Social Robotics, Elderly Care, and Human Dignity: A Recognition-Theoretical Approach

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Abstract. Attitudes towards robots in elderly care are systematically sceptical: a central worry is that a robot caretaker will rob the elderly of their human contacts. Are such worries justified? Will robotics change something relevant concerning the human dignity of elders? Are some specific robots especially dubious, or can robotics, as a generic technology, change the practices of care so that human dignity would be under threat? In this paper, we ask what human dignity entails in elderly care, and what kinds of threats and possibilities social robotics may bring with it. Earlier studies have approached this question, for example, in light of the capability theories of human life, consistent with human dignity. Our starting point are theories of recognition of persons, which have distinguished three main kinds of needs for recognition: the need for respect as a person, the need to feel esteemed as a contributor to the common good, and the need to be loved.

Keywords. social robots, elderly care, human dignity, recognition theory

1. Introduction

Within ten years, in all care facilities at least two kinds of robots will be circulating: robotic vacuum cleaners from corner to corner and therapy pet robots from lap to lap. Robots designed for cleaning and other routine tasks are widely accepted [1]. Attitudes towards care robots are more negative, however. There is disagreement on whether robots should be utilized in health care. The Special Eurobarometer 382 [2] reported that 18% of the respondents think that robots should be used in health care, while 21% answered "absolutely not!" When asked about the appropriateness of robots in care tasks, acceptance rates were even lower, as 60% of Europeans thought that robots should be banned from child care, elderly care or disabled care. In the recent update of the survey, 51% said they are uncomfortable having service robots and robot companions for the elderly or infirm [3].

Some applications of care robotics seem to be better accepted than others. Hundreds of Paros, therapeutic robot seals, have been adopted in care homes e.g. in Denmark and UK [4], as well as in Finland. Paro reacts to petting in some ways similarly to a real baby seal. It shows that it likes being touched and protests when pushed too hard. The robot learns to recognize its name and accepts being taken care of. Many regard Paro as a

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harmless toy. But it has been shown that cuddling Paro leads to lowered levels of stress hormones in urine as well as increased brain activity (EEG), and makes the demented more active in conversations (e.g. [5-9]). To some extent, these results may have been due to additional human therapists that have been involved when Paro was tested, but probably not entirely. A recent study reports that professional caregivers in nursing homes do find value in using Paro, both instrumental (for the benefit of the elderly residents in the nursing home) and intrinsic, as the caregivers themselves feel positive emotions towards their Paro [10].

Even if Paro seems to be a profitable care robot, some may still remain doubtful about its overall value. What *do* the elderly get from cuddling *robots*? Robots with humanoid appearances raise even more doubts. In Finland, the adoption of Zora, a care application built on the Nao robot platform, invoked letters to the editor (Finnish newspaper *Helsingin Sanomat* 10.10.2015):"The hand of the robot is cold. Can it be safe or pleasant?" and (18.10.2015) "the basic human need to be loved and respected does not disappear with old age or with deteriorating capabilities. Is the robot capable of love?"

The central worry with social robots such as Paro or Zora is that the robot will replace the human caregiver and decrease the amount of human contact for the elderly. Robotics can lead to the deterioration of the quality of life [11]. In what follows, we will address the question of human dignity and the threats and opportunities of social robotics, in this light.

2. Human Dignity

Human dignity has many aspects: it is both an inalienable status and a quality evinced by people who are dignified. Both are something to keep in mind when treating others, behaving oneself, and in distributing means for a living. These perspectives are illustrated in Figure 1, Nursing home residents' concept of dignity [12, p. 199], which nicely captures the three central aspects of dignity in relation to recognition.

Dignity is, in one sense, something that need not be deserved, but all are automatically entitled to. On the other hand, various lifetime achievements are the basis of differential esteem, so that "because of old age" one has more lifetime achievements, than in one's youth. And further, we are all dependent on the care of others, more so in infancy and old age, than in the prime of our lives, but we are dependent animals. These three aspects are reflected in universal respect, particularistic differential esteem, and in the care for the needy and in special relations such as friendship.

