

The Automated Heart: Digital Domesticity and Emotional Labour Saving

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Abstract

This article considers the relevance of domestic labour saving devices to emotional labour. Starting with an account of the ways in which household technologies failed to relieve the burdens of domestic drudgery in the twentieth century, it proceeds to consider the labour saving potential of the 'smart home', as well as the gendered ideologies it represents.

By looking at social robots designed for use in the smart home, we see that, while manual housework is beyond the scope of today's smart technologies, emotional labour is not.

Thinking about the different forms that domestic automation can take allows us to recognise that there are qualitative as well as quantitative factors to consider when it comes to critically assessing domestic labour saving ambitions.

The article concludes by exploring continuities with paid care work, and by developing a tripartite approach to reproductive labour as high touch, high tech, and high talk.

Keywords:

Companion robots; emotional labour; domestic technology; care work; housework

Biography

Hester is Professor of Gender, Technology and Cultural Politics at the University of West London. She is the author of *Post-Work: What It Is, Why it Matters, and How We Get There*

(with Will Stronge, Bloomsbury, 2024), *After Work: A History of the Home and the Fight for Free Time* (with Nick Srnicek, Verso, 2023), *Xenofeminism* (Polity, 2018) and *Beyond Explicit: Pornography and the Displacement of Sex* (SUNY Press, 2014).

Introduction: Why Care?

This article approaches the theme of this special issue not via wage labour – ‘work’ in the sense in which it is still most immediately understood – but via the technopolitics of unwaged domestic labour, particularly looking at the networked smart home and its associated devices. I start from the assumption that the home is not just a space of leisure, intimacy, and recuperation, but also a workplace (both waged and unwaged). This was brought home particularly clearly during periods of lockdown, when many homes became spaces not only of remote working but also of *hyper-proximate* working – spaces of life-sustaining care.

Under pandemic conditions, the domestic residence became a concentrated hub for a wide variety of caring tasks which are usually, at least partially, provided elsewhere – either by the public sector (education, adult day care, medical care, etc.) or by the market (early years childcare, domestic cleaning, hot food preparation, and so on). Households were expected to pick up the slack as other options – which were frequently inaccessible, unevenly distributed, or barely functional even *before* the pandemic – were rapidly taken off the table.

In the context of changing conditions of home-based working – and of the wide-spread generalization of a crisis usually felt most acutely by the poorest in our societies – the insufficiencies of the home-as-a-workplace achieved a greater degree of cultural visibility. It’s become painfully apparent just how unsatisfactory the home is as a place of work and how much domestic labourers might have to gain from reorganizing the activities that take place within it. This new visibility may better enable us to recognize where and how spatial

arrangements and working practices inform the value we attribute to household labour, and just how rarely collective efforts have been made to alleviate domestic drudgery.

In what follows, then, I will concentrate primarily on unwaged, intrafamilial housework and care work, and point to the technological conditions under which this work is pursued.

Drawing on research from my recent book (Hester and Srnicek 2023), I will consider how domestic technology gave up its 'labour saving' ambitions, and how horizons of household automation have come to be limited to visions of the data-harvesting smart home. Digging into one particular case study – drawn from the world of consumer-facing social robotics – I will argue that the changes ushered in by these developments have so far done very little to reduce unrewarding household work, and that ultimately, a wider reaching set of cultural and political shifts will be required if we aspire to a world in which domestic technologies can harbour real emancipatory potential.

Focusing on the topic of women and work via the unwaged domestic labour of the home is important, given that welfare states are increasingly reliant upon the family to provide basic care services, and that capitalists have proven themselves to be comparatively uninterested in developing solutions to the issues generated by the home as a workplace. Furthermore, recent calculations suggest that wealthy countries spend upwards of 45 per cent of their total labour time on work of this kind – that is, on unpaid work done in the home that remains largely invisible to the statistical agencies of the state (Hester and Srnicek 2023, 8). Rather than viewing this labour as a special case, however – one definitively bracketed off from other forms of 'women's work' – I want to stress the continuities between similar kinds of activities performed under different conditions. This work is inexorably tethered to other forms of cooking, cleaning, and caring that take place in the public sphere, whether they be remunerated or unremunerated, in the waged workplace or in the wider community.

