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Infrastructuring for remote night monitoring: frictions in striving for transparency when digitalising care service

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Abstract. The question of how to organise for the introduction of a new service involving the interaction of humans and technologies is both crucial and challenging. Convergence between the community of practice using the technology and the design of the technology is crucial for the technology to become meaningful and usable. While processes of convergence are challenging in themselves, they become more complex if several communities of practice are going to use and collaborate around/through the technology. The co-presence of different communities of practice is a common situation when delivering public welfare services. In particular, the development of welfare technology is a context rich in potential frictions, making convergence challenging. By mobilising the concept of transparency, we analyse the process of implementation of remote night monitoring and highlight how transparency is related to different aspects. Such analysis reveals that processes of convergence are related in this context not only to frictions shared with other settings, but also to specific frictions related to matters of concern in welfare services. This leads us to discuss whether digitalised care services can be argued as still having a human side or not.

Introduction

The question of how to organise for the introduction of a new service involving the interaction of humans and technologies has proved to be both crucial and challenging. As scholars from different disciplines have shown, technologies run the risk of never becoming part of the practices they were meant to improve (Bijker et al., 1987; Gherardi, 2010; Suchman, 1987). When they do, convergence between the community of practice (Lave and Wenger, 1991) using the technology and the technology itself can be observed. More specifically, we are talking of convergence in the sense of mutual alignment between practices – socially and materially sustained patterns of action with a normative character – and the emergent design of technology (Star et al., 2003). From this point of view, design is not finished before implementation (Aanestad, 2003).

While such processes of convergence are challenging in themselves, they become even more complex if several communities of practices are going to use and collaborate around/through the technology being introduced. As Star et al. (2003) show, for instance, this is a process characterised by politics and power enactment. The co-presence of different communities of practice is a common situation when delivering public welfare services (Breskovic et al, 2013; Cozza et al, 2016; MacManus et al., 2013). Such services are currently being changed by introducing new digital technologies (Östlund et al, 2015). This is particularly true in the case of what in Scandinavian are called welfare technologies, that is, technology used “to improve the services provided by the welfare society and make them more efficient” (The Nordic Centre for Welfare and Social Issues, 2010,p. 7). The issue of quality and efficiency of welfare services has been identified as one of the most pressing challenges to be addressed globally, given a rapidly ageing population. It is in fact estimated that by 2030, people over the age of 65 will represent about 24% of the population in Europe, 22% in the United States, and 12% in Asia and Latin America (Czaja & Schulz, 2006, p. 6). As anticipated, introducing technology in this context is challenging given that such technologies affect and are affected by the work of different communities of practice with a long history and strong professional norms, such as nurses, social workers, physiotherapists, care assistants, legal experts, and politicians, etc (Kylberg et al, 2015).

Furthermore, high expectations of both increased efficiency and quality of service, combined with political pressure to digitalise (both nationally and at local level) met by scepticism in the public debate around certain technologies, make such a context rich in potential frictions to be dealt with when introducing digital technologies. Such frictions may be related both to convergence between technology design and user’s practices and to convergence between technology

design and work practices within the public organisation. In this paper, we limit our attention to what happens when the technology and the organisational practices need to become aligned in order for those involved in delivering the service to be able to do their work properly in collaboration. This focus is empirically driven as we observed how much work was needed in order to try to achieve such an alignment, something that has been explored only to some extent in the literature discussing computer-supported cooperative work in social services (with more focus on healthcare than care, see for instance Hartswood et al, 2003). The convergence between technology and user's practices will not be analysed in this paper – future work will focus on that.

In this paper we are therefore going to explore which frictions emerge when trying to make a new (in this context) technology and work practices converge in order to deliver a social care service. Such an analysis provides a contribution to the literature on welfare technology (Peine et al, 2015; Östlund et al, 2015) as it highlights important issues to take into consideration, but also to the literature on infrastructure and convergence (Star et al, 2003) as we will discuss whether the context of social services presents peculiar challenges.

