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Delegating Agency in the Public Sector: A Case Study on Current Human-Technology Practices and Visions for AI

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DELEGATING AGENCY IN THE PUBLIC SECTOR: A CASE STUDY ON CURRENT HUMAN-TECHNOLOGY PRACTICES AND VISIONS FOR AI

Research paper

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Abstract

Human-technology collaboration is currently receiving a surge of attention in Information Systems (IS) due to attempts to introduce Artificial Intelligence (AI) in private and public organizations. In Scandinavia, governments are introducing AI-infused services to support decision-making and enhance efficiency in case processing within healthcare, education, and welfare. However, there is a need to shed more light on the conditions that precede AI implementation and the path that leads organizations to envision AI as a solution to a problem. We ask: How do humans and technology cooperate in the public sector? How is AI visioned to be part of this in the future? We report from an ongoing qualitative case study of work practices to assess sick leave cases at a Scandinavian welfare agency in which AI gradually emerged as a means to achieve more efficient resource distribution at the agency. Inspired by the concept of delegation drawn from Actor-Network Theory, we trace the distribution of work across technical and human agents in the sick leave department and illustrate how the agency is starting to envision a way to delegate tasks to AI-based tools in the future.

Keywords: Actor Network Theory, Artificial Intelligence, Delegation, Human-Technology Cooperation

1   Introduction

Digital innovations lead organizations to introduce new products and services, complementing or replacing existing practices (Hinings et al., 2018). For example, Artificial Intelligence (AI) is increasingly being tested and used in the public sector aiming to automate routine work tasks, increase efficiency, and improve the quality of services. AI-based technologies have the capability to automatically learn and adapt to new situations through data sets and experiences without being explicitly instructed (Berente et al., 2021), known as Machine Learning (ML). ML systems are increasingly employed as a tool for decision support, for example in healthcare to detect breaches or cancer.

Recent studies in Information Systems (IS) have looked at the implementation of AI in organizations (or attempts thereof) through a sociotechnical lens investigating and facilitating cooperation between

humans and technology: How inscrutable AI systems that are difficult for humans to interpret can be introduced in an organizational setting in a safe manner (Asatiani et al., 2021); how machines can learn simultaneously with humans in *metahuman* systems (Lyytinen et al., 2020) creating *hybrid* practices (van den Broek et al. 2021); how the outcomes of algorithmic-based systems need to be considered by both technical and social structures (Dolata et al., 2021). These studies provide a promising lens to surface the agency of humans and AI technologies. However, as Anthony et al. (2023) observe, most studies of AI in work and organizing take a medium or tool perspective, in which AI is a means to accomplish an aim such as better efficiency, accuracy, or precision. There is also a tendency to take a dark-side perspective in which AI becomes a source of alienation for humans (Mikalef et al., 2022). While these studies offer valuable insights, IS research does not usually problematize the path that led to the emergence of AI as the solution to a chosen problem (cf Monteiro et al. 2022). As a result, we lack more in-depth studies, thus engagement with the empirical context, into the conditions and path through which AI gradually comes to the fore and becomes part of a collective of humans and technology that cooperate over time (ibid). This involves a broader understanding of the sociotechnical practices that AI is supposed to become part of in an organization.

This is particularly important in the context of the public welfare sector. Welfare services typically consist of frontline work performed by case workers who make decisions about cases involving citizens as part of a service that must be accessible and non-discriminatory (EESC, 2015). Scandinavian and European governments have issued national strategies for AI, for example, Sweden (National Approach to Artificial Intelligence, 2018; European Commission, 2019), Denmark (National Strategy for Artificial Intelligence, 2019), and Norway (The National Strategy for Artificial Intelligence, 2020), to promote the development and use of AI for more efficient decision support in different services in the public sector, including welfare. Case workers continue to have an important role in the introduction of AI-based tools because they are ultimately responsible for decisions taken as mandated by the European regulation (Art. 22 GDPR). Curious about the consequences of national authorities' visions about AI for frontline work performed by case workers, we sought to investigate the current cooperative practices between humans and technology, and how AI is envisioned to be part of these work practices in the future. We, therefore, ask: *How do humans and technology cooperate in the public sector? How is AI visioned to be part of this in the future?*

Aiming to explore and explain phenomena (Gregor, 2006), we conducted a case study of case management cooperative practices in a Scandinavian public welfare agency. We are inspired by the Actor-Network Theory (ANT) tradition (Latour, 1992; Latour, 2005) that considers humans and non-humans (technology in the case of this paper) as equal actors within a network of evolving relations for analytical purposes. In this way, we are better positioned to understand how AI emerges as a counterpart in this network and how work can be assigned to it. We draw in particular on the concept of *delegation,* according to which "(…) organizational work and agency are passed back and forth across the shifting line between "social" and "technical" elements" (Ribes et al., 2013, p. 1) to outline the current human-technology cooperation, and how it is envisioned to delegate agency to AI-based technologies in the future.

