Technology becomes her

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TECHNOLOGY BECOMES HER

Why are so many of today's digital assistants presented as feminine? How does this relate to the history of workplace technologies and women's participation in the labour force? This article seeks to answer these questions, arguing that some elements of "women's work" are now being outsourced to machines – with interesting implications for our understandings of gender

Femininity and/as office technology

In an advertisement for Recognition Equipment in 1966, a young woman with a charming smile places an arm around her male colleague's shoulder, and rests her head gently against him as he tries to read some very serious and important paperwork. The tagline declares, 'Our optical reader can do anything your key punch operators do. (Well, almost.)' It's limitations? The copy informs us that the machine 'can't use the office for intimate tête-à-têtes' or 'be a social butterfly'. All it can do is its job, reading and computing data at the rate of '2400 typewritten characters a second'. Another, published a year later, and quite clearly a sequel to the first, uses the same tagline, this time accompanied by an image of a heavily pregnant blonde. Unlike this woman, we are told, Recognition Equipment's office technologies 'can't take maternity leave. Or suffer from morning sickness. Or complain about being tired all the time.' It should be clear to the reader which of these things is more useful to have around the office.

A contemporaneous advert for Optical Scanning Corporation's Digitek 70 takes a similar approach to hawking workplace kit. The top half of the page is taken up with black and white photographs of women's body parts – slender legs sitting or standing (presumably around the office), and lipstick-painted mouths in the act of talking. The copy asks the reader, 'What has sixteen legs, eight waggly tongues and costs you a least $40,000 a year?' The answer, of course, is eight female workers, who can be conveniently replaced by a single Digitek 70 optical reader. A slightly earlier example further reinforces this message: in a 1962 advert for *General Telephone*, we see an illustration of a bespectacled executive presenting his telephone answering set with a bouquet of roses. The tagline above informs us that 'He's in love with his Electronic Secretary'. There are various other promotional texts that perform a similar rhetorical manoeuvre. These adverts point particularly

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to the trouble with female employees – their errant embodiment, their capacity to distract and be distracted, their irritating habits of sociability and maternity. They also point toward the idea of the clerical worker (typically white, cis-gendered, and middle class, not to mention female) as an unsophisticated device for saving male managerial labour – a device that is liable for upgrading and replacement by newly available office technologies. In these adverts, the new technological apparatus assumes (often in quite literal ways) the position of the secretary. Technology becomes her.

The histories of machines, femininity, and waged labour have long been understood as deeply entangled and mutually constitutive. This merging of woman, machine, and work is taken in a new direction in the twenty-first century, with the advent of the 'digital assistant'. These applications are knowledge navigators, available as part of various operating systems, which recognise natural speech and use this ability to help answer user's queries and to aid in organisational tasks, such as scheduling meetings or setting reminders. Perhaps the most famous of these is Apple's Siri – now widely recognised as the voice of the iPhone – but there are several others, including GoogleNow and Microsoft's Cortana, all of which perform similar functions with varying degrees of efficiency. The connections between these digital assistants and the conventions of low-status clerical labour are obvious; a reviewer from *Wired* magazine compared Siri to an unpaid intern, and Microsoft even went so far as to interview human PAs whilst developing Cortana. These apps represent, in many respects, the automation of what has been traditionally deemed to be women's work.

Feminised labour, technologised labour

A recent billboard advertisment reads: 'Meet Cortana. She not only learns and remembers what you like, she can also provide reminders based on you location and contacts. All you have to do is ask.' Even if one is aware of the campaign's intertextual reference to a videogame character – the feminised AI from Microsoft's *Halo* series – this use of pronouns is still likely to register as highly conspicuous. Such gender markers associated with Cortana and other apps further emphasise the association with the so-called 'feminised labour' of clerical and service work. Though various voice settings are available – including a much overlooked man-bot (for robot) version of Siri – digital assistants are usually advertised with female voices. They are often referred to as 'she' in consumer reviews, technology blogs, and marketing materials.

In some ways, to point out that digital assistants are gendered is to make a very obvious point – many of us are more than aware that Siri, for example, is feminised, and many of us are likely already acclimatised to the gendering of virtual service work. Indeed, in her discussion of an earlier generation of virtual assistants (specifically, the customer service bots on early noughties websites), the critic Eva Gustavsson notes a demonstrable preference for feminised avatars. She dismisses this as an uncritical attempt to mimic the realities of offline customer service environments; help-bots are portrayed as young and female, in other words, because customer service workers in general are young and female. However, she also makes some pertinent comments about the role of expectation here – comments that work to foreground the notion of so-called feminised labour. Gustavsson (2005) suggests that the preference for this kind of gendered avatar is rooted in the assumption that women possess a natural affinity for service work and emotional labour. She also claims that 'The stereotyped image of female service providers has its basis in the stereotyped image of female qualities. […] Such a stereotypical female image of caring, empathy and altruistic behaviour has become a standard component in a service script' (Gustavsson, 2005: 402).