To this end, we mobilise the concept of transparency as introduced by Star et al. (2003) for conceptualising the process through which a technology becomes invisible as it develops to become part of a (in turn developing) practice. Transparency would, in other words, be the ideal state if convergence was complete – while this may be not achievable, practitioners strive towards it. We focus on a particular case in one Swedish municipality in which a technology for monitoring (a camera substituting visits from the homecare personnel in person during nights) was undergoing implementation in order to qualify what transparency may be about in this context. The Swedish case is particularly interesting given that municipalities have to provide welfare services and the pressure to digitalise is very high (Søndergård, 2014). We thus show that transparency is related to different aspects. Such analysis reveals that processes of convergence are related in this context not only to frictions shared with other settings, but also to specific frictions related to matters of concern in welfare services. This leads us to discuss whether digitalised care services can be argued as still having a human side or not.

The paper is organised as follows: after a short section introducing the theoretical framework, we discuss our method and present the case; we then analyse the endeavour to achieve transparency in relation to different issues in the process that we followed and conclude with a short discussion on the implication of our analysis so far. Given that this is an exploratory paper, such conclusions

are preliminary and would greatly benefit from discussion in order to be developed.

Infrastructuring: The challenge of transparency

When new technologies are introduced, they become connected to other technologies and systems in order to function. In the field of information systems, the term infrastructure has been commonly used to denote the network of interconnected visible and invisible (to the user) devices operating according to standards (for a critique, see Pipek and Wulf, 2009). Such a view has been criticized for considering infrastructure “a thing” and a “neutral” thing (Star and Ruhleder, 1996). An alternative is to build on a more relational and processual ontology and to think of infrastructure as relations embedding choices and politics (ibid). In other words, no device is isolated and a discrete entity – the development and use of the single device emerges in complex relationships (ibid). Not only does the device become embedded in complex organisational processes, but there needs to be a convergence between how the device connected to the system works and the work practices that the organisation has developed, in order for the device to be used in a meaningful way (Pipek and Wulf, 2009; Star and Ruhleder, 1996). In other words, it is hard to a-priori structure and automate a task; also, if users do not use a technology this is not a question to be addressed as overcoming user’s resistance, but an organisational and learning challenge (Star and Ruhleder, 1996).

One central feature of an infrastructure is thus its invisibility in use: people that come in contact with the infrastructure are not constantly aware of the infrastructure, if it has become integral to work practices (Pipek and Wulf, 2009). Hence, when introducing a new technology, one concern is whether it, and the infrastructure it is part of, will become invisible to the users. Such a challenge also has consequences for how the technology can be designed and introduced – we can expect an iterative process in which the technology and the work practices need to adjust in relation to each other.

The concept of transparency can be mobilised in order to explore such an iterative process. A technology or system is transparent if users do not need to bother with how the underlying machinery or software functions (Star et al., 2003). Transparency indicates that users can actually make use of the technology without having to be worried about how the technology works. With the relational approach that we subscribe to, transparency is not an objective feature of the technology, nor is it something that can be designed a-priori. Rather, transparency emerges as information resources and social practices become

aligned. Transparency is no stable feature either; it is always provisional and may require further effort as politics or knowledge, for instance, develop (Star et al., 2003; Pipek and Wulf, 2009; Star and Bowker, 2002).