These different contexts for the delivery of care inform each other and are shaped by an interconnected nexus of factors (from gender ideology to the structure of neoliberal welfare regimes); understanding this is helpful, given that it might better enable us to enhance solidarity between people playing different roles in the delivery of care. It is with this in mind that I turn my gaze toward paid care giving as I approach the conclusion of this article. What can a profession such as nursing teach us about the application of technology in the provision of ‘good care’ in the household? How can we move away from the unfulfilled promises of commercial labour saving devices, and think more expansively and imaginatively about living, loving and working with technologies in an era of digital domesticity? It is here that I will advance a distinction between three kinds of care work – high touch, high tech, and high talk – as I seek to consider what labour saving innovations could look like if they were put at the service of people rather than profit.

At Home with Technology

So-called ‘domestic labour saving devices’ do not historically have a great track record when it comes to actually saving domestic labour. As Angela Davis notes, “The structural separation of the public economy of capitalism and the private economy of the home has been continually reinforced by the obstinate primitiveness of household labour. Despite the proliferation of gadgets for the home, domestic work has remained qualitatively unaffected by the technological advances brought on by industrial capitalism. Housework still consumes thousands of hours of the average housewife’s year” (1983, 223). This has been confirmed by feminists such as Judy Wajcman (2015) and Ruth Schwartz Cowan (1989), whose work has taught us that, one reason why time spent on housework did not go down after the rise of domestic appliances in the twentieth century, was that – as these appliances became more common – *expectations* also began to escalate.

Cleaning was supposed to be deeper and to happen more frequently, home-cooked food was expected to be more complex and time-consuming, clothes were expected to be

thoroughly laundered and pressed, and so on. As Wajcman puts it, “appliances may be being used to increase output rather than to reduce the time spent on housework” (2015, 119). So, as new technologies enabled home-makers to complete specific tasks more quickly, the standards to which these tasks were supposed to be performed rose dramatically, along with the sheer number of chores and activities that qualified as part of the daily house work.

Domestic technologies did not really maximize their labour saving potential as the twentieth century progressed, either. There has been little in the way of meaningful innovation in recent decades. For nearly every household task, the technologies in place by mid-century remained virtually the same until the first decade of the new millennium – with the only exception being the microwave. As Robert Gordon notes, while a housewife from the 1870s would find a house in the 1950s virtually unrecognisable, a housewife from the 1950s would find the home of today largely unchanged (2016, 524–25). Technologies such as refrigerators, dishwashers, vacuum cleaners, and ovens have all been tinkered with in various ways, but little that is usefully new has been added to them. In the wealthier nations, the world of kitchen appliances has seen the introduction of a series of gadgets, gizmos and gimmicks – the bread maker, the spiralizer, the ice cream maker and so on – but none of these has represented significant *labour-saving* potential.

This situation may now be shifting, however, as we witness an apparent flurry of activity around domestic devices in the twenty-first century. One of the biggest ongoing trends involves ‘smart’ technologies – technologies which employ computers to add new features to traditional appliances. Such devices are giving rise to the so-called ‘smart home’, a constellation of such technologies networked together within individual households. Surely this will result in a meaningful diminution of drudgery, at last? Of course, much of what makes up the smart home isn’t new. Even in the 1980s, many of the individual technologies already existed. What’s novel is this “idea of integrating them. The smart home, then, serves

a managerial function in relation to the various smart devices it contains, offering an overarching vision of every movement and environmental fluctuation, combined with digital- and voice-control systems to enable the use and remote coordination of these elements” (Hester and Srnicek 2023, 41).

So far, smart home mania has been almost entirely a platform-driven project. Consumers have hardly been crying out for things like voice-operated fairy lights or remote-control kettles. These things are not an answer to most people’s everyday domestic woes. Rather, it’s companies like Amazon who have pushed developments in this direction. They have fought hard to embed their smart assistants in homes, whether through loss-making prices, major advertising efforts, or agreements with home builders. Indeed, the “drive to make all household tasks ‘smart’ is less a response to need than a reflection of the economic and technical capacity for collecting data and producing computer chips [...] we could see this period as an experimental stage where companies throw innumerable smart devices at the wall in the hopes that some of them stick” (Hester and Srnicek 2023, 45). This is, in part, the result of a drive for data dominance, as well as an attempt to find ways of locking users into particular platforms. The battle between Google and Amazon for smart home supremacy is ultimately a battle for control of the interface through which users will interact with their domestic spaces and their various devices – and all the data and insight that position might provide. The rise of the smart home cannot be separated from this desire for market infiltration and ever more data.