By this account, service work is positioned as feminised labour (and service bots become femmebots) not simply because women make up the majority of the workforce, but because the image of the sector is itself feminised; that is, it is associated with qualities traditionally coded as feminine. Indeed, this is not just true of customer service; many contemporary understandings of feminised labour gesture towards trends in the global labour market that can be linked to the dominance of a socially gendered skill set. Both service work and clerical work have conventionally been designated as feminine, and this distinctive gendered history has arguably been part of the reason for the prevalence of feminised digital assistants. We are witnessing the protocols of femininity being programmed into

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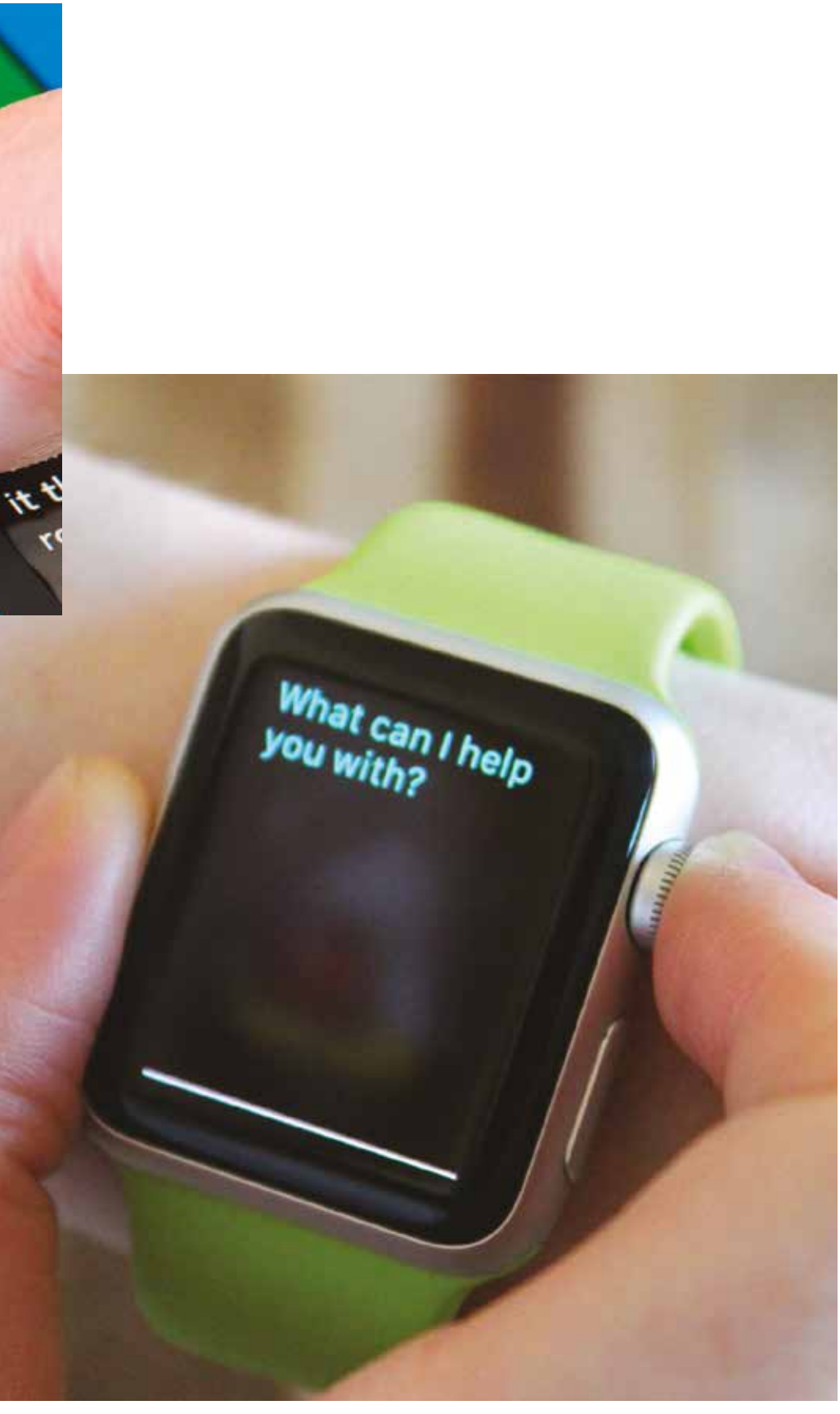
machines, as feminised labour becomes technologised labour. Many of us are at home with the idea of women in these kinds of roles, and as such think nothing of it when we encounter technological interfaces that are clearly coded as female. But it is important to remember that the presence of these feminine machine voices – their proliferation to the point of near cultural invisibility – was never a foregone conclusion.