Star et al. (2003) showed how transparency has to do with the convergence of information artefacts and communities of practice in the case of wider-scale information systems. We build on their work and explore how transparency is striven for when an existing technology is introduced in a new context. We say “striven for” as absolute transparency may be impossible to achieve, given the relational and processual nature of transparency and infrastructuring. As Bowker and Star point out

Transparency is in theory the endpoint of the trajectory of naturalization, as complete legitimacy or centrality is the endpoint of the trajectory of membership in a community of practice. Due to the multiplicity of membership of all people, however, and the persistence of newcomers and strangers as well as the multiplicity of naturalization of objects, this is inherently non-existent in the real world [...]. (2000, p 311)

As they suggest, we can explore the emergence of transparency by paying attention to the emerging convergence between practices of using the technology, and the technology and its infrastructure. Star et al. (2003) propose referring to the concept of community of practice in order to conceptualise the social component of such a process. Community of practice (Lave and Wenger, 1991) denotes a group of people that share and sustain certain sociomaterial practices (Orlikowski and Scott, 2008), that is, routinised ways of doing things, language, technologies and norms. The new (in the context) technology and its infrastructure converge with a community of practice as its use becomes aligned with its design and access – as they co-constitute each other (Star et al, 2003). Such a process of convergence is highly situated, political, possibly contested and enacting power. Moreover, if, as often, more communities of practices are involved, each with its own power enactments, the process of convergence becomes even more complex. Negotiations are required, and they involve the practices in use, but also other technological artefacts that are part of the infrastructure and the norms, priorities, values that they materialise. Convergence is thus “a layering of solutions and conventions, memberships and standards” (Star et al, 2003, p 263).

After having presented some methodological considerations and briefly described the case we focus on, we will explore which frictions concerning transparency within the public organisation seem to emerge as remote night monitoring is implemented and then discuss what this may imply when it comes to technology used in social services.

Method

The work presented in this paper is part of a project on welfare technologies and older people that we have been working with for two years (including a pre-study). In this project, we cooperate with two municipalities in Sweden with the aim of developing knowledge about how new technologies are introduced and fostering a discussion on how such processes may be improved. We have therefore worked with both older people (older than 65 years) and representatives of the municipalities in different ways in order to investigate different aspects of the introduction and use of technology when providing social services to older people. After an initial phase devoted to understanding the relationship between technology and older people's needs, we turned our attention to two cases of introduction of new technology. We discussed which case to follow with each municipality as we wanted to focus on something that was ongoing, as well as both relevant and challenging for them. In this dialogue, we decided to focus on the introduction of remote night monitoring at one of the municipalities. Such a technology has already been introduced in a few other cities, is seen as very promising by public actors, but is still controversial in the public debate. Such a combination of aspects enabled us to follow a process that we anticipated would be complex and potentially revealing frictions between communities of practice.

Given the exploratory nature of our work, in this paper we adopt a qualitative approach aimed at closely following what the practitioners called "the implementation project" as it unfolded (Czarniawska, 2008). Inspired by ethnographic work as mobilised in the study of organisations (Cooren et al, 2008; Pinkand Morgan, 2013), we produced empirical material by interviewing the project manager, by observing project meetings and by collecting printed material, both documents publicly available and internal documents. We were allowed to record both when interviewing and when observing the meetings, and therefore to closely read these conversations (Dubois and Gadde, 2002). In the first reading, we looked for the terms in which the new service was being constructed, the terms in which the technology was being discussed and the practices that needed to be connected in order for the new service to function. From this reading, the relevance of the concept of transparency became clear and we also observed that we could distinguish between different kinds of transparency. In a second phase, we thus organised our analysis around different kinds of transparency. The result is presented in the section "striving for transparency". First we introduce the studied process.

Introducing remote night monitoring for older people at AnyTown

The implementation process studied can be understood in light of the increasing concern in Swedish municipalities regarding the ageing population that leaves them with the challenge of providing welfare services to an increasing number of older people at the same time as they face the problem of fewer people being available for, and wanting to work with, care services.

Such developments are globally relevant, but it may be argued that the challenge in Sweden, and other Nordic countries, is particularly acute as municipalities are supposed to offer welfare services to citizens who have the right to be supported to a greater extent than in other countries (Hanson et al, 2011). This has led to several projects started in several municipalities in which different kinds of technological solutions are tested (Søndergård, 2014). One of the technologies that has received a lot of attention more recently is cameras installed in older people's homes to remotely monitor their well-being during night-time – while normally there would be care workers from the home-care unit coming in person and checking that the older person is sleeping and well a couple of times per night. Remote monitoring happens in a similar way, with people in a control room turning the camera on remotely a number of times per night (depending on the older person's needs) and checking that the person is still sleeping. Typically, this service is provided to older people living alone and afraid of falling in the night or of encountering other problems during the night.

