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Materialities of care for older people: caring together/apart in the political economy of caring apparatus

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ABSTRACT

By applying a posthuman perspective to the analysis of care for older people (COP), we analyse the agential cuts (together/apart) enacted by humans (mainly caregivers and older people) and more-than-humans (a camera intra-acting with other objects) whose agential entanglement configures and reconfigures the political economy of the caring apparatus. Our study identifies 'targeting', 'monitoring', and 'aligning' as interrelated caring practices, thus contributing to advance a posthuman understanding of welfare technology, and advancing a critical use of the possibilities enacted by technologies.

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Introduction

Care for older people (COP)¹ is, in many countries of the Global North,² conceived of as an exclusive human matter. As we witness the increasing use of digital technologies in providing welfare services to older people, such a transformation changes the way we understand COP, and the practices of caring for older people are hence reconstructed. In this paper, we thus propose to mobilise critical posthumanism to account for how an artefact – the night camera (henceforth: camera) – becomes part of and affects COP in a Swedish municipality. This camera is part of a larger infrastructure for remote monitoring of older people at home. The service is owned by the municipality and consists of technological equipment (the core is constituted by the camera linked to a router installed at users' home and interoperating with computers at the municipal operations centre) and a variety of professional caregivers differently involved in assessing the need for the equipment and making it work properly to assure that home care service is delivered to users in compliance with the national law and local (regional and municipal) policies.

Sweden provides a particularly interesting context, since homecare³ is a welfare benefit to which all citizens are eligible. Due to an ageing population, as well as budget restrictions and a decrease in the professional vocation in home-caring, the so-called 'welfare technologies' (devices used in welfare services) have been increasingly envisioned as the solution. Moreover, the digital transformation has also become a prioritised policy

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area to re-affirm Sweden as one of the most digitally innovative countries in the world. Municipalities are thus faced with new policies and practices that are expected to satisfy citizens' needs and rights. Despite much attention paid to welfare technologies, their role remains underestimated and unexplored as regards the reconfiguration of existing care practices, policy strategies, and new ethical dilemmas. Controversial issues thus emerge, and decisions made regarding a single device, such as the camera, may contribute to re-arrange COP at large.

Literature discussing the materialities of COP (see below) highlights the active role of objects in care, which we will conceive of as 'more-than-human caregivers'. These studies also provide lenses to analyse caring practices, through the mundane materiality of a more-than-human caregiver such as the camera. Our aim is to explore the possibilities and exclusions produced and reproduced in caring practices when policies of welfare technology and digitalisation lead to the introduction of more-than-human caregivers, in our case the camera. Building on Karen Barad's 'agential realism', we will analyse how the political economy of what we propose as the 'caring apparatus' is articulated through different practices. That is, we will attend to practices emerging in the entanglement of older people, professionals, and technologies (which, together, form the *caring apparatus*), and reproducing specific configurations of care, which in turn differentiates caring for different older people, depending on which interests are included and excluded (*political economy*). This argument is not only theoretical, but even demonstrates the need for posthuman thought to engage with and care for materialities in COP.

Materialities of care for older people

The significance of materialities has attracted increasing attention within the sociology of health and illness, situated within traditions of science and technology studies (STS) and new materialism. We use 'materialities of COP' as a heuristic device (Buse, Martin, & Nettleton, 2018), where mundane materialities act as a lens for studying care practices in welfare technology, that is, the technology used to improve welfare services and make them more efficient (Nordic Centre for Welfare and Social Issues, 2010). Materialities of COP encompasses ideas of both 'materiality' and 'care', which are not univocally defined. Here we focus on materialities not only as physical 'things', but also as networks of socio-material assemblages of people, objects, and technologies (a camera is our focus here) (Fox, 2016; Lovatt, 2018). Therefore, we do not frame materialities as 'merely a backdrop for care interactions, but playing an active role in constituting relations of care' (Buse, Martin & Nettleton, 2018).

