard et al., 2013; Mulki & Jaramillo, 2011), and some can proactively mitigate feelings of isolation (Charalampous et al., 2018). However, regardless of individual differences, the question of how to support those who are not coping with isolation remains.

To avoid isolation, the literature suggests different variations on the theme of connecting the disconnected. This study applies the idea of creating and maintaining communities of practice in workplaces where persons dispersed in time and space can interact regularly to learn together and from each other. Communities of practice (CoP) have been described by Wenger et al. (2002) as groups of people with a concern or passion for something they do, and who by regular interaction learn how to do it better. Knowledge-sharing CoPs can take many forms: long-lived or short-lived; big or small; homogenous or heterogeneous; inside or across organisation boundaries; spontaneous or intentional; and unrecognised or institutionalised. Common to them all is that sharing of practice requires regular interaction. The notion of co-located or distributed CoPs is particularly interesting to the discussion of remote e-work. Whereas many communities start as a co-located CoP among employees in the same workplace, others have members in different physical locations who form distributed CoPs. Distributed CoPs require the replacement of face-to-face meetings with other means of communication and a discussion about whether, and if so how much, face-to-face interaction is needed (Wenger et al., 2002). The emergence of new collaborative technologies has enabled virtual communities of practice (Dubé et al., 2005), but the question whether face-to-face interaction is needed to cultivate a CoP remains.

Bentley et al. (2016) show that perceived support from the organisation, supervisors and colleagues is positive for job satisfaction of remote e-workers and reduces psychological strain and social isolation. Such support can be provided via regular physical meetings with managers and colleagues (Mann & Holdsworth, 2003) or by creating social support networks between remote e-workers, supervisors and peers (Charalampous et al., 2018). Remote e-workers tend to contact persons they already know, which highlights the importance of face-to-face meetings at a geographical workplace to create a common ground for communication and social integration (Pettersen, 2020). Aira et al. (2010) suggest the introduction of flexible collaborations and professional networks to overcome professional and social isolation among general practitioners in Finland. To sum up, remote e-work is a challenge to physio-social workplace-based communities of practice characterised by physical meetings that provide affirmation, social support and participation in an organisational context. Furthermore, the meetings are arenas for learning, reflexion and exchange of knowledge and experiences that contribute to the creation of professional identity and belonging (Aira et al., 2010).
The legal dimension of ‘isolation by digitalisation’

According to the EU safety and health of workers directive 89/391/EEC, Article 6 §2.g (European Union, 1989), employers are obliged to develop ‘a coherent overall prevention policy which covers technology, organisation of work, working conditions, social relationships and the influence of factors related to the working environment’. However, as demonstrated in a study by McDowell and Kinman (2017), many managers tend to view the effects on health and well-being of using ICT primarily as an individual responsibility. This study approaches the difficult matter of employers’ responsibilities in relation to isolation from the angles of two groups of experts in occupational safety and health: inspectors as employees experiencing isolation and their employers.

METHODS

The study presented in this paper is part of a larger exploratory investigation initiated in 2017 by the Swedish Work Environment Authority (SWEA). The purpose of it was to improve the capacity of the agency to respond to challenges caused by digitalisation and take advantage of its possibilities (Håkansta, 2017 unpublished). The empirical material includes a broad range of documents from different departments at SWEA related to former, current and planned initiatives to implement digital solutions. It also includes information retrieved from interviews with 17 persons (nine women and eight men), including 13 employees, of whom one was a trade union leader, and a focus group discussion with four managers. This paper is a spin-off from the interview study and focuses on one of the key findings: the perceived social and professional isolation among the inspectors caused by ICT-enabled spatial and temporal flexibility. Another theme under investigation is the effects of standardising ICT on the discretion of labour inspectors at the base of the hierarchy.

The first set of data, gathered in 2017, consists of semi-structured interviews with employees with the aim of finding out how the staff experienced digitalisation in their own work practices, and how the inspectors experienced the effects of digitalisation on the occupational safety and health of the workplaces they visited. The employees worked at four of SWEA’s five regional offices (Stockholm, Gothenburg, Norrköping and Malmö). They were interviewed individually or in groups of two or three persons. Ten were inspectors, who ambulate and spend little time in the office. Two were staff working most of their time in the office: one legal officer and one member of the administrative/IT staff.