What is notably missing from this platform-driven vision of the hyper-connected dwelling, of course, is *housework* – or any intention of reducing it. Developments in smart devices are not typically oriented toward labour saving. In fact, not only does the smart home (as it is emerging today) continually fail to reduce – or even show much interest in reducing – domestic drudgery, but it can also be seen to *generate* new kinds of labour. It demands continual maintenance – updating software, getting devices to sync, finding workarounds

and solutions when things malfunction, attending to notifications, and so on. Think of the inefficiency and unreliability of the home printer; now imagine that every appliance in your home (from your toothbrush to your coffee pot) has the same level of functionality. This is the experience of digital domesticity and high-tech housework.

Furthermore, the smart home has been marketed in ways that seem to entrench (rather than disrupt) the gender division of labour as it pertains to unwaged domestic work. As Sarah Kember and Joanna Zylińska note, “some rather predictable gender patterns are embedded in the majority of technofuturist visions” (2012, 106). They point to Microsoft’s promotional campaign for its 2011 Home of the Future, for example – a campaign featuring a woman who shares a home with her husband and kids, whose smart mirror offers fashion advice and whose interactive countertops suggest recipes and remind her to take her pills! Here, imaginings of domestic technologies rigorously support, cater to, and help to generate current gender conventions; they performatively produce ‘the woman’ as a subject through the processes by which they pick up and feed back into existing ideologies. Such “future-oriented visions are normative and strangely regressive, relocating women (back) into nuclear heterosexual families and into the home” (Kember and Zylińska 2012, 107).

Labours of Love: Care, Companionship and Social Robots

There is one specific form of technology, suitable for embedding within the smart home, that makes for an illuminating case study here – social robots. What contribution, if any, do these devices make to the performance of unwaged intrafamilial domestic labour? The global personal robotics market reached \$21.5 billion in 2019, with one market intelligence firm suggesting that we can expect this to reach \$51.5 billion by 2030 (P&S Intelligence 2020). Personal robots have a range of uses – security and physical assistance, for example – but the category predicted to witness the fastest growth over the next ten years is companion robots (robots designed to keep the user company, or to evoke a sense of companionship). These technologies have long been heralded for their potential outside the private home,

including within institutional care settings, but there has been a marked resurgence of interest in them over the course of the 2020s – in part because the pandemic “provided the ultimate use case for them” (Samuel 2020). Things like the therapeutic robot seal PARO have been viewed as tools to reduce loneliness during lockdowns, with one article for *Wired* noting that “in a time when social distancing is exacerbating isolation, devices like [PARO] can be a psychological salve” (Knibbs, 2020).

But technologists’ ambitions for social robots are not limited to hospitals and care homes; increasingly, we’re seeing them imagined as everyday consumer goods for integration into the smart home. Amazon announced its new Astro domestic robot in 2021, for example – a combination of a Ring doorbell and an Alexa digital assistant on wheels, topped off with a cute little touchscreen face. According to its promotional materials, Astro will follow you around the house, talking to you and bringing you beer, while also offering certain security benefits. Companion robots are particularly interesting for our purposes because, despite being smart devices increasingly marketed for household use, they are quite unlike domestic labour saving devices in the conventional sense of the term. Rather than automating housework, and despite often being marketed as having administrative or organisational uses, they are primarily intended to provide interaction and social engagement.

A further example will make this clear. In 2014, a crowd funding initiative was launched for a device billed as the “world’s first family robot”. In the accompanying promotional video, a narrator guides the prospective consumer through a series of images of their world (or a fantasy version of it): “This is your house; this is your car; this is your toothbrush. These are your things. But” – the camera focuses on a framed portrait of a multi-generational, white-passing family – “these are the things that matter. And somewhere in between, is this guy.” We are thus introduced to Jibo – a squat little robot, with a white plastic body and a rounded, tilting head. ‘He’ is undoubtedly visually appealing, weaponizing cuteness (a form of affect closely associated with companion robots) in order to cultivate a reaction from viewers. As

one tech journalist puts it, “he looks like a character invented by Pixar, or something out of *The Brave Little Toaster*” (Van Camp 2019).