In fact, when we look back to the earliest moments in the development of these technologies, we encounter very different ideas about how best to programme them. The company behind the original Siri app, for example, seriously debated the possibility of a gender-neutral voice, whilst Apple's early visions of knowledge navigation systems sounded very different from the digital assistants we know today. In a work of speculative corporate advertising from the late 80s, for example, Apple's knowledge navigator is given a male voice and avatar. The advert, which looks forward to 2009 in order to imagine the intelligent assistant of the future, shows this technology in the hands of an eminent white male professor in an expansive, mahogany-clad office. This professionalised version of the digital assistant acts as a research assistant, an academic librarian, and an information manager, rather than as a personal secretary. The avatar even features that classic signifier of nerdy expertise, the bow tie. This masculinised software is shown performing some clerical and organisational tasks (giving the professor phone messages from his students and his mother, locating old files, managing his diary and so on), but the shift in emphasis between this vision of a twenty-first century workplace technology and today's more multi-modal knowledge navigators is clear.

Whilst Siri, Cortana, and GoogleNow are marketed as tools for both personal organisation and interpersonal connection (reminding users to call their spouses, sending birthday messages, helping users to identify people they know in the street), the 1987 Apple Knowledge Navigator is flagged up as a protective *barrier* between the male professor and the domestic sphere. Indeed, whilst the digital assistant in the advert has both a masculine voice and a male visage, we encounter an early spectre of the contemporary re-gendered Siri lurking in the form of the disembodied mother. This is the lone voice from the forgotten space of social reproduction, which surfaces in the form of messages and reminders about a surprise family birthday party. Fortunately, the knowledge navigator manages to catch and screen these messages, better allowing the male professional to repeatedly ignore them and get on with the work of being a genius. The mother, and all that is associated with her, remains literally obscene (in the sense of being off-the-scene) for the duration of the commercial. What is clear, though, is the continuing affinity between woman and machine here. The professor's mother – in calling to issue reminders, prompts, and guidance – performs functions aligned with those of the high tech Apple software. Yet, whilst proto-Siri is an example of human mastery over knowledge, the mother is little more than an annoyance to be managed. When the knowledge navigator issues a reminder, it is akin to useful work; when your mother issues a reminder, it is bothersome nagging. It would appear that this kind of reproductive labour remains largely invisible until the machine takes it over.

So, this is one under-recognised element of Siri's genealogy; the phone call making mother (just as much as the workplace secretary and the customer service bot) is part of the digital assistant mix. But to recognise this raises a number of issues; first of all, it is important to emphasise that the boundaries between the spheres of production and reproduction are not at all clear-cut. As materialist feminists have long been



aware, the traditional care giving activities associated with domesticity are part and parcel of preparing the body and mind of the wage labourer for work. This may extend to things like personal organisation, moral support, and even preparing documents.

And conversely, the duties that have fallen to the traditional secretary bleed into those associated with social reproduction. The personal assistant frequently finds him- or herself conducting a form of corporate care work, including providing for the sustenance of the body in the form of teas, coffees and lunch orders, as well as making dentists' appointments, picking up dry cleaning, paying personal bills, and so on.

It is interesting to note, then, that many of the ads for digital assistants show them performing the kind of personal services commonly associated with the hybridised figure of the 'office wife' – work at the impossible-to-maintain (non)boundary between production and social reproduction, waged labour and care work. We see the technologies flagging up birthdays and anniversaries, for example, or reminding the male user to buy flowers. Emotional labour that was once, amongst a certain class of the privileged, outsourced to both secretaries and wives is now outsourced to electronic devices. Some, limited elements of reproductive labour have evidently been technologised – certain aspects of certain activities can, under our supervision and with our input, be partially delegated to our devices. As Robin James remarks, this 'isn't a new phenomenon so much as a reconfiguration of an ongoing practice: […] our smartphones wake us up, not our moms, just as emails accomplish a lot of the relational work (scheduling, reminding, checking in, etc.) conventionally performed by women' (James, 2013: n.p.). Again, this stresses that the home has never been sacrosanct: it has always been a workplace for many, but the work performed there has been largely invisible.

