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# The robotic touch: Why there is no good reason to prefer human nurses to carebots

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**ABSTRACT:** An elderly patient in a care home only wants human nurses to provide her care – not robots. If she selected her carers based on skin colour, it would be seen as racist and morally objectionable, but is choosing a human nurse instead of a robot also morally objectionable and speciesist? A plausible response is that it is not, because humans provide a better standard of care than robots do, making such a choice justifiable. In this paper, I show why this response is incorrect, because robots can theoretically care as well as human nurses can. I differentiate between practical caring and emotional caring, and I argue that robots can match the standard of practical care given by human nurses, and they can simulate emotional care. There is growing evidence that people respond positively to robotic creatures and carebots, and AI software is apt to emotionally support patients in spite of the machine’s own lack of emotions. I make the case that the *appearance* of emotional care is sufficient, and need not be linked to emotional states within the robot. After all, human nurses undoubtedly ‘fake’ emotional care and compassion sometimes, yet their patients still feel adequately cared for. I show that it is a mistake to claim that ‘the human touch’ is in itself a contributor to a higher standard of care; ‘the robotic touch’ will suffice. Nevertheless, it is not speciesist to favour human nurses over carebots, because carebots do not (currently) suffer as the result of such a choice.

*In the residential care home where Maude lives, there are some human nurses and some carebots. Maude only wants human nurses to provide her care.*

**I**F MAUDE ONLY WANTED white nurses to provide her care purely on the basis of their skin colour, we would claim she was being racist – so when she chooses a human nurse over a carebot purely on the basis of species membership<sup>1</sup>, why do we not claim she is being speciesist? Two plausible responses are:

1. Humans provide a better standard of care than robots do (making the choice of a human nurse over a carebot justifiable).
2. Robots do not have moral standing because they cannot suffer, and therefore there is nothing morally problematic about choosing a human over a robot.<sup>2</sup>

I address the first of these responses and demonstrate that it is unfounded, because some robots are capable of providing a standard of care which is equal to or higher than that provided by human nurses. I further show that it is a mistake to claim that ‘the human touch’ is valuable simply because it comes from a human being.

## 1 Introduction

The World Health Organization predicts that by 2050, 22% of the world's population will be over 60, and people over 60 are expected to outnumber children under 5 during the year 2020 (WHO 2018). As the proportion of older people increases, there will be a proportional decrease in the number of people of working age. This demographic shift, coupled with the increased demand for nurses and carers for elderly people, is predicted to create a care staffing shortfall in the US of around 150,000 by 2030, and 350,000 by 2040 (Miller 2017). The US currently has more than 10 million people who are employed as nurses or carers (U.S. Bureau of Labor Statistics 2019a, 2019b, 2019c, 2019d, 2019e, 2019f), but far more will be required in order to care for all the elderly people in the coming decades. In Japan – a country where more than a quarter of citizens are over 65 – carebots are filling this staffing shortfall (Siripala 2018, Matuszek 2017). Carebots’ range of abilities is expanding along with their acceptance in care homes, but some philosophers have expressed concerns that outsourcing elder care to robots might be morally problematic. A seemingly plausible objection is the claim that the care which a patient receives from a robot is inferior to that provided by a human. Philosophers who argue this suggest that ‘the human touch’ is inherently valuable, and so

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<sup>1</sup> Although robots are not a species, the term ‘speciesism’ seems apt if humans are being chosen because of their species, and robots are being rejected because they are not members of the human species.

<sup>2</sup> By contrast, an African-American person *can* suffer and *can* provide a standard of care equal to a white nurse, meaning that when a nurse is chosen solely because she is white, this is an instance of racism which can cause the African-American nurse to suffer.

depriving people of human contact is problematic or cruel (Sparrow 2002, Sparrow and Sparrow 2006, Sharkey and Sharkey 2012, Sharkey 2014).

There are two possible grounds for the claim that ‘the human touch’ from a nurse is more valuable than ‘the robotic touch’ from a carebot:

- (i) Humans are better at providing care because humans have better skills and abilities than robots do.
- (ii) Humans are better at providing care merely in virtue of their humanity.

I address both of these grounds in turn. My argument will progress as follows: In section 2 I address claim (i), that humans are better than robots at providing care because humans have better skills and abilities. I distinguish between different types of care: practical care and emotional care, and I show that various robots today can do the former (or aspects of the former), and others can fairly convincingly simulate the latter. In section 2.2 I compare claims (i) and (ii), and discuss whether it is *homo sapiens* DNA or human behaviour which might ground the claim that ‘the human touch’ is valuable. In section 3 I discuss whether it would be speciesist for a patient to favour a human nurse over a carebot which cares equally well, simply based on species (non-)membership. I maintain that even though such a choice would be unjustified, it would not be speciesist because today’s robots cannot suffer as a result of such a choice. I conclude that favouring human nurses over carebots is unfounded, but not speciesist.