With permission from SWEA, the author and a colleague used the same interview data in a study on how digitalisation affects work practices and the work environment in the labour inspection (Håkansta & Bergman, 2018). Guided by an inductive approach, the authors listened to the recordings several times and created analytical categories focusing on the content, form and place of work as well as experiences and consequences of digitalisation. Finally, the authors identified relations between the different categories and the nature of the relationships (Gioia et al., 2013; Martin & Turner, 1986).

The second set of data was added in 2018–2019 in order to investigate the views of management in relation to the key finding of the 2018 article— isolation. This was done via a focus group discussion (Barbour & Kitzinger, 1999; Krueger, 2014) with senior managers from the SWEA Head Office in Stockholm, including the Deputy Director-General and directors from the departments of Human Resources and Inspection. Also, the leader of one of two trade union federations (SACO, the Swedish Confederation of Professional Associations) was interviewed. All interviews
and the focus group discussion were conducted in Swedish and all were audio recorded. Quotes were translated into English by the author.

RESULTS

The Swedish Work Environment Authority (SWEA) is a government agency under the Ministry of Labour with a mandate to ensure that employers abide to regulation in the areas of occupational safety and health and working hours. The organisation employs 634 persons, of which 60 per cent are women, in twelve offices throughout Sweden (Arbetsmiljöverket, 2020).

Since the 1980s, when computers were introduced, SWEA has gradually introduced E-government, including digital administration and information and services available via the SWEA website. In 2002, communications related to the inspections went from analogue to digital with the introduction of e-mails and the IT support system SARA. In 2015, SWEA considered SARA obsolete and replaced it with INES: the support system currently in use. At the same time, all inspectors received a laptop. INES has a standardised inspection protocol integrated with a meeting planning system and a case management system, which has led to automated case registration and dispatch of inspection messages to employers in the inspected workplaces. Because of these features, the inspectors were encouraged to bring their laptops to the inspections and do their administration in situ rather than return to the office after each visit to pass on their reports to administrators and legal officers.

The introduction of INES was turbulent for two reasons. One was initial technical problems with the system itself and erratic Wi-Fi connections at the inspection sites. Another was that it happened simultaneously with a reorganisation involving merging regional offices and office relocation, often to premises with open plan office solutions rather than cell offices as before. In the following quote, an inspector describes how the shift from cell office to open plan office had made concentration difficult and that working from home was a blessing:

I told my boss several times that I don’t need an office here. I always work from home. I’m only here for meetings and to talk to colleagues. I never sit here because it doesn’t work. We sit in an open plan office and it becomes quite impossible, so for me it is wonderful to be able to sit at home and work in tranquillity. I am much more efficient.

The official reason for the reorganisation was to create more unity, but it was also a way to save costs in an organisation hard hit by austerity measures some years before. An inspector who had just started working at SWEA at the time remembers it as chaotic:

SWEA cut SARA off, just like that, and started in INES, with all that this entailed. People had breakdowns and cried in front of the managers and everything in January-February 2015. Those of us who were new wondered ‘what is this place?’ People were really feeling bad.

Two common themes in the interviews were the reduced number of face-to-face meetings with colleagues and increasingly empty offices. Like in other ambulating front-line occupations, labour inspectors have always spent much of their working time away from their colleagues. In that sense, working alone and being isolated was not new to them. What was new was that digitalisation had
affected their work practices so that a previously manageable mobile and spatially isolated work practice had become increasingly isolated and mobile, as exemplified by this inspector:

One drawback of digitalisation, an enormous drawback that we have talked about a lot in our section.... There are fewer and fewer opportunities to meet in person because you can always sit at home. You could not [do that] in the same way before. You don’t need to be in the office for weeks, and that is a development I don’t think is good.

The introduction of INES and laptops in 2015 thus led to increased temporal and spatial flexibility for the inspectors. Since then, data and systems had moved into the inspectors’ smartphones, making their work even more mobile. The inspectors use GPS in their phones to find their way, the camera to document inspections and apps to demonstrate different points in their meetings with employers. They have thus entered the third generation of mobile work, the ‘virtual office’ (Messenger & Gschwind, 2016). Significant flexibility from the management side as to when and where to work further enhanced this flexibility. Digitalisation has not only enabled a spatial and temporal disconnection of the inspectors from their office (Flecker & Schönauer, 2016) but also made them more connected than before by means of systems, laptops and mobile phones.