In one sense, nothing can challenge human dignity as an inalienable status. Whether or not others respect one's dignity, the status exists – others *ought to* recognize and respect it. In another sense, some people may be especially worthy of appreciation or admiration or "appraisal esteem", because they manage to behave in very dignified ways – they manifest the dignified behaviour in noteworthy ways. The dignity of humans also requires a decent standard of living to maintain humane appearance and to be able to appear in public without shame or denigration.
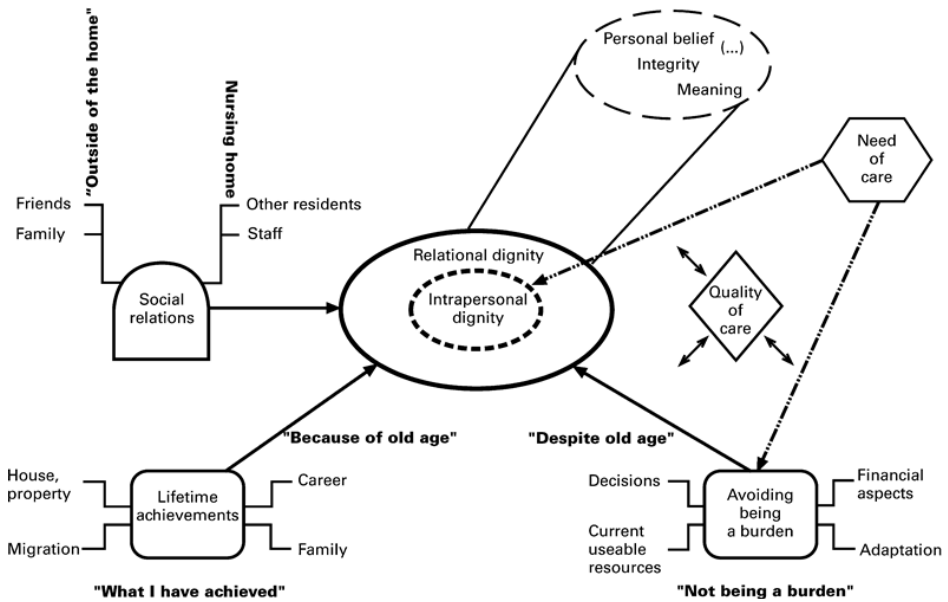
Figure 1. Nursing home residents' concept of dignity. [12, p. 199].

In Immanuel Kant's theory [13], everyone ought to be treated as ends and not mere means, each human being has an infinite worth instead of a measurable value: price. No-one is to be sacrificed in the name of the general good. Two debates in moral philosophy have examined the nature of human dignity understood as inalienable status. One debate turns on the question of what inalienable dignity is based on, if it is not dependent on achievements, or even one's dignified behaviour or self-respect. The Christian answer is that human dignity derives from the fact that humans are created in God's image (imago Dei). The "personalists" argue it is a matter of person-making characteristics, such as human agency – the problem with this being that not all people have the relevant characteristics, and no-one has them all the time. The Aristotelian "humanists" say it is merely a matter of the human form of life and what makes humans thrive (see e.g. [14, 15]). Some people may be born without the typical human capacities, and old people may have lost some of these capacities with age, but that does not lessen their status, argue the humanists.

Another debate concerns the absoluteness of the prohibition to sacrifice human lives. What if the situation is such that someone must die and we must choose between one and five, as in the so called trolley cases (see [16])? This highly theoretical discussion has now surfaced in the context of robot cars, which perhaps need to be programmed in advance to make a decision in such cases.

Yet, although nothing can take the inalienable status from humans, some people will have to live in worse conditions than the basic minimum that human dignity would entail, and some people are treated in ways, which are not respectful of their human dignity. Next we will briefly outline what the so-called theories of *recognition* might entail in this respect.

3. Human Dignity and the Need for Recognition

The letters to the editor of *Helsingin Sanomat* invoked the human need to be respected and the human need to be loved. Add the need to be an esteemed member of a community, be a giver and not only a recipient, be a contributor via one's work for the good of others, and we have the three main aspects of the need to be recognized [17-19]. Theories of recognition can fruitfully be applied to the context of elderly care [20].

The following ten aspects of recognition are the central cases (see [21]):

Universal respect
- Respect for personal autonomy, self-determination vs subordination (1)
- Respect for the basic moral status, basic dignity (2)
- Participation in Collective self-rule or autonomy, having one's voice recognized (3)
- Standing as an equal among others. Fair distribution of care (4)

Esteem and recognition of particularities
- Merits, achievements, contributions, talents, efforts (5)
- Recognition and standardized roles (6)
- Recognizing old age as a significant feature: 'because of', not merely 'despite' (7)
- Identity (8)

Loving concern and singularity
- Recognizing someone as a unique, singular, irreplaceable individual that matters vs. being a replaceable burden (9)
- Recognition of someone's existence vs. invisibilization and social death (10)

Here, we will work with the more coarse-grained distinction between three aspects of recognition: universal respect, esteem for particularities and concern or love for singular beings (see e.g. [17, 22]).