### 1.1 Terminology

The term ‘speciesism’ will be defined and discussed in section 3; here I outline what I mean by some other terminology which I will be using in this paper. I will use the terms ‘patient’ and ‘nurse’ to refer only to humans. The ‘patients’ in question are taken to be elderly adults (although my argument could also apply to younger adults) of normal mental ability who are resident in aged care facilities, hospitals or similar care institutions. I will use the term ‘nurses’ to refer collectively to human carers such as patient care assistants, health aides, personal care aides, nursing assistants, nurses, and other people who are employed in caring roles for the sick or elderly, not including doctors. This includes people who perform roles such as feeding patients; providing some medical care; and helping patients to move about, get dressed, bathe or use the bathroom.

The term ‘robot’ can be loosely applied to many mechanical devices. A robot may refer to a complex machine with moving parts which are perhaps limb-like, and some programming which enables it to interact with its environment. Pieces of interactive software, avatars, and virtual agents are not robots unless they have some physical manifestation. The robots I refer to are taken to have some sort of AI component, rendering them capable of learning and exhibiting adaptive behaviour, but they may not be considered ‘intelligent’ by all definitions, and are not sentient persons. They need not necessarily take humanoid form, although a humanoid shape and anthropomorphic ‘face’ are likely to assist in our feelings of warmth towards a robot (Blow et al. 2006). A paradigm example of such a robot would be something

like the Care-o-bot (Fraunhofer-Gesellschaft 2018), which is 158cm tall with a loosely humanoid shape, dextrous arms with grasping hands, and a screen which can display a 'face'. It may seem reasonable to define a carebot as a robot which cares for people, however this would beg the question: it would be dialectically problematic for me to define a carebot as a robot which cares, and then go on to argue that the aforementioned carebot does indeed care.<sup>3</sup> To avoid such problems, I define 'carebot' as a robot which is *designed* to perform (and *attempts* to perform) at least some of the caring functions traditionally performed by nurses (what 'care' consists of is discussed in detail in section 2.1). Whether it *actually accomplishes* the task of caring is established below.

My argument does not apply equally to all robots because robots vary in their capacities and abilities; some are mere toys costing only a few dollars, while others are highly sophisticated pieces of technology which have taken millions of hours (and millions of dollars) to develop. The robots which I refer to in the paper that follows are the highly sophisticated type with multiple abilities. I attempt to show that it is possible for *some* carebots to provide care which rivals that given by a human nurse. Carebots are typically designed to meet the needs of a particular group of people, rather than everyone. Robots could potentially be used to care for babies and young children, people in hospital, elderly people, people with learning disabilities, mental illnesses, or physical disabilities. My concern here is with elderly people in aged care facilities, and the carebots which they may be served by; different arguments may be required for other groups of people needing care.

It is worth noting that there may be legitimate pragmatic reasons for an institution to employ human nurses rather than purchase a carebot, such as cost or availability. At the moment, there is no single robot which can do all the things which a human nurse is able to do – and when one *is* developed, it may be far more expensive to purchase than a human nurse's annual salary.<sup>4</sup> This might mean that a care institution chooses human nurses instead of carebots for financial reasons; I do not address these institutional concerns herein. Rather, I approach the issue from the patient's point of view, arguing that when both human nurses and carebots are available, there will be no good reason for a patient to choose a human nurse over a carebot, and it is flawed to claim that 'the human touch' is a necessary feature of care.

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<sup>3</sup> This question-begging problem is implicit in the work of Meacham and Studley, who write "we ask if care robots can care" (2017: 97) – they later conclude, tautologically, that care robots *can* care.

<sup>4</sup> Robots may be more expensive than a human worker at the point of purchase, but because robots do not require ongoing salaries, they are cheaper over the long term. For example, if a carebot costs \$150,000 and a nurse's annual salary is \$50,000, although the carebot presents a large initial outlay, the hospital would be making an overall saving after three years had passed.

## 2 Do robots care as well as humans do?

In many ways, robots are better workers than humans are: they don't turn up late for work, they can be more intelligent, they aren't narcissistic, they don't get distracted or bored, they never tire (although they may need to recharge), and they are exceptionally reliable, not to mention the long-term financial savings which robots offer when compared to human workers (Young 2015, Schulz 2013, Waugh 2015). Since the industrial revolution humans have been replacing themselves with machines which can perform tasks more quickly, accurately and for longer durations than human workers possibly could. Robots continue to replace today's factory workers, and clerical jobs are now under threat too: predictions regarding how many of us will be replaced by robots by 2030 range from 20 million to 800 million worldwide (Connley 2017, BBC News 2019). But although nursing requires intelligence, diligence and accuracy (features which robots have in abundance), it can be said that being a nurse involves more than these traits alone: it involves *caring* – an ability which some philosophers suggest a robot (even a carebot) is incapable of. However, as I will show below, robots can provide a very high standard of care to patients, and the claim that nursing requires emotional input from the carer is mistaken.