Our findings show how work practices to assess cases in the public welfare sector involve emerging configurations of humans and technology and how some processes could benefit from an AI implementation to automate tasks, streamline services, and release work. However, we also discover the essential role played by human judgments that often underlie the assessment of a case. We contribute to the IS literature with new insights into the current status of welfare work practices involving a network of humans and technologies and how future work practices can include AI.

2   Theoretical background

Digital innovations such as new products, processes, and services are often created, implemented, and employed to complement or replace existing organizational practices (Hinings et al., 2018). Hinings et al. (2018) elaborate on a case from a hospital where an automatic dispensing robot transformed the practices of medication distribution: The robot "ultimately caused shifts in the occupational identities and boundaries of pharmacists, technicians, and assistants" (p. 56). However, it is not a new phenomenon that the introduction of new technologies shifts identities and boundaries. For example, Orlikowski (1992; 2000) discussed how work practices change due to the introduction of new technologies in organizations. Thus, digital innovation often triggers the delegation of tasks to digital technologies, resulting in changed work practices and a shift in the actors involved. Increasingly, AI-based technologies are discussed to achieve different outcomes in public and private services. Davenport and Ronanki (2018) looked into 152 AI initiatives in companies and identified *three types of AI:* process automation, for example, Robotic Process Automation (RPA) technologies to automate digital and physical tasks, cognitive insights such as ML-based applications that detect and learn from patterns in vast amounts of data, and cognitive engagement, for example, natural language processing chatbots engaging users.

Delegation (or translation or displacement (Latour, 1992)) is a concept in ANT where *actors*, according to Walsham, (1997, p. 468) ""stand in and speak for" particular viewpoints which have been inscribed in them, e.g., software as frozen organizational discourse". These actors can be social (human) or technical (non-human), which leads to work and agency being distributed between these actors (Ribes et al., 2013). This can, for example, mean that manual tasks performed by humans are assigned to non-humans; for example, using door hinges to close a door rather than a doorman (see Latour, 1988) or creating a speed bump in the road to replace a police officer to slow down cars (see Latour, 1992).

Research inspired by ANT encourages thinking about delegation as a redistribution, rather than a replacement, of human work and social ties (Ribes et al., 2013). Geiger and Ribes (2010) address the ignored and often overlooked heterogeneous cooperation between human and non-human actors to identify and block malicious contributors in the English language Wikipedia. They investigate the social role of software tools as a non-human actor, such as autonomous editing programs and assisted editing tools, and elaborate on how such tools have transformed previous manual processes in *sustaining order in Wikipedia* (Geiger and Ribes, 2010). Together with the human actors, the non-human actors present an unprecedented possibility to recognize vandals: "(…) technological tools like bots and assisted editing programs have a significant social effect on the kinds of activities that are made possible in Wikipedia" (Geiger and Ribes, 2010, p.125).

Assigning tasks previously done manually to digital innovations such as AI, allows for cooperation between humans and technology (AI in this case). This human and non-human collaboration is what Latour (1992) describes as a *distribution of competencies*. AI implemented in public services has the potential to deliver services more efficiently, correctly, and accurately. Elaborating on the future of work regarding AI, Malone et al. (2020) explain how AI and humans are more likely to work together as "superminds" in the future rather than computers replacing humans, which is in line with Anthony et al. (2023) elaborating on how the human-AI creates "super teams". These super teams have shown promising results in healthcare, where AI has been tested and implemented as decision support and used to complement doctors and physicians in detecting cancer with increasingly good results (see for example Lennox-Chhugani, 2020; Tschandl et al., 2020). However, research also shows how such implementation does not always succeed: Lebovitz et al. (2021) conducted a study on how managers evaluated ML-based AI systems implemented in the medical fields "(…) for potential organizational adoption" (p.1502). The managers encountered challenges, and the tools in practice did not meet the expectations because it was not able to capture experts' knowledge acquired through practical experience.