The advert continues, showing Jibo supporting family members in various domestic situations. He acts as photographer at a teen’s birthday party, for example, thereby allowing Mom to be part of the picture instead of hidden behind the camera. He accompanies Grandma baking in the kitchen, reminding her that somebody is coming by later to take her grocery shopping, and he reads a little girl the story of the three little pigs (complete with interactive huffing and puffing). Jibo allows an adult son to remotely attend thanksgiving dinner, and is later shown ordering said son a take away after a long day at work. He also acts as “a great wingman”, we’re told, as he reads out messages from a prospective date. We then see a brief montage of shots of famously helpful and/or personable robots from popular culture – R2D2 from *Star Wars*, Johnny 5 from *Short Circuit*, Rosie from the 1960s Hanna-Barbera cartoon *The Jetsons* – as the narrator sells us on the imminent arrival of a high-tech future: “We’ve dreamt of him for years, and now he’s finally here – and he’s not just an aluminium shell. Nor is he just a three axis motor system. He’s not even just a connected device. He’s one of the family.” The video concludes with the little girl affectionately caressing Jibo’s disc-like (inter)face, and wishing him goodnight as he blinks a heart in her direction.

As adorably well-designed as this robot might be, Jibo and his promotional accompaniments nevertheless demonstrate something of the regressive social dynamics embedded within many commercial visions of supposedly forward-looking domestic technologies. Whilst he is supposed to take on the role of domestic helper, household administrator, and companion, we are repeatedly presented with women (and more specifically, *mothers*) undertaking the primary roles in reproductive labour – organizing birthday parties, kneading dough, taking grandma grocery shopping, preparing a big meal for thanksgiving dinner. The men in the ad, meanwhile, are either totally silent and seemingly untroubled by the demands of domestic

labour (as in the father figure, who doesn't have a single line of dialogue), or young, single career men who use Jibo as a kind of combined personal butler, substitute parent, and advanced Tindr hook up facilitator. It is almost as if the video is expressly designed to reassure viewers that, whilst emerging technologies are capable of transforming our everyday lives, this will not and cannot extend to established family hierarchies and gender dynamics. This is neatly encapsulated by the nod to *The Jetsons* – a vision of the year 2062 in which domestic and working life have been totally transformed by automation, but in which gender roles and the nuclear family have somehow escaped entirely unscathed.

Of course, many visions of the smart home are produced by tech companies with a particular investment in the forms of domestic consumerism to which the nuclear family and the atomized smart home lend themselves. As such, the homes of the future continue to be imagined as privatized dwellings requiring the unending purchase, maintenance, and replacement of consumer electronics. In the end, though, our particular case study didn't get very far in terms of market infiltration. This was in part because the Jibo seen in the promotional video is *not* the Jibo that actually made its way into a select number of homes. Despite having some smart home functionality, the robot that shipped in 2017 (at a cool \$900 apiece) was limited in what it could accomplish. Jibo lacked the ability to order food, play voicemail messages, or receive emails; he couldn't read a bedtime story, record a video or audio clip, support personal calendars, or accomplish several of the other tasks advertised during crowdfunding.

More than this, though, the Jibo project as a whole turned out to be a failure. Delays in production meant that Jibo was outpaced by other smart home developments, and in 2019, notice was given that its "servers would be going dark, taking much of the device's functionality with it" (Carman 2019). As Ashley Carmen notes, "In the time it took Jibo to ship, Amazon and Google launched their smart assistants and speakers; Apple doubled down on Siri; Samsung launched Bixby; and the home smart speaker market exploded. Jibo

was going to change the world, but the big tech companies got there first” (2019). So, why should we be interested in a dead technology? What, if anything, can it tell us about women and work, or about digital domesticity and unwaged care?