Another reason why some inspectors did not see as much of their colleagues as they would have wanted was the perceived or real pressure from the management to be out doing inspections:

At the same time, they want us to be out and inspect, so you can’t … but I would not mind if perhaps, well not strictly required but … you should be in on Mondays and Fridays for example.

The interviews showed how a reduction in spontaneous interaction with colleagues affected the interpersonal relations of the inspectors (Hislop & Axtell, 2007), and despite general optimism about the newly won spatial and temporal flexibility, they feared a modern form of alienation: ‘isolation by digitalisation’ (Vega & Brennan, 2000).

Professional isolation

Professional isolation is the negative effects of spatial and temporal disconnection from the workplace on promotions, rewards and personal development (Cooper & Kurland, 2002). None of the informants claimed to be directly affected by professional isolation. This may have been because of the timing of the interviews only two years after introducing the new system; it may not have been enough to notice any effects. However, several informants raised concerns about the future and the situation of new employees.

Cooper and Kurland (2002) list three types of developmental activities that remote e-workers are at risk of missing. Number one, *interpersonal networking within the organisation*, seemed to work fine because of a long tradition of project-based work across the regions. One respondent referred to a network of specialists from different regional offices, which by necessity had always been a virtual community. This network provided all the professional development and support this respondent needed. Others mentioned nationwide inspection projects, for which digital means of communication had been used for many years. The labour inspectors thus belonged to various institutionalised *communities of practice* (CoP; Wenger et al., 2002): some were co-located...
CoPs between inspectors in the same regional office while others were distributed, virtual CoPs between inspectors and other staff working in different offices and departments (Dubé et al., 2005).

As for number two, informal learning related to work-related skills and information distribution, and number three, colleagues and superiors acting as mentors, the informants worried about newly recruited colleagues. The following quote from an inspector illustrates concern for new employees who have not yet established a professional network in the organisation:

There is also this risk with digitalisation ... if you are a new employee ... I mean, transfer of knowledge, you kind of sit and talk. Those of us who have been around a while may not have that need but all the new ones who come and may need someone to talk to, an experienced inspector, and then we are never there. We don't need an office so why should we have one then? But, then you forget about the social bit which is really important in a workplace as well as transfer of knowledge.

If professional isolation was not (yet) a big concern among the inspectors, social isolation was.

**Social isolation**

Lack of social support relationships (Collins et al., 2016) was a commonly recurring theme in the interviews. The inspectors missed the ‘coffee machine conversations’ and gossip from face-to-face meetings between colleagues, which create the base for context and anchoring (Vega & Brennan, 2000). The office in itself was thus not important to them, but they missed the encounters with their colleagues. As illustrated in this quote, the empty offices seemed to perpetuate the emptiness of offices in a vicious circle:

... the fewer we are here [in the office] during the week, there will be no reason for me to come in either. Like now, after an inspection. Maybe there is no one to talk to in general or if you would actually want to ask something, which one does mainly with one’s colleagues ... and if everyone thinks like that, well then there will be no one there and, well, there will be nobody.

There were in essence two types of narratives about how the inspectors experienced social isolation. The quote above is representative of more general stories about negative effects of isolation on the well-being and on the cohesion of the group. Other narratives more specifically related to their own work practices. Inspectors meet many people in very different settings, and most of the time they work alone. They must take notes, ask questions, summarise the meeting and walk around the place. The following quote illustrates the need for social support in a job that can be lonely, stressful and sometimes menacing (Piore, 2011):

Afterwards you are pretty empty and that is when it is nice to talk to someone because we are in a pretty vulnerable situation. Before we were seen more as ‘good guys’ but now we are exposed to more resistance ....

Remote e-workers tend to contact persons they already know (Pettersen, 2020). The following quote illustrates how an inspector was much less likely to phone someone h/she did not know well:
To go home after that, one needs...a telephone call can be good, even though you have no specific questions. But some of us don't have those channels, and others, well I think they don't understand how important it is, and they don't want to disturb. I guess it is something we all have, that we should manage things on our own.