Overall, the debate on materialities of COP has received a substantial contribution from a developing interdisciplinary field within the study of ageing, known as 'material gerontology' (e.g. Höppner, 2017; Höppner & Urban, 2018; Wanka & Gallistl, 2018). We situate our contribution to this research as a study of the interrelations between ageing and technology *from an organisational perspective*, a field still highly resistant to posthumanism (Bell, Meriläinen, Taylor, & Tienari, 2020). Studies falling under material gerontology deal, for example, with the meaning of objects for older adults, and older adults' construction of identity, for instance using clothing but also wearable technologies (Cozza, 2021; Long, 2012). Some authors explore the role of objects in the context of care, including

homecare (Loe, 2010; Mort, Roberts, & Callén, 2013). In this regard, scholars influenced by STS have analysed the social and societal implications of technologies, with special attention paid to remote monitoring technologies. Among these scholars, some focus on power and aspects of domination, and widely draw from Michel Foucault's work on health, illness, and micropolitics of surveillance (Essén, 2008; Joyce & Loe, 2010; Mort et al., 2013). We acknowledge the role of post-structuralism that Foucault initiated, in examining the micropolitics of health care (Fox, 2016, 2017). However, we also point out that post-structuralism made discourses, text, and textuality the object of study, while the materiality of the body receded beyond the analytical purview of the social scientist. Reacting to the post-structuralist denial of the materiality of the body, a 'material turn' emerged (Wanka & Gallistl, 2018) 'to bring back to discourses on the body (...) the materiality of humans and their material environments under specific conditions' (Höppner, 2017, p. 2). New materialism claims that the capacity for 'agency' – the actions that produce the social world and emerge through relationships – extends beyond human actors to the more-than-humans. For example, Lupton, by drawing on Donna Haraway's work, talks about 'digital data assemblages as companion species that have a life of their own that is beyond our complete control' (2016, p. 3); accordingly, adopting a more-than-human approach 'demands that the human subject is always considered permeable and open to the material world rather than closed-off and contained' (2018, p. 4). From this perspective, the same humanist idea of 'body' is challenged: a body is not something that 'exists' or 'is', but rather 'does' through intra-actions (Fullagar, Rich, Pavlidis, & van Ingen, 2019) – a concept that we explain below.

Therefore, the question 'who acts' – by assuming caring as the action or rather the apparatus of material-discursive practices we focus on – is expanded into the question 'what acts'. This is consistent with a concept of agency as relational, rather than conceived as an a priori and given feature of a human actor. Agency emerges from the interrelations between heterogeneous actors whose assemblage constitutes care practices (Reckwitz, 2012). Given this, the materialities of COP refer to bodies, objects, technological artefacts, possessions, relations, and knowledge, among other things, which are mutually entangled in specific situations. How they are entangled, however, depends on the apparatus and 'agential cuts' considered below.

Caring apparatus

Care is a contested and diverse concept, as pointed out by Mol (2006), who argues for disentangling 'care' from an anthropocentric idea associated with kindness, dedication, and generosity, which are crucial but cast care as opposed to technology. 'Care' is not opposed to, but includes and embodies technology. The technology we refer to 'is not transparent and predictable, but has to be handled with care' (Mol, 2006, p. 6); in turn, care is a practice that 'counts for engagement with "things"' (Puig de la Bellacasa, 2017, p. 29). Such a definition of care as caring resonates with a feminist practice-based approach that frames caring as an emergent process realised by a heterogeneous collective of humans and more-than-humans (Gherardi & Rodeschini, 2016). As Pols writes, 'there is no such thing as technology, but many practices where many different technologies are being used', and 'there is no such thing as care practice, but there are many different care practices' (2017, p. 2).

Especially in the countries of the Global North, COP is increasingly, although not exclusively, treated like any other ‘industry’. Older adults are surrounded by a variety of objects (e.g. security alarms, hearing and vision aids, medication reminders, mobile apps), some of which are actively used as deemed to provide care and increase their well-being, while others technologies become more-than-human companions in daily life, and are often chosen for the sake of the family and, above all, for the peace of mind of older people’s children. Put differently, ageing is sometimes governed by an open-ended process of caring that involves a team of professionals, devices, bodies, and relevant others (Yakhlef & Essén, 2013); sometimes, ageing is ruled by a unidirectional process according to which older people are passive consumers or customers of products (Peine, Rollwagen, & Neven, 2014) whose being and doing are regulated by the market or, as we posit, by the *political economy* of a caring apparatus. The ‘economy’ of the apparatus relates to its agency in *producing* and *re-producing* specific configurations of care; the ‘political’ feature of the apparatus regards the *non-neutrality* of such configurations, which always depends on specific cuts and, ultimately, on particular interests.