Due to national strategies in Scandinavia and Europe promoting the public sector to explore the use of AI in different services, AI as decision support is tested in different public services, for example, healthcare, education, and employment (National Strategy for Artificial Intelligence, 2019; The National Strategy for Artificial Intelligence, 2020; National Approach to Artificial Intelligence, 2020; European Commission, 2019). However, because AI is "(…) less visible, constantly evolving and more inscrutable than prior technologies studied by scholars of collaboration" (Anthony et al., 2023, p. 7), it can be challenging to observe the working practices that emerge around the use of AI in organizations (ibid). Moreover, research on what leads to the emergence of AI as a solution to a given problem is also lacking so far in IS research (cf. Monteiro et al., 2022). Earlier research found that technology impacts case workers' practices and discretionary power in non-obvious ways (Boulus-Rødje, 2018). Therefore, we hypothesize that looking at human-technology cooperation and the work practices in place before implementing AI is crucial before we delegate agency to AI.

3 Case context

The research is based on ongoing fieldwork at a public welfare agency in Scandinavia. The public welfare agency consists of several departments, and one of the departments focuses on all processes related to sick leave. The sick leave department was chosen due to an ongoing conversation with the agency's office for IT development to explore implementing an AI-based decision support tool to predict the duration of a citizen's sick leave.

The sick leave department has around 12 employees, referred to as case workers. The public welfare agency case workers are responsible for following up on the sick leave of around half of the municipality citizens. Through observations and interviews of the case workers, we aimed to examine how decisions are taken about sick leave while simultaneously exploring possibilities for future use and implementation of AI in general.

4 Research Methods

Interpretive case studies are well suited for discovering human interpretations and meanings in the collected data (Walsham, 1995) and for an in-depth investigation of a complex sociotechnical context. Therefore, our data generation method followed a case study strategy to investigate the current sociotechnical working practices among case workers in a public welfare agency.

4.1 Data collection

Our data collection is based on fieldwork at the public welfare agency (Table 1). This case study relies on qualitative data collected through observations of case workers' daily work to identify actions (Langley, 1999) and semi-structured interviews of case workers in the public welfare agency to identify meanings (ibid.).

The observations were conducted from November 2022 to March 2023, and the interviews were conducted in February and March 2023 to observe and go into depth in understanding ongoing practices at the welfare agency. We conducted three group interviews with nine case workers in total, and an interview with a former case worker in the public welfare organization. Because case workers often work in groups, it was important for us to preserve the group aspect and maintain the groups during interviews. Therefore, group interviews were selected as the interview method to enable discussions and reflections (Morgan, 1996) among the case workers. The interviews had a semi-structured format where open questions were asked to encourage reflections from the interviewees. The interviews were later transcribed, leading to the creation of concepts and overall categories (Table 2).

Who	Data collection	When	Content	Number of participants
Case workers	Semi structured interviews	February – March 2023	To understand processes in depth. To elicit reflections on potential applications of AI.	10
	Observations	November 2022 – March 2023	Observing how case workers work with sick leave. Weekly group meetings, interactions with IT systems.	12

Table 1.   Data collection table

4.2   Data analysis

To analyze the data, we used an interpretive research paradigm (Klein and Myers, 1999; Walsham, 2006). We were interested in exploring daily work practices; thus, the unit of analysis became the case workers' practices.

The first author conducted the analysis. Provisional results were discussed iteratively with the second author and other members of our research team to validate them. Data analysis overlapped with the data collection through deductive-inductive steps, alternating theory, and data (Eisenhardt, 1989). In the first phase of this process, we open-coded transcribed interviews and field notes to identify recurring concerns addressed by workers. Codes were compared and contrasted and gradually clustered into sets of concepts. For example, the excerpts "there are several systems", "there are many inquires there, from the doctor, contact person, treatment personnel" and "what is positive is the chat function with users" could belong to the concept "Interacting with internal systems and external online sites". In the second phase, emerging concepts represent recurrent solutions to the identified concerns, either in use today or envisioned through the introduction of AI (see category "Envisioning AI applications"). In the third and last phase, the identified concepts were further grouped into categories to describe human and technology collaborative practices in the public welfare agency (see Table 2). For example, since the concepts "Interacting with internal systems and external online sites" and "Depending on human connections" describe different ways to collect information, they would belong to the category "Retrieving relevant information". The categories contribute to the IS literature with new insights into the current status of welfare work practices involving a network of humans and technologies, and how AI is envisioned as part of these work processes.