Reduced social interaction between the inspectors thus risk leading to more superficial relationships, which could have negative effects on the much-needed social support from a close colleague after a stressful and lonely day at work.

**Inspectors: unusually well-informed informants**

The labour inspectors in Sweden are a group of skilled professionals, often with many years of work experience in for instance engineering, physiotherapy and psychology. The provision dealing with organisational and social work environment risks (AFS, 2015:4) has further enhanced their expertise in the area of psychosocial health. This makes them well aware of the fact that a lack of social support relationships (Collins et al., 2016) may have negative effects on workers’ well-being (Bentley et al., 2016; Charalampous et al., 2018).

When asked about solutions to the perceived problem of isolation, the inspectors emphasised the legal responsibility of managers to enable a supportive and developing work environment. They also provided concrete suggestions that are supported in the literature, such as organising physical meetings (Mann & Holdsworth, 2003), setting up social support networks (Charalampous et al., 2018) and creating professional networks (Aira et al., 2010). One suggestion was to create a forum with meetings between the inspectors, administrators and legal officers to discuss difficult cases, some via video link but also face-to-face meetings. Another suggestion was to improve communication of essential information in the organisation. It was also suggested to do more inspections in pairs to improve social support and learning, rather than the standard procedure of one-person inspections.

There were also voices to restrict SWEA's generous policy on temporal and spatial flexibility, which according to some inspectors, was a contributing factor to the problem of isolation. Although most offices had rules that inspectors should avoid inspections one or two specific days of the week, not everyone followed these rules. Several inspectors expressed the wish that managers should be stricter in enforcing the rules, illustrated in the following quote:

> In a way, we have Mondays when everyone is supposed to be in the office unless there is something special. But you would not need to be there to do your job. You can work via Jabber [a communication tool used at SWEA at the time], telephone meetings, or you can do it via computer or mail.... They [the managers] could be a bit stricter and make sure everyone is in on Mondays. Because now you just say: hey, I have an inspection...and this while they have told us not to plan any inspections for Mondays. Just so that we come in and be social. They should just... everyone must be in on Mondays, end of story!

Similar to the labour inspectors, most of SWEA’s managers are experts in occupational safety and health. Despite that, the senior managers painted a rather different picture of problems related to digitalisation.
Management focus on culture and the rule of law

The interviewed managers saw professional and social isolation as a passing phenomenon that would eventually disappear with changes to the organisational structure and culture. Implicitly, they were thus emphasising individual responsibility in relation to the effects on health and well-being caused by the use of ICT. Similar to a study in the UK (McDowell & Kinman, 2017), our data indicate an absence of policies and guidance to support the employees with technology-enabled working practices and communications.

In the context of culture, the managers described different traditions in the various regional offices. In the following quote, a manager refers to the regional office in the Northern region. In the North, the population is sparse and travel distances long between the inspection sites, causing inspectors to connect on-line more than is the case in the other regions.

(...) digital technology can be used for socialising and learning. Used in the right way, one can have fora for chats and for face timing with each other. I know that in the North somewhere they have digital ‘fika’ [Swedish tradition of social coffee breaks] together and they connect with each other wherever they are. I mean, that is where I think we have to go.

Digital ‘fika’ became routine in Swedish workplaces during the pandemic but at the time of the interviews, it was still uncommon. The managers also talked about plans to develop and promote the use of digital devices and software programmes to enable inspectors to communicate with managers and colleagues.

SWEA introduced flexible working time already in the 1990s and now the managers felt that digital solutions had led to ‘too much’ temporal and spatial flexibility. They said that there was a need to establish principles and rules to create more structure. However, rather than saying how and when this would happen, they argued for a change in the culture from within, for example by recruiting people who live close to the office to reduce travel distance between home, inspections and the office – thus, strengthening the incentive to stop by the office. In this quote, the HR manager explains how they convey working time rules during recruitment interviews:

We don’t have it formulated today but, like, at least one day a week we should be at the office or so many days per month (...) it’s about setting a framework, it is about how to organise, to say that these are our rules. If you want to work here, this is how we work.