Our concept of ‘political economy of apparatuses’ is based on Karen Barad’s (2007, p. 230) agential realism, which has contributed to a new material thinking and has widely influenced the sociomaterial perspective and its notion of constitutive entanglement (Orlikowski, 2007; Orlikowski & Scott, 2008). However, Barad does not apply the concept (i.e. political economy of apparatus) to caring, which is our task here.

The concept of apparatus relies on the neologism ‘intra-action’ that Barad has formulated in contrast to the standard term ‘interaction’, which presumes the prior existence of independent entities. Hence, intra-actions include a large material arrangement, a set of material-discursive practices or apparatus, which effects an ‘agential cut’ between subject and object, between what is excluded and what is included in a specific situation. Agential cuts are, then, non-dualistic practices of differentiation, in sharp contrast to the Cartesian cut that establishes the autonomous, exceptional agency of the humanist subject.

The concept of apparatus in COP allows for analysis of caring practices as enacted by intra-acting human and more-than-human actors, and enables analysis of the multiple ways in which such an apparatus does not simply detect differences already in place (for example, differences between the living conditions of older people, or geographical differences between welfare systems), but rather contributes to the production and reproduction of differences (for example, the abovementioned differences, their enactment by a specific intervention). Therefore, there is no way for the material-discursive caring practices of which an apparatus is made to be ‘innocent’ (Barad, 1996). ‘[C]uts are performative, have materialising effects, which produce entanglements/relations/relationships through and in establishing differences: “cutting together/apart”’ (Völker, 2019, p. 91).

‘Cutting together/apart’, in Barad’s work, refers to an apparently paradoxical process that encompasses both entangling (*together*) and differentiating (*apart*), joins and dis-joins (Barad, 2013). In other words, and by applying the concept to a caring apparatus, every material-discursive practice inevitably affects in different way different actors, and such consequences materialise as possibilities (for some) and threats (for others).

In this paper, we propose using ‘caring together/apart’ to refer to specific practices and the cuts enacted by them within the political economy of a caring apparatus. In the case at

hand, the political economy of the caring apparatus has not only a theoretical relevance, but also an empirical concreteness, which finds its referents in financial issues and policy matters. Caring practices generate better living possibilities for some older people but, inevitably but not purposefully, include a spectrum of impossibilities for others. By collecting several examples of caring practices under the umbrella-term ‘caring together/apart’, we want to position the caring apparatus within a politics of possibilities, while acknowledging that the same practice may enact ‘im/possibilities’. However, with regard to COP, we propose expanding this original concept by using ‘caring together-’ to emphasise, on the one hand, what a care practice makes possible and the particular possibilities for intra-acting it opens up, while, on the other hand, we use ‘caring -apart’ to highlight the constraining nature of specific cuts, that is, what/who is excluded from mattering within the caring apparatus, through that practice.⁴ We ground such an articulation of caring apparatus and practices on Barad’s concept of agency that opens up to ‘possibilities for the iterative reconfiguring of the materialities of human, nonhuman, cyborgian, and other such forms’ (2007, pp. 177–178).

The following presentation of COP practices necessarily involves an analysis of the artefacts which are assembled to constitute the caring apparatus we refer to and, in particular, we develop our argument focusing on the case of a camera as a more-than-human caregiver.

Case study method

Our case study relates to the adoption of a camera for older people at home. The context is a Swedish municipality of about 100,000 inhabitants, considered one of Sweden’s most innovative cities in welfare technology, thanks to an active network of actors, namely the local university, the regional authority, the municipal government, hospitals, older people associations, and the regional assistive technology centre. The municipality has decided to adopt the camera, deemed to provide ‘better’ service as people are not disturbed at night compared to when professional caregivers (*Nattpatrullen*, the homecare night patrol) visit them,⁵ but also in consideration of the potential savings. Since 2018, 30 cameras have been installed in the municipality (the total number of people having homecare at night is 200 with approximately 400 tasks performed every night).