Before such a service (in person or remotely) can be delivered, a social worker makes an assessment of the patient's eligibility. At AnyTown, when the studied implementation project ends, the idea is that the social worker, in dialogue with the older people, will decide whether the monitoring at night should be performed in person or remotely. After that, the information will be delivered to the unit that provides home care at night. They will contact a private company that provides the camera and the technology needed for streaming images from the older person's home. Technicians from the company will then install a small camera in one of the top corners in the patient's bedroom (as well as other appropriate places in their home if deemed necessary). These cameras are then remotely monitored centrally by home-care personnel who turn them on at the decided intervals. The intention is to use the camera as a technical aid to perform regular check-ups on older people, and the municipality is clear in its communication that this is not to be confused with surveillance cameras to observe or control the user. Ideally, this will not only free up time for the municipality personnel, but also be less of an annoyance to the users who can avoid being woken by regular in-person check-ups.

At AnyTown, we followed the project that started once the procurement phase was concluded (a company had won the contract for providing the technology) in order to implement this technology. AnyTown is a municipality located in Sweden with roughly 100 000 inhabitants; the municipality as an organisation has 10 000 employees. The organisation includes different areas and units; in social services, there is a unit that assesses people's needs (social workers), a unit that provides home-care during the day, a unit that provides home-care during the night (the Night Patrol), a unit taking care of safety alarms (Alarm group), a unit taking care of quality and IT systems, among others. The project group that worked with the studied implementation process included representatives from all these units, some of them being managers and others being co-workers. In addition, a communications officer was included. Naturally, the involvement and collaboration between the project members varied with time, but the group had monthly meetings throughout the entirety of the project to make sure things were going in the right direction, to inform each other on what was going on in the different units regarding the project, and to bring to the surface challenges and problems and address them. The project group also shared a workspace online with all the documents that they deemed relevant for the project and were otherwise in contact via email. In the following section, we present our preliminary analysis of what happened in this project with regard to transparency.

Striving for transparency – making different communities of practice and a technology converge

In the municipality we studied, the project aimed at implementing the camera encountered a number of challenges and unexpected turns. In this paper, we interpret such unfolding of events in terms of necessary steps in order for the new technology to become close to transparent to the municipality employees. While, given the results of previous studies (cf. Star et al, 2003), it is not surprising that there are challenges and conflicts to be dealt with before the technology can become transparent, in the case of home-care services, we have particular communities of practices involved, which makes the process of convergence different from other organizational settings. It should also be kept in mind that this technology has received a lot of attention both in the public sector and more generally in Sweden, given the media and their reports. Hence, the technology is expected to create worries and problems, both within the organisation and in the municipality, which makes its becoming transparent both difficult and urgent for the people working with its implementation.

It is also interesting that the technology used, a camera installed in a room and activated at regular points in time by personnel sitting in a control room, is already used by the company that provides it in other contexts, such as for the surveillance of warehouses.

In the following sections, we empirically explore transparency in relation to certain aspects; see a summary in table I. We select those aspects that emerged as important in the observed meetings. Of course, other aspects may have been discussed in other arenas, and our aim is not to exhaustively reproduce all possible aspects. Rather, by exploring these selected ones we think we can learn something about introducing technology in the context of social services.