A partial answer to these questions is suggested by the sheer strength of feeling associated with both Jibo and his demise. This is evident in public reaction to news of his support pages going offline and his remote servers shutting down. There was a vigorous campaign to save Jibo, efforts to reverse engineer the appliance so that he could keep running, and numerous heartfelt posts across social media. According to a 2019 YouTube video by the tech review Michael Fisher, all of this is evidence that Jibo succeeded in his “most fascinating, most improbable mission”; for although he may “ultimately have been defeated by the Amazon Echoes and Google Homes of the world, he was meant to do something more – become a part of the family”. Jibo, in other words, succeeded precisely as a companion robot; he managed to make at least part of his user base experience a sense of profound emotional connection (and subsequently, a profound sense of loss when the remote servers that supported his functionality shut down).

On Automation and Autonomy

While he never offered much in terms of alleviating the burdens of household drudgery or domestic management, Jibo can nevertheless be seen as effectively taking on *some* crucial activities of social reproduction in his role as a companion robot – namely, those involving interaction, play, care, and intimacy. This is the realm of *emotional labour*, in other words. This is a concept developed by Arlie Russell Hochschild in her hugely influential book *The Managed Heart: Commercialization of Human Feeling* to refer to work that involves “a publicly observable facial and bodily display” that is intended to produce “the proper state of mind in others” (1983, 7).

In Hochschild's original formulation, emotional labour is specifically associated with paying jobs. For the purposes of this article, however, I will be following Alva Gotby in using the term in a more encompassing manner, to mean "interactive work that produces emotional effects in [a] person" (2023, 3). While such a definition avowedly points to "a broader process than the one usually described in sociological studies of emotional labour" (2023, xiv), it has the distinct advantage of reminding us that our 'private lives' do not sit magically outside of capitalist economic structures. The emotional elements of unwaged care practices extend to sustaining people's "ability and willingness to continue to engage in capitalist productive labour, often despite the continual emotional strain produced by this work" (Gotby 2023, xiii). As such, emotional labour can be said to play an important role in sustaining both existing economic systems and the people within them.

This broader approach to emotional labour – which Gotby sometimes refers to as "emotional reproduction" (2023, x) – also has the benefit of troubling any perception of a hard and fast dividing line between emotional services offered for a wage and those performed for free. This is not to deny that there are key distinctions involved – caring for a customer is different from caring for a partner, parent, or child, of course – but in the context of the current discussion, assuming a firm division risks obscuring continuities between various forms of activity. It suggests that the work of caring performed within the family is *fundamentally* different from work done in the waged workplace, when this distinction may in fact be less a matter of essence and more a matter of degree. In terms of its physical and emotional elements, for example, the labour undertaken by a nanny in caring for a baby is substantially similar to that performed by a family member; it is the *context* and the social relations at play which sets these situations apart.

For all their differences, though, Hochschild and Gotby *both* view emotional labour as a human pursuit (and as a process that affects all parties involved). What, then, does it mean to bring robots into this sphere? How do labour saving devices apply to this kind of work?

Clearly the activities that companion robots perform (or attempt to perform) are of a very different character to those that we associate with manual housework. Indeed, one could argue that the tasks they undertake represent that portion of social reproduction which often feels *least* like work. Emotional labour is no doubt an effortful (and highly gendered) activity, frequently performed for the benefit of capital under conditions not of one's own choosing; it is important to take it seriously. Nevertheless, we must also recognise it as a source of revolutionary hope, given that it may contain the seeds of a different way of relating. The activities of emotional labour are thus those which, to my mind, lend themselves particularly readily to emancipatory re-imagining; they might comfortably "become non-work if they are disconnected from the conditions that compel us to perform them" (Gotby 2023, xx).

Aspects of emotional labour come very close to something like *quality time*, then – to the realm of autonomous and freely chosen activity. It is here that devices such as Jibo are designed to intervene. But this state of affairs is not limited to novel tech developments, and is to some extent in keeping with the wider dynamics of domestic labour saving devices. As Leopoldina Fortunati puts it, "To be able to prepare the food and clean the house, the job of looking after the children has been relegated to the TV set or the computer [...]. It is as if entertaining children by speaking to them and playing with them has been considered less urgent than getting the dinner ready or cleaning the windows" (2007, 141). Whilst that work which is most "similar to material labor still tends to resist the process of machinization, it is the less tangible part (thinking, learning, communicating, amusing, educating, and so on) that has been machinized" (Forunati 2007, 141). Thinking, learning, communicating, amusing, educating – these are the things that labour saving technologies have been supposed to free us *for*, not *from*.