Categories	Concepts	Excerpts from interviews
Retrieving relevant information	Interacting with internal systems and external online sites	"There are many inquiries there, from the doctor, contact person, treatment personnel"
	Depending on human connections	"(…) You can ask others for advice and tips. (…)"
Interacting with citizens	Maintaining an online dialogue	"You start by contacting them quite early (…)"
	Planning for physical meetings	"We experience that it is very valuable to see a citizen [in person]"
Envisioning AI applications	Automating tasks	"(…) it would be nice if we could just have more automatic answers for the easier things. (…)"

	Indicating practical challenges	"(…) I don't know in what way it should be done … Because there are a lot of human assessments here"

Table 2. *The collected data was developed into concepts, resulting in three overall categories describing the sick leave process observed from a case worker's perspective.*

5 Findings

Our analysis resulted in three key findings: *Retrieving relevant information, interacting with citizens,* and *envisioning AI applications.*

5.1 Retrieving relevant information

While following up on citizens' sick leave; whether to prepare for meetings, facilitate support, or decide what kind of support a citizen needs, case workers interact with and navigate through at least four different internal systems to find information. A case worker elaborates: "There are many inquiries there, from the doctor, contact person, treatment personnel" (*interview*). The internal systems contain information about citizens such as medical descriptions (sick note) from the doctor or the general practitioner (GP); how long the citizen has been on sick leave; if the citizen previously has been on sick leave; workplace and employer; previous workplaces (if any). A case worker explains: "There are a lot of tasks, there are several systems, so we have to try to create a system that suits each individual" (*interview*). Sometimes, interacting with medical descriptions can be challenging. Often, the medical description needs to be better reasoned or filled in by the responsible doctor, for example, mandatory fields to fill in may be marked with a hyphen only. Occasionally, the documents can even be scanned documents that are difficult to interpret, they can be written by a doctor abroad in a foreign language or include medical terms that are impossible to know unless you work in the medical field. For example, in one case, a GP used the word "calcaneus" in the medical description. The case worker had to navigate online to find out it was the medical term for "heel" and subsequently navigate through external sites for additional information regarding the medical diagnosis.

Moreover, a case worker's human connections also play a huge role in the work with following up on citizens, that is, the connections between the case worker and relevant stakeholders involved in the case worker's daily work to retrieve information, to be able to make decisions, and supervise citizens to get back to work. Hence, the case workers come from different disciplines such as nursing, physiotherapy, teaching, and social work to mention some, and thus they contribute unique insights into different aspects related to citizens sick leaves. A case worker elaborates "[recruiter] wants to have different backgrounds on us. Don't want everyone to go on the same pace and rhythm, there is no development in that" (*interview*). A case worker explains how they can ask their colleagues for assistance: "The perspectives thus become slightly different on things, and so does the collaborations. You can ask others for advice and tips. For example, if you have a case with muscle and bone disorders, you can ask the physiotherapist "what would you do in this case?"". For example, after using online sources to find information regarding the heel diagnosis, the case worker subsequently clarified with another case worker that had experience with physiotherapy the treatment time of this diagnosis. This was done to be able to decide whether the sick leave should be extended, and what kind of treatment plan would be appropriate in this case.

Occasionally, it can be difficult to find information about diagnosis or medical issues using online sources or other case workers experiences. If the case workers still have questions regarding medical issues after consulting with each other, the case workers save the question for a bi-weekly meeting they have with a consulting senior physician that works in the local welfare agency. Questions could be related to long covid training, fractured shoulder, back pain, obesity, or pregnancy complications, to mention some. Due to the nature of these medical issues; they can be very individual or diffuse, be related to previous issues, or be related to the family situation, the case workers sometimes need to

discuss with the consulting senior physician to understand the background, treatment, or consequences of different medical issues. The consulting senior physician can supervise the case workers in medical support and give help and advice for the case workers to make informed decisions and support.

5.2   Interacting with citizens

After navigating through internal and external systems to collect information, the case workers often have a meeting with the citizens to discuss the citizen's current situation and further steps. Part of case workers' daily tasks is interacting with citizens. This includes interacting with citizens while working with cases that have reached eight weeks' sick leave and participating in dialogue- or status update meetings with citizens. The meetings are conducted physically or digitally, through video- or phone calls. Video calls with citizens were enabled by the covid 19 pandemic and are, to a large degree, still in use. It is an efficient way of meeting the citizens compared to traveling to, for example, doctors' offices for conducting the meeting.