First, I shall distinguish between two different meanings of the word 'care':

- Emotional care – a feeling of compassion towards someone
- Practical care – performing necessary tasks to look after someone

What I call 'emotional care' is an affective state which involves having a feeling of compassion or benevolence, and an interest in the wellbeing of another person; this might be articulated as 'caring about' someone (Cronqvist et al. 2004: 68). A strong sense of emotional care could even be called love. When we care for someone in the emotional sense, it roughly means that we want what is good for them – longevity, health, happiness, success and so on. Emotional care may involve mental concerns or worries about someone's welfare (Noddings 2003: 34). This emotional aspect of caring is a feeling which is internal and private; it need not be accompanied by any particular actions – I can emotionally care about my crush from afar without ever acting upon this feeling. By contrast, what I call 'practical care' involves physical acts such as providing resources or assistance to promote the thriving of a person; this might be referred to as 'caregiving', and it involves the practical completion of a necessary set of tasks (Cronqvist et al. 2004: 68). When we care for someone in the practical sense it means that we are trying to ensure the survival and flourishing of the subject, but not necessarily that we have any emotions or compassion towards them.

Saying "I care for x" is ambiguous because it is not always clear to which type of care we are referring. So I may say: "I care for my sister" to mean that I want good things for my sister, that I am concerned about her life, her wellbeing, and what happens to her, but I do not look after her because she is a grown woman who can look after herself. Thus I care emotionally but not practically for my sister. This differs from when I say: "I care for my son's pet tarantula". By this I mean that I do

what is necessary to look after the tarantula – giving it food, cleaning its tank and suchlike – but I do not have any compassionate feelings towards it, and I would not be bothered if it died. Thus I care practically but not emotionally for the tarantula. Of course, the two meanings of ‘care’ often come in tandem such that when I say “I care for my son” I mean it in *both* senses: I have a genuine concern for his continued wellbeing (emotional care) *and* I do what is necessary to look after him (practical care). The two types of care are causally linked in the case of my son: I practically care for him *because* I emotionally care for him – my benevolent feelings towards him are what cause me to look after him and provide for him. Nonetheless, even though the two types of care *can* be linked in this way, they are in fact distinct and can occur separately – as shown by the examples of my sister and the tarantula.

It is surprising that some of the prominent philosophical literature concerning robots and elder care (Sharkey 2014, Sharkey and Sharkey 2012, Sparrow and Sparrow 2006, Meacham and Studley 2017) neglects to adequately distinguish between these two meanings of the word ‘care’. The distinction between practical and emotional care is, however, present elsewhere in some of the nursing literature, particularly in discussion of the interplay between the feelings of compassion for a patient and the act of practical caregiving (Nelson and Gordon 2006: 4, Cronqvist et al. 2004: 68, Freter 2018: 38). The lack of clarity among philosophers discussing carebots can lead to confusion and disagreement about whether or not a robot can care, because it is not always clear whether writers mean practical care or emotional care. For example, some commentators claim that a robot cannot ‘really’ care for a patient because it has no emotions or compassionate feelings towards anyone (see Hotzak 2015, Tuisku et al. 2019, Sparrow and Sparrow 2006, Sparrow 2002, Sharkey 2014, Sharkey and Sharkey 2012). It would seem that such writers are focusing on the emotional meaning of ‘care’, suggesting that it is essential, and practical assistance without any emotional input it is not a ‘real’ or ‘genuine’ act of care. Such a claim is common but unfounded, and is highlighted by Meacham and Studley:

We think that this objection [to carebots] is grounded on a problematic insistence that in order to be “real”, care must be linked to reciprocal internal cognitive or affective states (emotions) [within the carer].  
(Meacham and Studley 2017: 98)

As Meacham and Studley point out, there is no reason to think that care is only ‘real’ or ‘genuine’ when it is accompanied by a particular emotional state. They provide a convincing argument in favour of carebots, suggesting that if a carebot can behave in a way which humans interpret as caring, then its (lack of) emotional state is irrelevant (Meacham and Studley 2017: 98–99). The question I shall now address is whether a carebot really *can* provide care as effectively as a human nurse can, or whether its lack of emotions is an insurmountable problem which will leave the elderly people of the future in institutions where they are not properly cared for, and are harmed by the lack of ‘the human touch’ in their lives.

## 2.1 Carebots can practically care, and simulate emotional care

Many robots can perform the practical care tasks which nurses currently provide, such as bathing patients<sup>5</sup>, fetching and carrying items<sup>6</sup>, feeding patients<sup>7</sup>, cleaning patients' bed sheets<sup>8</sup>, helping patients to walk<sup>9</sup>, and more. Some machines even surpass human capabilities: for example, they can lift a patient more safely than a human can<sup>10</sup>, give injections more accurately than a human can<sup>11</sup>, monitor patients' vital signs<sup>12</sup>, and diagnose conditions with (slightly) greater success than a human doctor can<sup>13</sup>. Add to this the fact that carebots are more consistent and diligent than humans because they never tire or become distracted (though they may require maintenance and recharging), and it seems clear that carebots can provide practical care to patients at a level which rivals – and sometimes surpasses – that provided by humans.