A strange inversion has taken place, then – one exemplified by social robotics, but also evident in better established domestic media technologies. As the mother of an eighteen month old, a four year old, and a five year old, I have no interest in disparaging these

technologies – I am more than aware of how helpful the TV, games console and tablet can be. But perhaps my relationship with, say, children’s television would be different if I wasn’t relying on it to keep my babies occupied whilst I complete paid work or perform routine domestic tasks (sorting the washing, cleaning the high chair, emptying the nappy bin, and so on). If wage labour and intrafamilial reproductive labour didn’t occupy so much of my time, energy, and headspace – and if I wasn’t parenting three infant children without the day to day assistance of a support network beyond my co-parent – my experience and usage of these technologies would be decidedly different. As it is, however, we have to reckon with the fact that instead of automating drudgery, we’ve inadvertently automated quality time. Ultimately, better domestic technologies should not be judged solely on *how much* labour they save, but also on what *kinds* of labour they are supposedly saving us from.

So, we’ve seen that there has been little in the way of *desirable* labour saving innovation in recent decades. From the gizmos of the contemporary over-equipped kitchen, to the connected gadgets of the smart home, to companion robots programmed to perform¹ emotional labour and fulfil social needs, the devices being developed for the wealthiest people in the wealthiest nations have not been designed with the goal of eliminating drudgery in mind. But whilst domestic technology should not be mistaken for a panacea, it shouldn’t be assumed to be a poison either. It is beholden upon us to reclaim the future of domesticity from restrictive visions of the kind I have been considering so far, and to foster collective projects via which we might find more egalitarian ways of managing and mitigating the burdens of unpaid household work.

Conclusion: The ‘Three Ts’ of Care

On the basis of our discussion above, we can distinguish at least three categories of reproductive labour: high touch, high tech, and high talk. The first two are already well-established in the literature (Naisbitt 2001), particularly when it comes to paid work. ‘High touch’ refers to tasks characterised by physical proximity, tactile interaction and manual

handling – things like washing, lifting, and dressing, which have historically been performed by female and non-native workers. ‘High tech’, meanwhile, refers to tasks requiring digital skills and involving the creation, maintenance or use of automated systems such as remote monitoring technologies. A perceived division between these categories informs many contemporary debates about the automatability of remunerated care jobs,² as well as fuelling mounting concerns about polarization in the sector when it comes to pay, conditions, and prospects. But, as our discussion so far has illustrated, this distinction also has increasing relevance to unwaged work in the home. Much domestic labour still depends on elbow grease and a human (woman’s) touch, but an increasing portion also takes the form of ‘digital housework’.

What, then, of this third type of activity? What is ‘high talk’ care, and how does it fit in to our analysis? One thing that the high tech/ high touch divide fails to take into account is emotional labour. Much recent discussion regarding professionalized health and social work has pointed to the neglect of this form of care. A 2013 survey of registered nurses, for example, found that 86% had left one or more care activity undone due to lack of time on their last shift. Most frequently incomplete were “comforting or talking with patients” and “educating patients” – high talk tasks with a crucial role in actually making people feel better, which are also associated with emotional labour as a skilled and potentially rewarding element of care work (Ball et al. 2014).

Across the care giving spectrum, we find high talk work being swallowed up by other commitments. And of course, this creates the need that PARO and Jibo seek to meet. It is understandable, given contemporary political and economic conditions, that many people feel anxious about the automation of care. Even if these technologies work as they are supposed to (and in their defence, they *do* often seem to be well-received by users), they still lend themselves to nightmarish visions of cold and loveless techno-futures. With the Health and Social Care sector subject to targets and productivity pressures, and with

unwaged carers of various kinds feeling the squeeze in the absence of adequate state support, the fear is that encroaching technologization will spell isolation and dehumanization for those in need of support – that, in the absence of an attentiveness to emotional labour, care will become ever-more uncaring.