The empirical material was produced over a period of four years (2016–2020) and results from the collaboration between the local university and public authorities in three national projects on welfare technology for older people. We conducted semi-structured interviews and participatory workshops with older people interested in using welfare technologies (i.e. not only the camera); municipal managers for quality in the care and wellbeing division (*Vård- och Omsorgsförvaltningen*); the digital strategist of the same division responsible for the digital development on care and wellbeing; the project manager of the communication, IT, and digitalisation Unit (*Kommunikation, IT och Digitalisering Enhet*); the case officers (*Biståndshandläggare*) who assess the needs of older people and make determinations; and, finally, the head of the night patrol unit, who monitors older people at distance and makes visits as necessary. Along with these interviews, we also interviewed key informants indirectly involved in the implementation of the ‘camera strategy’, that is, the regional office for the dissemination of knowledge in the health care sector, and the regional assistive technology centre.

We have also conducted ethnographic observations of meetings during the implementation of the camera, and realised further interviews with representatives from companies in the welfare technology market on the occasion of an important annual trade fair in Stockholm, twice attended by two authors (2017, 2018) to collect qualitative data (detailed descriptions of some of these activities can be found Andersson, Cozza, Crevani, & Schunnesson, 2018; Cozza, Crevani, Hallin, & Schaeffer, 2018; Crevani & Cozza, 2018).

In our analysis, we focus on three caring practices (among possible others) embodying the materialisation of the political economy of the caring apparatus in its agential cutting together/apart. Consistent with the posthuman approach, we do not prioritise human voices in presenting data; that is, we do not show our data – for example through quotes – as done in humanist qualitative post-positivist research. Instead, we develop a narrative that allows for appreciation of the complex entanglement between humans and more-than-humans (Fullagar et al., 2019) by acknowledging that devices do not speak, and that what they do can only be observed and spoken about by researchers (Pols, 2012). By narrating, rather than extracting ‘evidences’ (St. Pierre, 2021), we think through a more-than-human orientation, according to which we foreground the entanglement of heterogeneous actors and, in line with posthuman ethics, we account for the human and more-than-human agency in COP more symmetrically (Fullagar, 2017; Pols, 2015).

Caring practices in a Swedish municipality

In this section, we explore how caring is not the mere result of actions engineered by human subjects, but rather emerges from complex agential intra-actions of multiple material-discursive practices of bodily production. In particular, we identified ‘targeting’, ‘monitoring’, and ‘aligning’ as interrelated caring practices that we unpack and articulate from a posthuman perspective. By these practices, various agential cuts are enacted, which in turn correspond to ‘caring together-’ and ‘caring -apart’.

Targeting

In our reading of the empirical material, targeting emerges as a practice consisting in selecting which older people the caring apparatus should include in (caring together-) or exclude from (caring -apart) welfare care, based on an assessment of their needs. In the following, by recalling the history of the camera and telling it in the form of a story, we point out that care is performed intra-actively by human and more-than-human agents. Among these, the camera is the main (but not exclusive) actor entitled to ‘look at’ older people remotely, and it partially replaces the human ‘colleagues’ as the exclusive agents appointed to visit the person at night and ensure their health, safety, and comfort. Such a technology becomes the digital companion of the older person, as well as a more-than-human caregiver, along with the human companions. But let us step back, and examine the origin of this apparatus.

The introduction of this new technological ‘member’ of the municipal caring staff was based on a debate about which older persons were entitled to remote visits via camera oversight, or, phrased differently, how the camera could meet an older person’s needs

while supporting the night patrol unit. Indeed, the strangeness of night-time visits to an older person's home, and awakening an older person in the middle of the night, caused distress for both homecare staff and older persons. The camera was thus considered a more respectful and discrete potential agent.

At this point in the story, the camera enters the municipal caring apparatus as an unknown element intra-acting with pre-existing practices aimed at assessing older people's needs first and, as needed, eventually replacing in-person visits with the 'technological gaze' to guarantee peaceful sleep. From a human perspective, this is a tricky question. On the one hand, managers and municipal accountants quickly realised the possible savings that the camera could bring, since time for visits and travel would be reduced. Hence, the possibility of targeting older people in the name of financial issues began materialising in the local caring apparatus.