It is true that several of the above technologies currently perform only a single function, but we can expect this to change as technological convergence takes place. Technological convergence is a process whereby previously separate technologies are incorporated into a single device. This has occurred with the cell phone, which can now function as a camera, sat nav, games console, calculator, and mini television in addition to making phone calls. It is reasonable to expect that over the coming years, the currently separate robotic systems which can bathe a patient, carry items, give injections and so on, will be incorporated into a single multifunctional carebot which can rival human nurses in its practical caring skills. We are already witnessing this technological convergence to some extent in care

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<sup>5</sup> Researchers at Georgia Institute of Technology have developed a bath-bot (Quick 2010).

<sup>6</sup> Numerous carebots have been developed to carry items, including the Care-o-bot (Fraunhofer-Gesellschaft 2018), and the EL-E (ScienceDaily 2008).

<sup>7</sup> Secom's robotic MySpoon will feed patients (Secom 2019).

<sup>8</sup> Sheet-cleaning robots such as the Cleansebot (Impressive Things 2018) and Bed Roomba (AOL 2019) are commercially available, and could be used to clean or sterilise hospital bed sheets.

<sup>9</sup> The Stride Management Assist (Honda 2019a) and the Hybrid Assistive Limb (HAL) (Cyberdyne 2019) are both designed to support patients while they walk and increase their strength. Many other robotic devices provide the support that a walking frame could otherwise provide.

<sup>10</sup> The bear-like Riba robot can safely lift patients weighing up to 80kg (Riken 2019).

<sup>11</sup> A robotic device which gives injections into microscopic blood vessels in the eyeball has been developed by researchers at KU Leuven, a university in Belgium (see Moon 2017).

<sup>12</sup> The CareBot (Gecko Systems 2019) monitors vital signs and provides telecare.

<sup>13</sup> Babylon Health's AI doctor has been shown to accurately diagnose patients over 85% of the time – compared to human doctors' average of 83% accuracy (Babylon Health 2018). AI also outperforms radiographers in diagnosing breast cancer (Walsh 2020).

robotics: several multi-functional carebots currently exist, such as the CareBot (Gecko Systems 2019), Care-o-bot (Fraunhofer-Gesellschaft 2018), and Stevie II (Trinity College Dublin 2019), and each new version incorporates yet more capabilities. For example, the CareBot will monitor the patient's vital signs, facilitate video calls with family and friends, remind patients to take medication or do other things, alert them to visitors, have conversations with the patient, tell anecdotes, play music, detect patient falls and inactivity, respond to calls for help, and alert emergency services when needed (Gecko Systems 2019). These functions were previously only available through separate devices, and it is reasonable to think that the carebots of the near future will be able to do more and more of the practical caregiving tasks which nurses currently perform. Robots are thus on the cusp of being able to provide practical care which rivals or surpasses that given by human nurses.

Nonetheless, even when robots match or surpass human nurses in their practical caring abilities, some people still maintain that being cared for by a robot is inferior to being cared for by a human nurse because robots lack the ability to *emotionally* care for their patients. Some philosophers suggest that we should proceed with caution into the carebot revolution because using carebots might mean that patients lose out on the emotional care which they currently get from human nurses (Sharkey 2014, Sharkey and Sharkey 2012, Sparrow and Sparrow 2006, Elder 2015). Emotional care does seem important: feeling as though another person has compassionate feelings towards you is comforting – particularly in a nurse-patient relationship (Noddings 2003: 42–44) and it is true that today's robots are emotionless. However, it is evident that we *can* feel comforted by and affectionate towards emotionless robots: we *do* form (albeit unrequited) bonds with them. Numerous robots already exist which are designed for emotionally interacting with people – these typically come in the form of something animal-like, or loosely humanoid. Animal-like examples include Paro, a robotic fur-covered seal (PARO Robots USA 2014); AIBO, a robotic dog (Sony 2018); and NearMe, a robotic fur-covered cat made by Omron (Megadroid.com 2005). The robotic animals display behaviours as if they enjoy being petted and interacted with; people find this endearing and relaxing, and some people develop genuine feelings of affection towards these robotic creatures. The robotic seal Paro, for example, has been shown to improve the mood and wellbeing of elderly people who interact with it (Wada et al. 2002). Humanoid social robots are typically capable of verbal conversation at a reasonably sophisticated level, and this is improving over time. Examples of humanoid social robots include Pepper, which can recognise particular people, and converse in 15 languages (Softbank Robotics 2018), and Asimo, which can understand human behaviour and interact with us accordingly (Honda 2019b).