The managers also stressed the need to secure the rule of law through standardisation and replicability, which is common for all labour inspectorates and not unique for SWEA (Piore, 2011). The introduction of INES and other digital solutions were seen as necessary measures to improve the state rule by avoiding idiosyncratic solutions to regulatory problems and to facilitate the work practices of the inspectors. This positive outlook mirrors what Buffat (2015) calls the ‘enablement thesis’, which claims that ICT opens up new possibilities for action to street-level bureaucrats. In the following quote, one manager acknowledges the loneliness of the profession but stresses the need for replicability, and thus, implicitly justifying the necessity of introducing digital solutions to uphold the rule of law:

If we look at the inspectors, this is a lonely job but dialogue is also necessary because we need to be able to say the same thing to two different companies and make the same kind of demands, even though we are different persons (...).
The labour inspectors on the other hand did not share the managers’ positive view of front-line conformism by digitalisation.

**Resistance among the street-level agents**

According to Buffat (2015), the ‘curtailment thesis’ claims that digital solutions reduce or eliminate front-line policy discretion. This was evident in the inspectors’ narratives describing how the introduction of standardised inspection protocols (INES) curtailed the discretion of their inspection routines. They perceived that INES reduced the freedom previously enjoyed as to how to write their reports; they could no longer describe their findings in their own words in a long or short text. This caused frustration – especially among persons who had worked at SWEA for many years. An additional problem was that INES was not suited for complex types of inspections, only for routine inspections. Consequently, some inspectors simply ignored the standardised protocol, as illustrated in the following quote:

(- - - ) at least I know a few who do not use INES. Instead, they use the ordinary Word and so forth. And that may be a sign that one does not think the new system is good enough.

Another sign of resistance was reactions to the idea that inspectors should write the reports on their laptop during the inspection. Few inspectors did so at the time of the interviews because they found the computer an impediment to communication or because they often walk or stand during the visit, making it impossible to write on the laptop. This quote is from one of several interviewees who never brought the laptop to an inspection:

I never bring the computer to the employer. I have my telephone and their computers so they will have to enter and...So I never, well (laughter), bring it. The idea of this INES system and all was that we would sit there directly with the employer and send their e-mail and then go home, but it does not work (...) but then afterwards one can do it at home or in the car or in another place (...).

The interviews thus revealed a clash produced by digitalisation in a street-level bureaucracy (Buffat, 2015) between the management, which saw digital solutions as a means to prevent idiosyncratic solutions to regulatory problems (Piore, 2011), and the street-level bureaucrats, who experienced a curtailment of their discretion to perform work.

The implications of these results, revealing experiences of isolation and a clash between standardisation and discretion in this street-level bureaucracy, will be discussed next.

**DISCUSSION AND CONCLUSION**

This explorative pre-pandemic paper examines the consequences of introducing digital solutions in a public sector occupation: the labour inspectors. The paper focuses on professional and social isolation following increased spatial and temporal flexibility.

The results show that laptops, smartphones and a new support system in the work of the inspectors led to increased disconnection from their office (Flecker & Schönauer, 2016) and
transformed their work into a ‘virtual office’ (Messenger & Gschwind, 2016). Technology thus made them more connected and available in one sense, and more disconnected in another. As a consequence, many inspectors experienced increased loneliness, in what had been a lonely profession already before digitalisation. They expressed concerns about damage to the interpersonal relations in the group (Hislop & Axtell, 2007) and that they would come to suffer from ‘isolation by digitalisation’ (Vega & Brennan, 2000).

Although acknowledging that professional isolation might potentially affect promotions, rewards and personal development (Cooper & Kurland, 2002), none of the informants claimed to be directly affected. However, they did raise concerns about future formal and informal learning in the group, thus illustrating their need for the knowledge sharing qualities of a Community of Practice (CoP; Wenger et al., 2002). Virtual collaboration in the form of national projects and specialist networks nevertheless indicated that the practice of ‘virtual communities of practices’ (Dubé et al., 2005) had already made its way into the organisation.