Asked to explain what a standard case could look like, from the first contact point between a citizen and the agency until the case is finished, a case worker describes the difficulty of describing a *standard* case as it can differ a lot: "You start by contacting them quite early (…) It is difficult to describe a standard case, because it can be everything from one-day sick leave, until 17 weeks up until one year" (*interview*). In connection with sickness absence, work requirements must be assessed, and further treatment plans set after eight weeks on sick leave. Therefore, this contact point between a citizen on sick leave and a case worker involves sending out a few standardized questions to the citizen from one of the internal systems where questions being asked are: "How are you", "Do you follow any training program", "What is your plan further", mainly for getting in contact with the citizen and start a good dialogue. A case worker elaborates on the importance of this contact point: "We prioritize eight-week cases to have a good start" (*interview*). Depending on the answers they get from the citizen, the case workers can define an action plan. This is also in line with the *duty of participation,* where the citizen has an obligation to answer the questions the case worker asks.

Case workers also have weekly meetings with citizens through status update meetings to understand how the case worker can be of the best support for the citizen to either get back to work, get back to work part-time, or for finding a new job. The case workers also meet citizens through dialogue meetings that happen 26 weeks (the latest) into a sick leave – which is a meeting between (at least) the case worker, the citizen, and the citizen's employer, but often also the citizens' GP, and other stakeholders involved in the welfare system that may have interest in participating. These meetings are arranged by the public welfare agency, where discussion points are the citizen's plan for getting back to work, the possibilities of solutions at the workplace, and whether the citizen needs rehabilitation or work-oriented measures. These meetings can be conducted either online, or physically, and often, it is up to the involved parties which one is chosen: "The employer has, and this has happened several times, asked for a physical meeting, they want it" (*interview*). Another case worker elaborates on the benefits of conducting the meetings physically to capture potential information that is difficult to capture in online meetings: "It can be very valuable to see the interaction between the involved parts. How does the person act, how does the person move, how is the dialogue, and how is the chemistry between employee and employer? You lose this in video calls. So it is, from time to time, I make an assessment on it. I want to see them" (*interview*). Whether a meeting is conducted online or physically is also dependent on the reason for the sick leave. It might not be necessary to conduct a physical meeting due to a broken foot, as the sick leave is likely to end, and the citizen will be back to work as soon as the foot has healed.

5.3   Envisioning AI applications

Sometimes, when case workers work with and through the different systems to follow up on citizens that enter week eight on sick leave, they identify citizens that have appeared several times in the system for different reasons (it could be medical reasons, work-related issues, etc.). A case worker explains: "We have those who have gone to the maximum on sick leave money, and then they appear again on a

sick leave. We are interested in capturing those quite early" (*interview*). Moreover, it also sometimes happens that citizens have been on partial sick leave for many months without interacting with the welfare sector. A case worker says: "If you are on a graded sick leave (…) then we will not ask more detailed questions in relation to the course of treatment, (…) but you still have to be careful – suddenly half a year can pass with 50% sick leave." *(interview).* These two examples rely entirely on the competencies of each case worker to be captured – current systems do not mark these cases or notify the case workers that they should pay particular attention to them. The case workers discuss that these types of cases could have been captured by a "smart" automated system and given a notification to the case workers – such as marked them with a "red flag" so that case workers could pay particular attention to them.

Moreover, the case workers are aware of the ongoing discussions on AI implementation in different services in the public welfare agency led by the agency's IT department. While the case workers are not regularly involved in these discussions, they are curious about future possibilities and challenges for their profession. On the one hand, case workers discuss possibilities around AI implementation; for example, they see a vast potential for streamlining services. While a case worker is responsible for many citizens' sick leaves and thus needs to prioritize cases, they discuss how streamlining services can contribute to releasing work by automating tasks. For example, a former case worker elaborates on how the engagement with citizens through an internal system could benefit from automation:

> "I know that me and my colleagues we all would say to each other that it would be nice if we could just have more automatic answers for the easier things. (…) at week eight, we send out a standard response. "So, you have been sick for so long, how are you? Can you describe your situation?" A lot of it is standard (…) most of the time you could send it as an automatic chat. So, this would be nice if it could be more automatic" (*interview*).

On the other hand, the case workers are also aware of the challenges a potential implementation of AI could present. For example, when informed of the ongoing discussions around test implementations of an AI-based tool to predict the duration of sick leave, some of the case workers were dubious about the use of such a tool because of the missing human judgments in such an evaluation. When asked if they would trust the assessment such a tool could give to them, one case worker elaborates: "No, when I see all those assessments and all those surprises (…) I don't know, I don't know in what way it should be done… Because there are a lot of human assessments here" (*interview*). For example, case workers learn to capture and consider several underlying, often informal, parameters when a decision is made. This information does not appear in any system but is captured entirely by the case worker. Even if captured, due to GDPR regulations it would not be possible to use it as input in an AI-based system.