On the other hand, case officers worried about taking responsibility for finalising the needs assessment by, consciously or not, promoting the camera. Such a decision would meet financial targets and, probably, would please some older people; at the same time, it would cut -apart other older people that, for different reasons, are not considered a proper target and, ultimately, could not benefit from the technological assistance. In short, the human caregivers were torn over having to decide how to distribute homecare by taking into account the budgetary issue that seriously affects services, due to limited human and financial resources. The human caregivers realised that, either way, they would generate a diversification among the older population in terms of access to welfare benefits.

In this process that we, as researchers, have been involved with over a period of years, the camera eventually becomes a legitimised caregiver that human caregivers are appointed to include in the home care service package, once an assessment procedure has ascertained its relevance for an individual. From this point of view, the camera becomes both a possibility for some (caring together-) and an exclusion for others (caring -apart), depending on the assessment and consequential targeting. The camera is the first alternative to consider, and only when such a set-up would not work should an in-person visit be considered. This feature of the caring apparatus is also the result of politicians pushing for a quick implementation of this specific technology in the municipality, as a sign of modernity. Despite the fact that the older person's wishes still seem to come first, case officers are supposed to educate older people about how the technology works, and its benefits, something that makes many case officers, who are often ignorant of the device's technical features and wary of seeming pushy, feel uncomfortable. In this regard, professionals involved in the implementation also contribute to further 'cut' the caring process, by constructing a stricter definition of 'need' for the camera in order to accurately targeting the 'right' older people, i.e. those who want it and may become 'allies' in promoting the camera. Municipal accountants even suggest that gathering older people in 'batches', to systematise the implementation of as many cameras as possible at the same time.

The controversial nature of such a caring apparatus is voiced by both case officers and homecare personnel, whose professional ethos frames care as something that everyone has equal right to, whenever necessary, and independent of where one lives, or what public servant provides help from the municipality. This is why, as the camera is

implemented, case officers become the bottlenecks in increasing the number of cameras or, in other words, are perceived as antagonists of their technological colleagues.

In our story, as time goes by, new decisions are made. The homecare personnel start installing the camera by themselves, instead of having the camera suppliers doing that, since the most important thing is to place it properly and to interact with the older person while doing that. This new practice also allows homecare personnel to become familiar with the camera, whose adoption and installation they become responsible for, in conversation with older people. This attention for older people is a caring together- practice that, however, rests on a previous process of targeting that cut -apart a number of potential users.

Such a step in the story of the camera leads the caring apparatus to eventually include a human/more-than-human scenario, which combines the physical visits of human caregivers with technological intervention via the camera. Through intra-actions, humans and more-than-humans on the one hand cuts down the expected savings but, on the other hand, respects homecare professionals' ethos as well as gets the gratitude of those older people who feel safer and more secure with such a caring apparatus.

In sum, our data analysis shows that the caring apparatus works through a practice of targeting older people as potential users of the camera. Such a practice makes the apparatus highly controversial, in the way that it creates possibilities for some older people (caring together-) and excludes others (caring -apart) depending on the assessment of their needs. In other words, the targeting produces a diversification within the older population in terms of access to welfare benefits.

Monitoring

Relying on our analysis, we define monitoring as the caring apparatus keeping track of the person it cares for. In this regard, the camera becomes the more-than-human actor entitled to perform such a caring practice, and which enacts caring together- or caring -apart cuts. It is noteworthy that for the camera to perform caring, the case officer and the older person must agree on how often the camera should be active each night (typically a few times) and what the (human) homecare worker should do if the older person is not in the expected place,⁶ or if the technology stops working. Practices enacted may include checking again after a few minutes, calling the older person on the phone, and sending night patrol to the old person's home. That said, we can return to the story of the camera and certain missing pieces.

The camera must be ordered from a private supplier which, initially, was also responsible for installing it. However, as mentioned earlier, homecare workers took over this task, since they are more familiar with the older people's routines, preferences, and lifestyles. This caring attention (caring together-) increases older people's trust in the camera and in the homecare apparatus overall. The camera monitors the user through infrared light,⁷ so that is 'only' the shape of the body that can be seen remotely on the night patrol's screen. Infrareds are considered more discreet (care together-) than normal cameras used in the pilot study (Figure 1).