A critic might think that a conversation with a robot is a poor substitute for real human interaction; they might assume that AI software is not advanced enough to compete with real human beings when it comes to emotional matters. However,



such an assumption would be wrong. AI software<sup>14</sup> has already been developed and utilised to help people suffering from depression, stress, anxiety, and other mental health conditions by engaging them in daily chats and tracking their moods (Woebot 2019, Fitzpatrick, Darcy, and Vierhile 2017, X2AI 2019, Fulmer et al. 2018). Other AI software has successfully provided couples' relationship counselling (Utami and Bickmore 2019), and helped to emotionally support and counsel Syrian refugees (Romeo 2016, Molteni 2017). In fact, it has been shown that people are *more* open and honest with AI software than they are with a real human counsellor. In a study conducted by Lucas et al (2014), 239 participants were told that their avatar counsellor was controlled either by a human, or by AI (in fact, *all* were controlled by AI). The results showed that people were significantly more willing to 'open up' and discuss personal or embarrassing issues when they thought they were talking to an AI-controlled counsellor rather than a human being (Lucas et al. 2014). Clearly, people can and do feel comforted by machines which do not reciprocate their feelings – this is because the machines give the *impression* of emotional care, compassion or friendliness.

Carebots which utilise software such as that described above would thus be simulating emotional care, but not genuinely feeling any emotions; this simulation would be, from the patient's point of view, comparable to the emotional care provided by a human nurse. Robots which simulate emotional behaviour are nothing new (although they are becoming increasingly sophisticated and convincing as technology progresses). But those who argue that a robot cannot replace a human nurse suggest that merely *simulating* emotional care is markedly different from *actually* emotionally caring about a patient. Indeed, I do not claim that when a robot convincingly displays emotional caring behaviour, that it *actually* possesses caring or benevolent emotions. Recall that emotional care involves feeling particular emotions such as compassion towards a patient, and so emotions are a necessary feature of bona fide emotional care. Roboticians have not yet succeeded in creating a robot with emotions, but they have succeeded in creating some robots which can convincingly simulate emotions. However, some philosophers have expressed concerns that such a simulation of emotional care is inferior to the genuine emotional care offered by humans, and even deceptive (Turkle et al. 2006: 360, Sparrow 2002, Sparrow and Sparrow 2006). The concern is that patients may believe they have a genuine, emotional and reciprocal relationship with a robotic device, when in truth, the relationship is wholly one-sided. This is because a robot cannot *really* emotionally care, so any emotionally-caring-like behaviour is a form of deception, which is allegedly morally troubling. (Indeed, Sparrow even claims that it is "morally deplorable" (2002: 306) when a human cares for a fur-covered robotic pet.) I agree that any emotion felt towards today's robotic devices will not be reciprocated, but I maintain that the mere simulation of emotional care is sufficient for being a good nurse or carer. Meacham and Studley (2017) rightly argue that a robot can adequately care for humans, not because it has emotions (it

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<sup>14</sup> Most of the examples given here do not have a robotic manifestation, or what they do have is very basic (e.g. a moving computer screen, or a cartoon-like robotic 'head' which sits on the table).

doesn't), but rather because of the way it behaves – for we use the same criterion (*viz.* behaviour) for judging human nurses.

Although we might have sentimental notions that all nurses emotionally care about all of their patients all of the time, this is unlikely to be the case. There will undoubtedly be some nurses who have no emotional warmth towards some or all of their patients (they may even actively despise their patients!) but if the nurses are able to provide good practical care and effectively *simulate* emotional care, their patients will be obliviously satisfied. It is possible for nurses – like anyone – to give the impression of emotional care or compassion when in fact they feel no such thing. Consider two human nurses who provide identical levels of practical care for their patients:

- (a) Nurse Anna looks after the needs of her patients because she is friendly, warm-hearted, compassionate, and enjoys enhancing her patients' lives. She genuinely emotionally cares about her patients.
- (b) Nurse Briony looks after the needs of her patients because she has rent and bills to pay, and nursing brings in money. She does not emotionally care about her patients.

Suppose, however, that Briony is able to convincingly simulate emotional care towards her patients to such an extent that she seems *just* as warm-hearted and emotionally caring as Anna does. If we had a God's eye view or an insight into the private mental states of these nurses, we might be inclined to prefer Anna to be our nurse because of her reason for providing practical care, *viz.* because she cares emotionally. After all, Briony has no emotional interest in her patients – she is just 'going through the motions'. But in reality, assuming that patients are not mind-readers, a patient would have no good reason for preferring Anna to Briony, since they both deliver the same levels of practical care, and both appear to emotionally care to the same extent; to the patient on the receiving end, Briony's care and Anna's care are indistinguishable. In our everyday lives, we experience other adults, young children and even animals as being emotionally caring without having access to their private mental states (Meacham and Studley 2017: 98). If any patient believes that Briony emotionally cares for him, he is mistaken, but it is not clear that this is a problematic mistake to make – indeed, we might think that Briony's 'deception' is beneficial to the patient's wellbeing and recovery. We would not typically call a patient 'delusional' for feeling cared for by Briony, so it seems odd to make the same claim about a patient who feels cared for by a carebot (yet Sparrow and Sparrow (2006: 155–156) *have* made such a claim about patient responses to carebots). A carebot without any emotional component is in a similar position to Briony – it provides practical care to a high standard, and convincingly simulates emotional care for patients. So if we would accept that Briony's care (both the practical and emotional aspects) seems as good as Anna's to the patients on the receiving end, then we should accept that a robot's care can be as good as a human's.