6   Discussion

Our findings illustrate that welfare work practices unfold along a network of human and technological agents. We observe that current practices involve case workers combining technical interactions with social connections in working with sick leave; respectively using internal and external systems for information retrieval and cooperating with each other through physical and online meetings. Inspired by ANT (Latour, 1992; Latour, 2005), which considers humans and non-humans as actors within a network of evolving relations, we found the concept of delegation helpful in tracing how work can be distributed across a network of technical and human agents to include new technologies based on AI. Previous literature discovers that the delegation of tasks creates new types of work (Latour 1992) and that we should think of it as a "redistribution of human work and social ties" (Ribes et al., 2010, p.5). Moreover, Ribes et al. (2013) investigated *delegation in the distributed organization* and discovered how different tasks could be delegated to new actors and reconfigure and transform work and outcomes: "(…) delegation to artifacts results not in the wholesale transfer of human work across a sociotechnical divide, but rather a *reconfiguration* of that work – bringing new technological and human actors into the mix." (Ribes et al., 2013, p.10). Our findings show how the pandemic introduced and increased computer usage as part of their daily work, which transformed the practices of physical meetings to include online

meetings with citizens. Previous research identifies that work practices can change when people are introduced to new technologies (Orlikowski, 1992; 2000; Hinings et al., 2018).

What will the use of AI imply? The case workers in the public welfare agency are aware of the ongoing discussions around AI implementations, and they see advantages with potential implementations for automating routine work and tasks. Davenport and Ronanki (2018) identified process automation as the most commonly used AI for automating digital and physical tasks, and RPA as the "least expensive and easiest to implement" (p.110) from the 152 cognitive technology projects they studied. Furthermore, they also discuss that their study "(…) also reveals that highly ambitious moon shots are less likely to be successful than "low-hanging fruit" projects that enhance business processes" (p.110). When case workers identify AI as a solution to automate routine work tasks (e.g., asking questions to citizens or contacting them after a specific time) we identify this as a potential delegation to RPA systems that can contribute to delivering public services (such as following up on citizens' inquiries) faster and more accurately. In order to succeed with AI implementation in businesses, Davenport and Ronanki (2018) explain that it is more likely that an AI implementation will be successful if businesses look at AI implementation through an augmenting approach that supports human capabilities, rather than replacing them. Our findings show that an assessment is complex while case workers in addition to using systems for retrieving relevant information, also sometimes identify informal parameters such as body language. While new technologies have produced impressive results in capturing and quantifying human qualities and behavior (Monteiro et al. 2018), an AI-based tool cannot replace and use crucial human judgments under current regulations, hence, the types of tasks such a tool can perform are restricted. Finally, we argue that it is crucial to identify the specific problem to be addressed by such a tool and determine which tasks can be delegated to these (new) technologies. This is especially important if implemented as decision support for case workers in public services. In addition, Ribes and colleagues' work reminds us that delegation differs from automation: When implementing AI as a decision-support tool in welfare, organizations should remember that AI is not supposed to be used alone, but with human oversight – with a "human in the loop". This network of *humans and AI working together* ensures that human oversight is preserved. Moreover, such use of AI will therefore imply that case workers are aware of the tools' limitations and can require close collaboration between the IT department responsible for the development of such a tool and the relevant stakeholders (here: other case workers) to identify where there is a need for such a tool.

7 Conclusion

This paper addressed the following research questions: How do humans and technology cooperate in the public sector? How is AI visioned to be part of this in the future?

We report from an ongoing case study in a Scandinavian public welfare agency and illustrate how the agency is envisioning ways to delegate tasks to AI-based tools in the future. The findings show how the work practices to assess sick leave cases involve a human-technology collaboration and that AI implementation has several possibilities for streamlining and automating processes. However, the findings also show the importance of human judgments. We therefore stress the importance of looking into the conditions and current practices in organizations to understand how AI can be a solution to a problem before it is implemented.

This work has limitations. First, the case study relies on data collected over a short, although intense, period, making it difficult to generalize the findings or to give a longitudinal view of human-technology configurations over time. Second, the data is collected from one public welfare agency, and the findings might not represent other welfare agencies. We hope this study can inspire future research on current human technology cooperation to understand the current practices in place before AI is implemented as part of a process.

Acknowledgments

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