A light signal informs older people that the more-than-human caregiver (i.e. the camera) and the human caregivers at distance, are intra-actively monitoring the

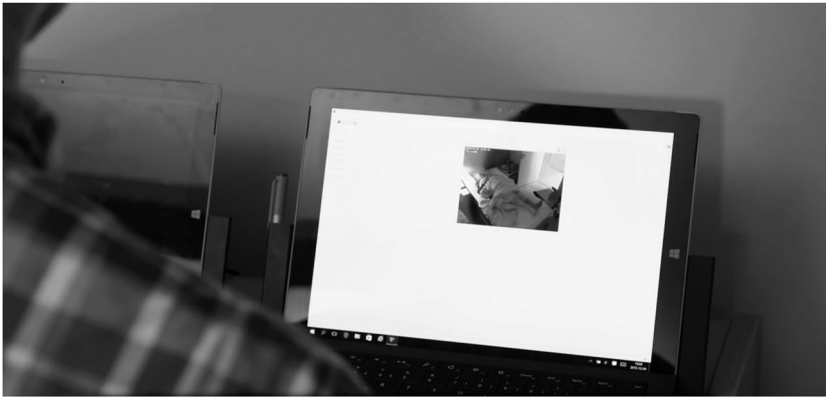


Figure 1. An operator remotely monitors an older person sleeping at home by using a non-infrared camera, during the pilot study.

person at home. The significance of this little light is shown by a story collected in our research, in which a woman waits in her bed for the light to turn on, then waves at the camera. The camera intra-acts with the older person, with the human caregivers in a large open-plan office in the city centre, and also with screens that nevertheless are entangled with the wider sociomaterial caring apparatus.

All tasks performed in relation to one care recipient, as well as all communication with other professionals about a specific user, are logged into an IT application installed on iPads. In June 2019, the municipality had approximately 30 cameras installed and made approximately 70 ‘looks’ during one night-shift, 8:30 pm to 7:00 am. In the case of older people afraid of falling out of bed, checking in during the night via the camera was deemed sufficient to guarantee peace of mind and good sleep. In contrast, people living with dementia must be comforted, reminded that it is night time, and that they should sleep, which means check-ins via the camera are complemented with in-person visits. Both practices are forms of caring together-, that is, forms of caring for differences among users.

The ‘collaboration’ with the camera implies that night patrols gradually learn how to read what they see on the screen: the ‘language’ of the technology must be learned, in order to act professionally. Night patrols know which users are usually up at night, and whether they should worry or not when the older person is not in bed, for instance. As they are emotionally invested in the older people, they also worry about the uncertainty generated by the introduction of a more-than-human colleague: What happens if the technology fails? What happens if a member of the night patrol unit falls ill, since only a few are specialised in this service?

Similarly, neither the professionals nor the users accept the relationship with the camera light-heartedly. On the contrary, it instils a sense of insecurity. Some users perceive the monitoring as a form of surveillance, and not by chance, since this is the market area from which the camera comes. As the head of the night patrol unit explained, he ‘met’ this camera at an exhibition of technologies for surveillance and security. Professionals assuage such concerns by educating users about how the camera monitors them, and that it is activated only for a few seconds at a pre-determined and agreed

upon time. In this way, hopefully with time the user forgets about the camera and stops worrying, allowing caring together- to mitigate the effects of caring -apart.

In short, by analysing the practice of monitoring, we can see that the caring apparatus actualises the effects of the practice of targeting while generating new cuts. Monitoring becomes, in other words, a practice of tracking the older people that the apparatus has deemed entitled to a camera. The collaboration with the more-than-human caregiver causes both a sense of insecurity associated with the fear of surveilling and being surveilled (caring -apart), as well as focusing special attention on the differences among users seen through it (caring together-).

Aligning

Our analysis, finally, leads us to the conclusion that aligning is about re-arrangements in the caring apparatus that make professional practices, older people practices, the camera and other materialities converge and work together to produce care. Care offered by the municipality is regulated by specific laws, both concerning social services, which constitute a right for citizens granted through public authority decisions, and by the handling of personal data in different intra-actions involving IT applications. The caring apparatus is a sociomaterial assemblage of heterogeneous actors that work sometimes in parallel, sometimes together: among the human caregivers, these include case officers, homecare personnel, and nurses, but also IT specialists, accountants, communication officers, and legal officers. For this reason, a working group is established in order to coordinate actions and to map where the effects of specific decisions (i.e. cuts) appear. All these different actors must deal with, at a certain point, one more-than-human caregiver, the camera. However, it is worth noting that the camera was not introduced suddenly, but gradually.