This is certainly one possible future. However, I believe that a more emancipatory approach to care could also develop from thinking about how emerging technologies inform high touch, high tech, and high touch care. One positive outcome of automation would be to recentralise high talk activities, wherever appropriate, within practices and understandings of care work – to target drudgery and enable connection. Writing about social care, Samantha Howe and Karol Florek remark that robots have the potential to “alleviate the more onerous tasks for human caregivers, allowing them to focus on the more complex and emotionally demanding, if also rewarding, aspects of eldercare. After all, their labour is often highly physically strenuous – direct care workers are among the occupational groups most prone to musculoskeletal disorders. Physical-assistance robots, designed to perform tasks such as lifting, hoisting, carrying, bathing and dressing, could ease burdens while freeing up carers to be attentive in non-physical ways” (2024). The right kinds of technologies would make it increasingly possible to eliminate those kinds of high touch tasks that are not only risky, demanding or boring for workers, but which also force people into uncomfortable and potentially unwanted positions of physical intimacy.

Furthermore, such technologies could be used to enable different ways of managing and organising care. Indeed, from my point of view, one of the most hopeful visions of the automation of reproductive work is not a flashy companion robot performing high tech, high talk labour, but a rather more quotidian techno-material assemblage – the influential nurse-led Buurtzorg model from the Netherlands. This model spans both waged and unwaged work; the home, the community, and the healthcare setting. It sees self-managed teams of nurses cooperating with individuals and wider support networks (including relatives, friends,

and neighbours) to help people age well in their communities. Without the kinds of job role specification demanded by efficiency- and productivity-led approaches, it carves out time for the building of ongoing, holistic and multifaceted caring relationships. Nurses have the expertise and training to deliver high tech care (dealing with telemedical systems and so on), but are also on hand for high touch support (dressing wounds, washing hair) and high talk interactions (having a cup of tea and a chat).

The Buurtzorg model is resolutely *not* a labour saving techno-fix; it demands different types of (more autonomous) working arrangements and encourages the formation of alternative kinds of social relationships. Crucially, by operating at a scale between the home and the hospital, it also involves thinking beyond the domestic dwelling and the atomised household, thereby better weaving care into the fabric of people's complicated everyday lives. But it is still, to my mind, a crucial positive example when thinking about technologies of care, because it relies on the kind of technical infrastructures that allow nurses to remain connected while mobile in the community – things like specialist software for recording and analysing client data, and devices that operate securely and reliably while on the go, for example.

The capacity of technology to lessen the burdens of things like day-to-day administration and the careful management of sensitive data seems to represent an opportunity for the *right kind* of labour saving – one in which automation could free up time for people to exist in other kinds of emotional relations. Specifically, it might enable the kind of comforting, talking, and educating that paid care givers have found nearly impossible to deliver to a satisfactory standard in recent years, and that even unpaid caregivers have found themselves struggling to provide in ways they might like. Clearly there are issues to be addressed in terms of the arrangement of caregiving as it currently stands (both within and beyond the household). In large part, these stem from the social relations that have come to define care under

capitalism – not least, time pressure and work intensification leading to the depletion of care givers and the neglect of care recipients.

We can acknowledge the need to fundamentally restructure these relationships without overlooking the fact that some elements of this work could feasibly be mitigated via the judicious application of technology. It strikes me as important to rethink the technical, as well as the social, organisation of this work in order that we can collectively steer and steward unrealised labour saving potentials into being, and to ensure that innovation is put at the service of people not profit. High talk activities have been squeezed out of care work; technologies, as one element in a sustained political struggle, might enable us to put them back at the heart of care. Let's reclaim our quality time.

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Notes

1 I use this word advisedly, given that the idea of performing suggests both accomplishment and mimicry; one's sense of whether or not social robots can "really" undertake emotional labour will depend on one's view on the necessity of emotional reciprocity.

2 Many sources view paid care work as a growth area capable of offsetting potential job losses resulting from automation, particularly in light of impending demographic changes. PwC, for example, suggest that a relatively low proportion of health and social work jobs in the UK are at risk of automation (Berriman 2017, 38). Not everyone agrees, however. A study by Deloitte argues that care is far more automatable than we typically imagine, and ranks Health and Social Care in the top three sectors when it comes to existing jobs at high risk of automation (2016, 3).