Transparency in relation to eligibility for the new service

The new service is part of the social services provided by the municipality, which means that it is the citizens' right to apply for it. As it is also a service that has been described in critical terms in the public debate at times and a service that is supposed to be more resource-efficient than when night monitoring is performed by visiting the older people in person, discussions during the project emerge about how and when to offer the possibility to receive remote night monitoring. For instance, when the accounting unit performs an estimation of the cost of the new service and compares it with the cost of visits in person, they realise that there are big savings to be made. As part of enacting accounting practice, they also calculate the optimal "batch size" to be achieved in order to optimise resources. That is, they propose to gather x number of people interested in the camera and then to offer it to all of them and at the same time, thus making another resource free. This is received with disconcertion mixed with irony by the project group, and different professionals forcefully restate that the citizen is provided with the service as soon as a need for it is assessed.

Such a strong statement about what constitutes the mission of the public officer meeting the older person in need is also mobilised when discussing how to communicate about the new service and which people to target. The management, somewhat worried by how the service is perceived and received, seem to be keen to start with the "proper older people" in order to gain a smooth start and accumulate some success stories – their practices being embedded in work devoted to maintaining legitimacy for the unit/organisation. The professionals, on the other hand, mobilise ethical considerations regarding who is to decide which older persons should be targeted and which not. Both these instances of friction are resolved by enacting the ethos of the public service that should be impartial on the issue of who is eligible and only decide based on the actual needs.

Transparency in relation to the appropriateness of service

The service is meant to make the older person feel safe, which means that the question of what happens when the camera is not working or while waiting for the camera to be installed is a central one if the service is to be trusted by both the older person and the employees involved in the provision of the service. As the project group starts working, such questions are brought up for discussion. For instance, what happens if the camera is not working because of technical failure? How long should the personnel wait before taking the initiative to activate someone to provide the service in person? What is an appropriate service and who is to decide?

Also, according to the way in which the municipality works, once the social worker makes the decision to grant a service, the service needs to be activated directly as the practices are to be appropriate to the older person's need which is imminent. The company, on the other hand, needs five days from order to delivery for installation of the camera given how their practices are organized. This means that there are five days of "limbo" between the decision and the service being provided according to the decision. Such an issue emerged during the project and had not been addressed before.

Both frictions are solved by including the older person in defining the routines for providing the service in her/his particular case. The project group seems very satisfied with such a solution and the new technology will probably become quickly transparent in this respect since the staff do not need to be worried about how to handle it as the question is settled in the initial care planning meeting with the older person.

Transparency in relation to assuring personal integrity

Part of the work done in the implementation project is directed towards adjusting current practices in the company providing the technology and in different units at the municipality in order to align them with the rules and expectations of a social service that respects personal integrity.

One friction arises from the routines for handling information in the company being situated in a private sector context in which nonhumans are surveilled, while the service being implemented concerns humans. This places demands on the security of the systems and on how personal details are managed, given Swedish legislation and given routines at the municipality. At the same time, it is important that the right information is shared between the organisations at the right time. Such a friction is handled by mobilising technological solutions that need to be integrated with the existing systems for instance, a login system

provided by an independent app – but the integration of the systems turns out to be less smooth than anticipated. In addition, securing integrity does not allow the e-commerce system to be used for every transaction, which the procurement unit would like, and a paper system will also need to be in place in parallel with the digital system. Such a friction is also handled by resorting to legal documents specifying the emerging practice, even though the company puts up resistance to this.

As the project unfolds, this friction persists. While the municipality repeatedly expresses the wish to solve the issue – with our lenses making the technology transparent – as soon as possible and the project members seem to work on as if the issue had been solved – just to be surprised again and again that it has not –, the company does not succeed in aligning their routines with what is required by the service they want to provide.