Before municipality-wide implementation could be carried out, a pilot was deemed necessary (Figure 1). Technical solutions deemed successful in one municipality cannot be automatically adopted by another municipality, given, for instance, infrastructural differences in internet access or secure data transmission, or varying distances between the homes of older people. This is a matter of caring together-, because the cut is not accomplished regardless of the local character of the caring apparatus, and contextual characteristics can make big differences in determining which solution to adopt.

At the same time, as new roles are needed to face the increasing sociomaterial complexity of the caring apparatus, new routines within and between administrative divisions, and new ways of communicating and intra-acting with the older people, have to be developed. This takes time, and a number of unexpected issues may emerge during the implementation process, including technology failures.

Once the camera is in use, regardless of the type (infrared or otherwise), night patrols are focused on caring together-, that is, securing the safety of the older person. In this regard, one of the most discussed issues concerns the older person's personal integrity. Such a concern is due to the fact that camera suppliers are unused to working with municipalities on health care matters, but work rather with the private sector, where cameras are used for the surveillance of places, rather than humans. Hence, for the camera to become part of the caring apparatus, the organisational practices of the IT system supplier and at the municipality must adjust to each other, and the supplier's needs must

be aligned with the municipality's, in order to exchange information about the older people. Interoperability requires some bricolage, such as use of an application on workers' mobile phones to achieve a two-factor log-in procedure.

More problematic is the lack of a secure system for transferring data about the older person (i.e. the user) from the municipality to the supplier: there is no guarantee that the transmission from the camera is not hacked. To continue with our story, it was thus decided to use pseudonyms, in the form of a combination of letters and numbers, in the system. This was a form of caring together-, to safeguard the older person and mitigate the effects of the technological cut in the caring apparatus. Hence, rather than a name, the camera supplier learns that, for example, 'CV3' needs a camera, and that a camera is installed at CV3, and the information system informs human camera monitors that CV3 needs three check-ins per night. In this scenario, a hacker would be unable to learn the identity of the older person.

Despite its efforts to ensure personal integrity, this technical solution creates another worry, as a legal advisor points, regarding the liability of the municipality. Using a pseudonym could in fact increase the risk of providing the wrong service to an older person, which would have legal consequences. Indeed, the wrong sequence of letters and numbers could be typed into the system, when registering a user, and this error could escape notice, since it is more difficult to remember a pseudonym than a real name. Hence, guaranteeing personal integrity comes at the cost of appropriateness of service: caring together- may become caring -apart.

An overarching question regards who is to own, be responsible for, and maintain the IT application connected to the camera: the night patrol (who is knowledgeable and engaged) or the IT administrators (who have no time, and no first-hand knowledge of the context of use)? Given that the camera can also 'take care of' younger people with cognitive deficiencies, eventually, the long-term ownership is given to the IT unit that is neither area nor age specific. Until this department takes over, the night patrol is responsible for managing the camera.

To conclude, based on our analysis, the practice of aligning – which is effectively connected with targeting and monitoring – qualifies as a working apparatus through processes of convergence between professionals involved in caring practices and making information systems interoperate. When it comes to aligning people, objects, and technologies to deliver homecare, questions regarding personal integrity and organisational liability arise. Mutual adaptations and coordination are enacted, in order to provide a better service (caring together-), but the appropriateness of the service may be threatened by the same solutions developed to account for the older users (caring -apart).

Postscript on the political economy of the caring apparatus

Despite the increasing push towards the digitalisation of the caring sector, there is still a limited understanding of the role of technologies in reconfiguring care practices. Our claim builds on a criticism of the still-dominant anthropocentric approach to caring, which disregards that care is more and more about a matter of the entanglement of different materialities.

Our aim was to apply a posthuman perspective to explore the role of a device for night monitoring of COP in a municipality in Sweden. Based on Karen Barad's agential realism

(2007), and by acknowledging the contributions of other (feminist) scholars contributing a relational understanding of care practices (Lupton, 2016, 2018; Mol, 2006; Pols, 2012, 2015, 2017), we proposed to investigate the political economy of the caring apparatus which is an assemblage of material practices producing and re-producing specific configurations of care that stem from specific political and ethical choices. These decisions create certain possibilities but also generate forms of exclusion (caring together/apart). Consequences of any kind are inevitable and not limited to the implementation of a specific device like the camera. Since ‘we’ – humans – live in technology-saturated environments, the effects of human-more-than-human assemblages are more pronounced than ever, and raise questions, not least ethical, about what such entanglements bring with them (Lupton, 2016).