An opponent might object at this point, saying that it is at least *possible* that Briony could form an emotional bond with her patients at times, even if money is her priority, whereas no such possibility exists with a carebot. In other words, a human will be more convincing at simulating emotional care because there is a possibility that the emotional care *could* be genuine, whereas it certainly cannot be genuine in the carebot.

Consider then, the case of another individual – Cassie – who has a severe neurological condition which makes it impossible for her to feel any emotions at all. Cassie is, however, through years of practice, quite capable of convincingly simulating emotions. She laughs when someone tells a joke, appears concerned when someone falls over, appears loving towards her family and friends, and appears to be offended when someone is rude to her. To all observers, Cassie appears to be a normally-functioning human capable of emotions (but in fact she has no emotions). Now suppose that Cassie decides to become a nurse: there is no reason to suppose that Cassie could not complete the requisite training and qualifications, and get a job as a nurse. Nurse Cassie is little different from a carebot: both display all outward signs of emotional care, but in fact have no correlating emotion or compassion of any kind. In terms of emotion, Nurse Cassie has far more in common with a carebot than she does with Nurse Anna and even Nurse Briony.

Now, let us imagine that there is a patient in the hospital where nurses Anna, Briony, Cassie and the carebot all work, and the patient has this experience:

- All four of them provide practical care to the same level
- All four of them give the appearance of equal levels of emotional care

To the patient, all outward signs of caring are absolutely equal among the nurses and the carebot; the patient has identical experiences of being cared for (practically and emotionally) by each one of them. If care is only ‘real’ when it is accompanied by benevolent emotions then this would preclude carebots from caring even if they perform identically to their human nurse counterparts. However, if one really wishes to exclude carebots from the category of entities which provide good care for patients, then they should also exclude Cassie and Briony, since they feel no emotional benevolence towards patients either. As discussed above, it would not be surprising to find that all human nurses ‘fake it’ from time to time (they appear to emotionally care for their patients when in fact they are indifferent to them or dislike them), meaning that these nurses would also need to be excluded from the category of entities who ‘really’ care – at least, on the occasions when they are ‘faking it’. This seems too extreme. Besides, short of constant and intrusive neurophysiological scans of human nurses (they might lie if we just *ask* them if they emotionally care), we have no way of knowing how frequently nurses are merely pretending to emotionally care.

A critic might suggest that a salient difference between nurses who ‘fake’ their emotional care (such as Briony) and carebots is that humans in general have the capacity to emotionally care, whereas robots do not. However, if such critics object to carebots on the grounds that they are deceptive when they appear to emotionally

care (Turkle et al. 2006: 360, Sparrow 2002, Sparrow and Sparrow 2006), then they should object to these human nurses to a far greater extent. After all, if we are more convinced by Briony's pretence than we are by a carebot (because we know that Briony, being human, has the capacity to emotionally care), then Briony is more deceptive than a carebot. If deception is wrong or harmful then Briony (and Cassie, and all nurses who 'fake it') presents more cause for concern than a carebot does – yet there does not seem to be the same level of scaremongering or condemnation of nurses such as Briony as there is of carebots.

It seems then that the main reason why critics have different attitudes towards carebots than they do towards human nurses who 'fake it' is simply down to physical composition: human nurses are organic, and carebots are inorganic. That alone may lead people to (unjustifiably) prefer human nurses to carebots – but that sort of attitude could be a prelude to speciesism. Over the coming years, the attitude of preferring organic beings to inorganic machines is likely to disintegrate among many people, as our interaction with carebots and other types of robot increases. We may come to view robots as friends with whom we can develop long-lasting relationships (Danaher 2019, Mulvey 2018, Rainey 2016). The more that carebots effectively simulate emotional care towards us, the less of an illusion it will seem to us – this effect will be especially heightened in cases where the carebot is very lifelike in its looks. In the near future, when carebots can provide a level of care which matches a human nurse, and simulate emotional care convincingly, we will have no good reason to prefer a human nurse to a carebot, because to the patients on the receiving end, there will be little difference between the two.