Transparency in relation to IT operations

The new technology and the related IT system are introduced by means of a project and as the project develops, the question of who is to take care of the IT system emerges. As there is some time pressure, the task is assigned by the project team to one of the project team members who seems to possess the competence and show initiative. It is the person who is responsible for the staff monitoring the older people through the camera. On the other hand, it is also recognised that this is not a good solution in the long term. Such a discussion also intertwines with a more general discussion at the municipality regarding how to assign ownership and administrative duties for digital systems in general and which principle to use. As this system may be used not only for older people but also for people requiring assistance due to disability, the new policy points to the head of department as most appropriate person to assume this responsibility and to the unit taking care of shared systems as those who will maintain the new system. Such a solution would need to be approved by the manager but there is no opposition in the project group to shifting these responsibilities (in other words, there is no friction between the particular system and the rest of the digital systems and the practices developed around their functioning). Convergence is thus aided by leaning on organisational policies assigning responsibilities, and transparency in relation to administration seems to be unproblematic at this point of time. Future observations will reveal whether unpredicted frictions may emerge when the responsibility is actually transferred.

Table I. Summary of important aspects related to frictions in striving for transparency.

Transparency in relation to	Friction in the convergence of	Caused by	Handled by resorting to	Development
<i>Eligibility</i>	Social service practices, accounting practices, management practices in relation to legitimacy	Different logics when it comes to how to offer the service (citizen right, efficiency, probability of success)	Social services ethos	The friction is resolved
<i>Appropriateness of service</i>	Social service practices, legal practices at the municipality, company work practices, an artefact (the camera) that needs to be introduced (while “normal” home care staff is already available)	Timeliness being treated differently by the organisations	Including the older person in establishing routines and defining what is appropriate	The friction is resolved
<i>Personal integrity</i>	Social services work practices, private surveillance work practices, e-commerce practices, different IT systems	Different context of use of the technology, different priorities (for instance efficiency vs security)	- More technology - Legal documents - Paper documents in parallel to the digital ones	The friction is treated as solved but persisting
<i>IT operations</i>	Practices related to the use of this specific technology, IT operations and maintenance in general	Different knowledge of the new service and technology	Organizational policies	The friction seems easy to resolve in the future

When convergence of practices and technology remains incomplete

In the previous section, we have described some frictions that seem resolved or possible to resolve. Sometimes we observe that the convergence needed in order for the new technology to become transparent in relation to one dimension is a challenge to convergence in relation to another dimension. It is impossible to say

whether such tensions are caused by the process we observed still being at the initial phase or if they denote conflicting demands that will not be solved.

One example is the issue of personal details and how such information needs to be handled. As there is no secure system for transferring personal details on the older person to which the service is provided from the municipality to the company and no secure way to guarantee that the transmission from the camera is not hacked, the project team decided to use pseudonyms in the form of a combination of letters and numbers in the system. Hence, rather than Maria Camacho, the company will know that CV3 needs a camera, they will register that a camera has been installed at CV3 and the people monitoring Maria Camacho with the camera will also read in the system that CV3 needs to be checked on three times a night, for instance. If a hacker captures the transmission from the camera, s/he will not know which person s/he is looking at. This is a solution adopted in order to ensure personal integrity and make technology transparent in relation to it. But, in the course of the project, such a solution gave rise to another worry, which was in particular brought up by the legal advisor enacting practices embedded in norms related to the liability of the organisation. What was discussed is that the use of pseudonyms could increase the risk of providing the wrong service to the older person (and what legal consequences this might have), as it is easier to type the wrong sequence of letters and numbers in the system when registering a user and/or not to realise if an error has been made given that the staff is dealing with pseudonyms rather than with names of people that they can link to a face and personal history. Hence, transparency with regard to personal integrity benefits from this arrangement of practices and technologies, but transparency in relation to the appropriateness of service is suffering from this solution and remains incomplete with people at the municipality wondering what might happen if an error is made and not discovered.

Discussion

Our analysis reinforces the argument that technology in use is situated: the camera already exists and is already used, for instance, in warehouses, but once it becomes part of the delivery of social services, its use and the issues related to its use change (Aanestad, 2003). In elevators or warehouses, cameras are already transparent, or close to transparent, to us as well as to those interacting with them in organisations. A camera in an older person's house is not the same artefact, is not part of the same kind of infrastructure and does not need to align with the same work practices (Bratteteig and Ina Wagner, 2013). Hence, understanding the technology in relation to work practice when designing it is important, but it is also crucial to consider "implementation" as a process in which both technology

and practice are adjusted and co-evolve, rather than expecting implementation to just be about a “finished device” to be put into use (Pipek and Wulf, 2009, Aanestad, 2003).