In particular, by empirically studying the introduction and use of a camera for older people at home, we have identified three main caring practices – targeting, monitoring, and aligning – as cutting care together and apart. This posthuman take extends previous literature on care practices, particularly for older people, and their relational analysis. While narratively presenting the three caring practices, we emphasise how the professional caregivers’ perspective (including the camera as the main more-than-human caregiver) and older people as users emerge from intra-actions. Also, we account for the humans-more-than-humans entanglement as such by developing a posthuman ethical reasoning on caring together/apart and the im/possibilities generated by these practices. In this regard, our ethical approach is aligned with Barad’s model of an ‘ethics of entanglement’ that is aimed at underlying the intra-activity between the world and its human and non-human subjects, and accounting for the consequences of the agential cuts that these subjects enact intra-actively.

What emerges from our study is the controversial nature of the caring apparatus, starting from the question of who the target user should be (*targeting*). As we have shown, the fact of proposing the camera as first choice to all people entitled to have night assistance is experienced as a dilemma for the case officers, whose professional ethos is built on human contact and prevents them from dealing with and promoting technical equipment. This translates into a diversified offering of service, which includes some users and exclude others depending on the case officer who assesses their needs. This process also affects the way in which the actual *monitoring* by the camera is perceived by those who receive the monitoring service: for some, this technological device provides a beneficial sense of security, while for others it is a form of surveillance and control. Lastly, critical issue of personal integrity and organisational liability emerge from *aligning* people, objects, and technologies to deliver homecare, whereby the same solutions may improve the service while also creating new vulnerabilities.

The adoption of the camera reconfigures the ‘service’. Various intra-actions generate a different caring apparatus that includes the artefact and human professional caregivers. The specific cuts enacted by these intra-actions show the extent to which the entry of the more-than-human caregiver into the caring apparatus also reconfigures the expectations and needs of humans, both older people and professionals.

The camera is an example of welfare technology that works with humans and, in so doing, constantly ‘kicks back’ (Barad, 1998) and reclaims its role in the caring apparatus. Acknowledging its agency is not a form of technological determinism. Rather, this

acknowledgement entails a reassessment of the working of all actors in their multiple sociomaterial entanglements. Traditional practices of collaboration, coordination, and mutual adaptation between human actors have to be reconfigured in light of the agency of more-than-human co-workers that co-configure the caring apparatus. A post-human perspective provides us with analytical tools to analyse such a complexity, by accounting for its multiple human and more-than-human agents.

Notes

1. This construct ('care *for* older people') does not imply the passivity of older people as recipients of care, but is formulated to emphasise the socio-institutional regime that regulates welfare services in the research context of this article.
2. 'Global North' is generally understood to refer to countries in Europe and North America, as well as Japan and Australia, characterised by economic and technological growth and an ageing population, among other features.
3. 'Homecare' is health care or supportive care provided by professional caregivers in the individual home where the (older) person lives, as opposed to care provided in group accommodations, like clinics or nursing homes.
4. In using 'caring together-' and 'caring -apart' we keep the hyphen directly attached to the terms that Barad (2013) uses in a joint form, to stay true to the original sense of 'dis-jointness', discontinuity and continuity, separation and entanglement, and the intra-relationships between practices that are interrelated. We are aware of the potential limits of our theoretical stretching, which however is not meant to dichotomise caring practices, rather to ease the understanding of specific aspects that we want to point out.
5. When an older person gets access to the homecare service associated with the camera, he or she also provides keys to municipal homecare staff – or night patrol – permitting homecare staff to enter as necessary and, in particular, to conduct systematic nighttime checks to ensure the older person's wellbeing (the equipment, homecare staff, and the sociotechnical process involved have been thoroughly described in Cozza, 2018).
6. Usually the camera is installed in the bedroom.
7. During the pilot study, the camera in use was not infrared (Figure 1).

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