It is interesting to note that codes of conduct for medical professionals do not generally stipulate how nurses must *feel* towards their patients, only how they must *behave*. For example, the American Nurses' Association Code of Ethics states that nurses should create an environment of kindness, and treat others with respect (ANA 2015: 4). It states that nurses must adhere to the ethical code of conduct (ibid: 15), maintain an environment which facilitates virtue among nurses (ibid: 23–24), and that nurses must emphasise the importance of qualities such as respect, fairness, and caring (ibid: 35). However, nowhere in the Code of Conduct is it stipulated how nurses must feel, or what emotions they should have towards patients or indeed anything. Further afield, the UK Nurses' Code of Conduct states that nurses must treat people with respect (Nursing and Midwifery Council 2018: 6) and respond compassionately to patients (ibid: 7). Again, there are plentiful stipulations about how nurses must behave, but no mention of how they must feel or what emotions they must experience. The subtext, it seems, is that a good nurse is one who behaves in the predefined ways as laid out in the codes of conduct – but this need not involve having particular feelings towards patients. In other words, *behaving* compassionately is necessary, but *feeling* compassion is not. If this is the case, then nurses such as Briony (who *could* feel emotional care towards her patients, but does not) and Cassie (who is incapable of emotional care) can both be very good nurses so long as they simulate emotional care convincingly. Furthermore, an (emotionless) carebot which can provide practical care and convincingly simulate emotional care is in as good a position as a human nurse,

given that there is no expectation that being a good nurse necessarily requires particular feelings of emotional care. When we receive practical care and the appearance of emotional care from a nurse, these are sufficient for us (as patients) to feel we are being cared for: if it *feels* like a caring environment, then it *is* a caring environment and we are not being deceived (Meacham and Studley 2017: 107). We do not generally demand unequivocal evidence of the inner mental states and emotions of our nurses in order to ascertain whether we as patients are ‘really’ being cared for – we simply accept it at face value. In sum, it does not seem that feelings of warmth, compassion or emotional care for patients are important aspects of being a good nurse (only the *appearance* of them), and since a carebot can theoretically give a convincing simulation of these, there is no good reason for a patient to prefer a human nurse to a carebot.

## 2.2 The robotic touch

It could be suggested that regardless of the quality of care provided by carebots, human nurses have something that carebots do not: they have ‘the human touch’. The hyperbolic arguments which abound in the popular media regarding the ‘horror’ of robots replacing human nurses for the elderly (see Hotzak 2015, Saavedra 2017) are perhaps instances of unnecessary scaremongering. But although such arguments may fall short of speciesism (as I will show below), they do betray an anthropocentric mindset which has been echoed in the philosophical literature (Sharkey and Sharkey 2012, Sharkey 2014, Sparrow and Sparrow 2006, Tuisku et al. 2019). The implication is that ‘the human touch’ is an inherently valuable aspect of care – for example, Sharkey and Sharkey write that depriving the elderly of the social interaction that comes from human contact “is unethical, and even a form of cruelty” (2012: 30). The pertinent question is whether ‘the human touch’ is a valuable aspect of care simply because it comes from someone with *homo sapiens* DNA, or whether it is valuable because of the way in which humans – and human nurses in particular – behave. *Homo sapiens* DNA cannot be sufficient to make an interaction valuable or caring, since not every human interaction is emotionally gratifying; indeed, some are quite the opposite! If there are some people with *homo sapiens* DNA whose ‘human touch’ is ungratifying, unpleasant, or uncaring, then human DNA is not sufficient to make human-human interactions superior to human-carebot interactions.

*Homo sapiens* DNA cannot be a necessary condition for care either, for we do not check the DNA makeup of all those who work as nurses in order to ascertain whether they are in fact caring. It is theoretically possible for some apparently human nurses to have DNA which is sufficiently mutated and distinct from normal human DNA to call them a different species or subspecies, but if this were the case we would be unlikely to shun them simply because of their DNA (see Timmerman 2018: 688–691). Rather, we would probably accept them as caring even if tests showed that their DNA was not altogether human. If we would feel that we can get ‘the human touch’ from a nurse with errant DNA, then ‘the human touch’ has little to do with genetics. We do, after all, readily accept the care, compassion and emotional warmth of non-human animals who are by definition incapable of ‘the

human touch'. So it would seem that human DNA is not a necessary prerequisite for a valuable caring relationship, and it does not make human-human interactions superior to human-carebot interactions.

If it is not human DNA which makes 'the human touch' so valuable, then the other most plausible explanation for our valuing 'the human touch' is human behaviour. If 'the human touch' is valuable simply because of the way in which humans tend to behave towards each other, and carebots can reproduce this with remarkable and convincing precision – as shown above – then a patient would have no good reason for seeking out 'the human touch', when 'the robotic touch' will suffice. In other words, if the human touch is grounded in behavioural attributes, then a robot which can behave in the same way as a caring human nurse does, has a 'touch' which is on a par with a human nurse.

### 3 Robot speciesism

Recall Maude, who lives in a residential care home for the elderly, where there are human nurses and carebots. Let us assume that the white nurses, African-American nurses, and carebots in Maude's institution all provide identical levels of practical care, and identical levels of (apparent) emotional care. Given these stipulations, if Maude favours white nurses over African-American nurses simply because the former has lighter skin than the latter, then it would be reasonable to call her choice racist. But when she favours human nurses over carebots, should we call her choice speciesist?<sup>15</sup> I presently consider this potential case of robot speciesism, but ultimately reject it on the grounds that a carebot does not suffer when a patient such as Maude chooses a human nurse.