Experiences with and risks related to social isolation was a recurrent theme in the interviews. Similar to other remote e-workers, the inspectors missed the social interaction with their colleagues and its capacity to create a base for context and anchoring (e.g. Vega & Brennan, 2000). They stressed the need for social support in an increasingly hostile environment (Piore, 2011), emphasising the importance of talking to a colleague you know well after a strenuous day at work (c.f. Pettersen, 2020). Their narratives illustrated the importance of the CoP in establishing trust and relationships needed for colleagues to provide and receive social support.

Managers and employees at the Swedish Work Environment Authority (SWEA) are leading experts in occupational safety and health. However, when asked about solutions to the perceived problem of social and professional isolation, each group had radically different ideas. The inspectors emphasised the legal responsibility of managers to enable a supportive and developing work environment (c.f. Aira et al., 2010; Charalampous et al., 2018; Mann & Holdsworth, 2003). The managers on the other hand saw isolation as a phenomenon that would eventually disappear. Furthermore, there were no policies or guidance in place to support the employees (c.f. McDowell & Kinman, 2017).

The results suggest that the discrepancy in views between the management and the inspectors can be understood in the light of SWEA being a street-level bureaucracy (Lipsky, 1980), the inherent conflict between the management’s focus on the rule of law and the inspectors’ discretion to make decisions and perform their work (Piore, 2011). One of the aims of the new digital solutions was to standardise the inspectors’ work practices. The management saw isolation as a (temporary) price worth paying for what was received in return: the prevention of idiosyncratic solutions to regulatory problems (Piore, 2011). At the same time, management viewed the new technology as something that would ultimately be of benefit to the inspectors, thereby confirming the ‘enablement thesis’ (Buffat, 2015), which claims that ICT opens up new possibilities for action to street-level bureaucrats. Nonetheless, several inspectors expressed frustration with the standardisation of their work practices, which they felt prevented them from doing a good job. This confirms the ‘curtailment thesis’ (Buffat, 2015), according to which the introduction of ICT has a negative effect on the discretion of street-level bureaucrats.

This study is a response to the call of Nayani et al. (2018) for more research on organisation and leadership to prevent the negative effects on the work environment of a rapidly growing number of remote workers. It breaks new ground by investigating the effects of ICT on an ambulating profession in the public sector. Furthermore, it introduces the concepts CoP (Wenger et al., 2002) and street-level bureaucracy (Buffat, 2015; Lipsky, 1980; Piore, 2011) to the discussion. The CoP concept illustrates the importance of providing a platform for learning, tacit knowledge and
relationships, which is so essential to organising remote e-work without risking professional and social isolation. The concept street-level bureaucracy (Lipsky, 1980) helps to disentangling the underlying motives of disparate rationales in an organisation, exemplified in this paper by the different views of the inspectors and managers.

This paper contributes to theory and practice in terms of the applicability of the findings not only within the public sector context or indeed that of labour inspectorates, but also in organisations more broadly. In conclusion, there is a need for organisations that already have or plan to introduce remote e-work, to create and maintain CoPs in order to reduce and prevent social and professional isolation. Furthermore, managements in street-level bureaucracies need to keep in mind that while improving efficiency and respect for the rule of law, new technology can also lead to unwanted effects for the civil servants at the front line. By taking action early, street-level bureaucrats should have a better chance of enjoying decent working conditions when their work practices are being digitalised.

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CONFLICT OF INTEREST
None.

DATA AVAILABILITY STATEMENT
The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

ORCID
Carin Håkansta https://orcid.org/0000-0001-7491-9093

ENDNOTES
1. Vilhelmsén and Thulin (2016, p 83) define advanced services as ICT; finance and insurance; professional, scientific and technical activities; and education.

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**AUTHOR BIOGRAPHY**

**Carin Håkansta** is a researcher and teacher at Karlstad University and Karolinska Institutet in Sweden. Before and parallel to her academic career, she has worked for the International Labour Organization, the Swedish Ministry of Labour and three Swedish government agencies. She is interested in how changes in society, policymaking and the labour market affect work and workers. Carin is currently engaged in PWR, an international research programme on the effects of non-standard work on health, and KomDig, a Swedish project on the effects of digitalisation on work and workers in two municipalities. From 2022, she will lead a new project on the effects of algorithmic management on the work, health and well-being of warehouse workers in Sweden. Carin Håkansta lives in Stockholm.