Gender, technology, and the (in)visibility of work

This move toward outsourcing some kinds of reproductive labour to machines rather than women is marked by important cultural shifts – shifts which relate to the framing of so-called 'women's work', and the various obstacles that are thrown up by the social imaginary in terms of recognising reproductive labour as effortful, purposive, and valuable. Work performed by gendered subjects in the home (particularly within cultural fantasies of a heteronormative family dynamic) has been naturalised; it has historically been framed as an extension of naturally occurring feminine (and often, quite specifically, maternal) predilections, affects, modes of intimacy, personal preferences and so on. Indeed, this is something that Kathi Weeks picks up on when she declares that 'To the extent that the expression of emotion has been not only feminised but in the process also naturalised – as a spontaneous eruption rather than cultivated display – the skills involved in managing it successfully remain difficult to grasp' (Weeks, 2011: 240). That is to say, these skills remain invisible as work, both within the home and within the waged work place.

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Although emotion work lends itself particularly easily to the cultural erasure of effort, we can see the same processes in operation when it comes to things like housework as well – the idea of a feminine tendency to be house proud and to have exacting standards, for example, takes what Angela Davis calls the 'obstinate primitiveness of household labour' (Davis, 1983: 223) and repackages it as a simple matter of 'a woman's touch'. The functions and activities performed by electronic devices are far less available for naturalisation, and as such their usefulness and necessity are less likely to be obscured via the same means. Hence, in some of the examples we've looked at, machines become more visible as workers than women. Whilst it may be somewhat galling to be confronted with the fact that the activities of Siri, Cortana, et al are more readily recognisable as work than similar activities performed by feminised human subjects, this may still afford interesting opportunities in terms of the progressive de-gendering of work. In Katy Waldman's words, 'As shiny, trendy devices absorb some of the jobs we once delegated to lower-status *humans*, those jobs (still unpaid) have at least begun to shed stigma' (Waldman, 2013: n.p.). As feminised work becomes technologised work, it may come to be less culturally denigrated, and therefore more available to be taken up by different kinds of subjects.

Those with choice and cultural capital, in other words, may be more willing to perform this labour if it is associated with culturally valued objects rather than with socially disparaged subjects – an extremely partial victory, given that it assumes that the only way to dislodge stigma is to remove any associations with embodied women and those related to their sex class. This whole phenomenon is less a matter of 'I'd rather be a cyborg than a goddess' and more a case of 'I'd rather be an iPhone than a woman'.

Programmable genders

It is perhaps in terms of destabilising some of the assumptions at the heart of 'the feminisation of labour' that the automation of clerical, service, and care work can be considered most interesting or productive. This process of automation arguably troubles the idea of an innately feminine skill set or perceived causal links between particular bodies and particular social roles or attributes. It is clear that many of today's apps and automated systems draw upon pre-existing gendered assumptions, programmed as they are to be girlish avatars or feminised disembodied voices. They exploit our assumptions about feminised labour and our existing relationship to socially gendered caring and service behaviours, tapping into those elements of femininity that have historically enabled care-giving or service-providing subjects to better undertake specific obligations, activities, and tasks; so far, so unhelpful from a feminist point of view. However, the technological uptake of femininity and the automation of what was once coded as women's work can also be seen to denaturalise those gendered, socially expedient, and culturally programmed caring behaviours that are frequently brought under the banner of femininity.

In acknowledging that our devices or apps have to be actively programmed in order to mimic specific gendered behaviours – in recognising that their feminisation is neither neutral nor inevitable but the by-product of specific histories – we are invited to rethink the ways in which non-machinic gender might itself operate as an artificial and culturally programmed construct. When technologies 'do gender' it is obviously not natural, but is instead visible as the product of deliberate choices about how best to relate, assist, or persuade the imagined technology user. As we have seen, femininity (understood here as a particular set of gendered expectations, associations, and behavioural norms) often plays a part in the developer's toolkit. This foregrounds the idea of femininity as an admittedly problematic label for a mobile set of capacities, techniques or strategies, potentially available to machine and variously gendered humans alike, thereby undermining the idea of feminine behaviours as the product of an innately sexed skill set or as a spontaneous eruption. Contemporary apps exploit ideas about gender in their attempt to offer an effective service to users. With this in mind, then, can we position femininity as a technology that our technologies now put to use?

This is an extract from a longer article entitled *Technically female: Women, machines and hyperemployment*, which originally appeared in the May 2016 issue of *Salvage* magazine. It is reprinted with permission.

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Keywords

Gender, technology, work, social reproduction