As it is possible to see in table I, which summarizes our findings, different resources are mobilised in order to increase convergence. Depending on the friction, we see discussions resorting to more technology, to formal documents, to the professional ethos, but also to involving users in order to resolve tensions in the emergent alignment of practice and technology. Hence, as infrastructuring is sociomaterial (Orlikowski and Scott, 2008), working with increased transparency also includes heterogeneous elements that are put in relation. The project manager in the case studied was receptive to such different elements and seemed to be able to navigate the process without getting bogged down in the technology only, or the work practices only. We observed no serious conflict in the studied case, but this is, of course, not the same as claiming that managing a project in which convergence seems to increase is the same as handling a democratic process. The accounting practices were, for instance, not allowed to influence how decisions were made, which is an example of enactment of power.

Based on our theoretical framework, we could also argue that one could consider implementation as being accomplished once the technology is transparent. As we have seen, given the processual and relational nature of infrastructures (Star and Ruhleder, 1996), complete transparency may be impossible to achieve and is only temporary. In the case of social services, not only does technology develop and new devices are added, but also norms, laws, professional standards, etc change, which means that there are many factors that will, most probably, make striving for transparency an ongoing process, something that also has consequences also for how new technologies are maintained (Pipek and Wulf, 2009).

If we look at the kind of aspects we have identified when analysing the endeavour to achieve transparency, we can see that some are common to other settings, such as convergence in relation to administration, while others could be more specific to social services, such as personal integrity or the appropriateness of service. Interestingly, we see a relation between these aspects and certain matters of concern that Crevani and Cozza have identified with respect to the relation between older people’s needs and technology (2018) – matters of concern in the Latourian sense of matters that are “real” although not easily characterised (as matters of fact could be), matters that gather interest and affect, given their complexity and relevance (Latour, 2004). For instance, frictions in relation to personal integrity can be related to the matter of concern “balancing appropriate care and integrity”, that is, the tension between providing care at the right level

(which means letting others come close to the individual in order to make decisions about when an intervention is needed) and respecting personal integrity. Also, frictions related to eligibility for the new service could be argued to be related to the matter of concern “balancing providing sustainable services against including all older people (services accessible to everyone)”, that is, the tension between providing services that are possible to deliver and having to cope with the limited resources available.

Finally, what our analysis also shows is that all the work necessary to try to make the camera transparent indicates that providing home care through technology is not the same as forgetting what home care is about. The question is whether one could argue that there is still a “human side” to remote monitoring. A positive answer would be motivated by the frictions we see that the organisation needed to handle. Many of these frictions are related to the nature of the welfare service provided: care. Providing care requires certain practices that are still relevant even when technology is the actor present in the older person’s home. A negative answer would be motivated by arguing that there is a difference if monitoring is performed by a human in person. Even though the user may sleep throughout the visits (whether they are done through the camera or in person), there is still a symbolic and affective value in knowing that a human has come and looked after the older person. This is lost if such visits in real life are substituted by a camera (Bratteteig and Ina Wagner, 2013). Although there is no simple answer to such questions, we believe that they are worth asking in order to contribute to building a future that we want to be part of.

In conclusion, this exploratory paper contributes to the literature on welfare technology (Peine et al, 2015; Östlund et al, 2015) by foregrounding important issues to be taken into consideration when technology is introduced and used for delivering welfare services. The paper also contributes to the literature on infrastructuring and convergence (Star et al, 2003) given that we propose that such processes need to deal with particular issues in the context of welfare services, and in particular care services. The paper focused on transparency within the organisation and further work needs both to deepen the analysis presented and to enlarge it to include transparency to the user.

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