Although charges of speciesism have not (yet) been levelled against people such as Maude who prefer human nurses to carebots, this sort of claim is one which may arise in future, so it will be useful to briefly consider its legitimacy here. Speciesism, roughly conceived, involves treating a creature or entity unfairly and less favourably merely because of its species, thus causing it to suffer (Singer 1975, 2009). This is usually utilised as a way of showing that our attitudes towards animals are speciesist – if I think it is permissible to maim and kill species B but not species A even though the two are equally capable of suffering, then this could be called speciesism. When a subject S treats A better than B, this amounts to speciesism iff the following three conditions are met:

- (i) S's choice is unjustified (because A is no better than B)
- (ii) S's choice is based on species membership / lack of membership

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<sup>15</sup> As acknowledged earlier, although carebots (and robots generally) are not a species, if they are treated less favourably because they are not members of the human species, and they suffer as a result, then the use of the term 'speciesism' would be apt, because it would be illegitimate discrimination on the grounds of species (non-)membership.

- (iii) B suffers as a result of S's choice (Singer 2009, 1975, Horta 2010: 244, Ryder 1998: 320)

In section 2 I have attempted to show that a carebot can provide as good a level of care as a human nurse can. If my argument has been successful, then condition (i) has been fulfilled: choosing a human nurse instead of a carebot is unjustified because a human is no better at caring than a carebot is. If patients such as Maude *do* choose a human nurse rather than a carebot, it is likely that their choice is solely or primarily based on species membership – viz. the carebot is not a human being. There are other possible reasons why a patient may make such a choice though, such logistics, availability, or concern about the loss of human jobs. If the reason a patient chooses a human nurse is simply that they do not like robots, then this would be sufficient to meet (ii), just as a patient who chooses a white nurse simply because she does not like African-American people would be racist.

Although I have attempted to show that there is no good reason to choose a human nurse rather than a carebot, even if a patient such as Maude *did* make this unjustified choice (i) and it was based solely on species membership (ii), this would not be a case of speciesism unless condition (iii) was also met. My argument herein does not show that choosing a human nurse over a carebot is an instance of speciesism, because I do not establish that:

- (a) robots are capable of suffering
- (b) choosing a human nurse over a carebot would cause the carebot to suffer

If it were possible for robots to suffer and have emotions, then they would probably (on utilitarian grounds, at least) be worthy of moral consideration. In such a situation, choosing a human nurse over a carebot merely because the former is human could *potentially* cause the carebot to suffer and thus be an instance of speciesism. However, in order to prove a case of robot speciesism, it would need to be robustly established that robots can indeed suffer, and that choosing a human nurse instead of the carebot would cause the carebot to suffer. At present there is insufficient evidence to suggest that robots can suffer (nor that choosing a human nurse would cause such suffering), and so I do not argue herein that it is possible to be speciesist against a robot.

In spite of its not being speciesist, choosing a human nurse instead of a carebot remains *unjustified* when the robot can provide a level of practical care which rivals a human nurse, and it can realistically simulate emotional care. 'The human touch' is only valuable because of the way humans behave, and since carebots will some day be able to behave similarly, 'the human touch' can be replaced by 'the robotic touch' in care homes for the elderly without cause for concern, and a preference for human carers over robotic ones is unfounded.

#### 4 Conclusion

With the rise in the elderly population and the proportional decrease in the number of people of working age, carebots pose a potential solution to the expected staffing shortfall in care homes for the elderly. Some philosophers and the popular media have raised concerns about the implications of carebots, suggesting that patients who have less of ‘the human touch’ are losing out on something valuable. I have attempted to show that with a little technological convergence, carebots can provide practical care at a level which matches or exceeds what a human nurse can provide; furthermore, carebots can convincingly simulate emotional care and provide emotional support for people who need it. Carebots which simulate emotional care towards patients are no worse than human nurses such as Briony and Cassie (and many real-life nurses) who give the appearance of emotionally caring when in fact they do not. Given that we cannot be sure whether human nurses are simulating emotional care or ‘really’ feeling it, we have no reason to prefer a human nurse to a carebot. Indeed, it is possible that people will develop closer bonds with a carebot than they might with a human nurse, given that the carebot is always on duty, and is never irritable, self-involved or negligent. ‘The human touch’ is touted as if there is something inherently valuable about contact with other human beings, but I have shown that it is not being human *per se* which is valuable, but rather, the way human nurses behave. As shown by nursing codes of conduct, it is the behaviour of nurses – rather than their DNA makeup or private mental state – which creates the feeling of being cared for. What is of paramount importance is the patient’s feeling that someone or something cares for them – and when a carebot can provide excellent practical care and simulate emotional care, there will be no good reason to prefer ‘the human touch’ to ‘the robotic touch’.



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