3.1. What Should We Think about Social Robotics in Relation to Universal Respect?

Many robotic applications are designed to assist the elderly in maintaining their mobility and their ability to carry out physical tasks, and so increase their autonomy or capacity to self-determination. Similar to wheelchairs and walking supports, robotic walking supports or exoskeletons could, in principle, help independent living. On the other hand, if the robotic devices are too difficult to use, they can decrease the person's autonomy and feeling of being control of her or his life.

Apart from individual aspects, the principle of self-determination should extend to collective decision-making concerning the admission of robots in care situations: for instance, the elderly should have the right to make their voice heard, with regard to whether robots are taken into use, in the care facility they live in.

Sometimes the capacity for self-determination is lowered, as in the case of children, the cognitively handicapped, or the demented. In these cases, the full right of self-determination is lowered as well, and turned into "assisted self-determination". One should not lose all autonomy rights the moment one's capacities are slightly lowered.

Many other basic rights can be based on human dignity independently of one's capacities for autonomy. Basic rights to life, nourishment, health, shelter, bodily integrity, freedom from torture etc. concern all people.

One central right is that of the right to human contact: there have been many ethical discussions about the ethics of solitary confinement as a form of punishment. The central popular concern about social robotics is that they replace human contacts. The following dark scenario comes from Amanda Sharkey: "An old lady sits alone in her sheltered accommodation stroking her pet robot seal. She has not had any human visitors for days. A humanoid robot enters the room, delivers a tray of food, and leaves after attempting some conversation about the weather, and encouraging her to eat it all up. The old lady sighs, and reluctantly complies with the robot's suggestions. When she finishes eating, she goes back to stroking the pet robot seal: "'At least you give my life some meaning' she says, as the robot seal blinks at her with its big eyes, and makes seal-like sounds in response to her ministrations." [11, p. 63].

The common and important response to scenarios like this has been that robots are not meant to replace human contacts, but to ease caregivers' burdens in different ways. Indeed, as Pirhonen and Pietilä [23] remark, loneliness is already a serious problem in assisted living today. In reality, the old lady may sit in her room all alone, without the company of a robot seal, and a hasty nurse would pop in with the tray. The current reality may be worse than Sharkey's scenario. Furthermore, some applications, such as Paro, can increase contacts for people suffering from dementia. As noted above, the robot appears to encourage and help to initiate social interaction with a therapist, caregiver or another elderly person.

Bodily integrity and human touch are delicate issues in long-term care. Here robotics promises both good and bad prospects: assistive robotics may help the elderly to perform their personal hygiene autonomously. On the other hand, decreasing human touch in care situations may endanger a profound human need, the very need to be touched by humans. According to Bush, people who suffer from dementia still have capabilities to communicate through gestures and touching [24]. Langland and Panicussi hold that the more confused elderly people are, the more touch-deprived they get [25]. Regarding people with severe dementia, touch may be their most effective way of communicating, which emphasizes the quality of the toucher.

One key issue, concerning fairness, is that of treating people as equals. In some cases, this means treating people equally (say, one vote per one human), in a "one size fits all"-kind of treatment. But in cases of special needs, treating people as equals may demand providing more resources to those with special needs – wheelchairs are a classic example [26]. Even in cases where resources should be distributed differently in the name of fairness, it may be that there is some other "measure of justice" in terms of which people receive equal treatment. For example, distribution of resources might be based on the idea that one should get what one needs. One fundamental concern with social robotics is related to inequality. Will the benefits of robotics only be available to the better-off? Will the risks of lessening human contact be actualized for those who already are worse off? This will bring a further aspect to the question on whether social robotics may threaten the dignity of the elderly. Such societal issues will not be solved by technological means, but rather, will partly depend on societal developments as to whether the good or the bad prospects of technology will be realized.

Thus, to sum up, the universal aspects of personal autonomy, collective self-determination, basic rights including the issues of human contact and protection of

privacy and fair treatment as equals, will all be relevant in assessing the ethics of social robotics in elderly care.

3.2. Recognition of Particularities: Lifetime Achievements and "Because of Old Age"

One deep need for human beings is to take part as a contributor to the common good, and be esteemed as a contributor. The need concerns being or having been a useful member of the community and being a recipient of the gratitude of others, not *merely* being a burden to others. (Below we will point out that a healthy relationship to self also includes acknowledgement of dependence throughout life, which the vocabulary of "burdens" distorts.) This is often illustrated by the experience of becoming unemployed: it typically makes one economically worse off, but also entails losing the role in which one can be of use to others. The feeling of being "superfluous" accompanies losing one's status as a contributor.

Moreover, older people have been found to avoid becoming a burden to their close ones [27]. Typically, pensioners are considered to have largely made their lifetime contributions and achievements, so they need no longer fill that role. The experience of relevant features one has "because of old age" is central. On the other hand, within family and among neighbours, it is still equally rewarding to be able to contribute. In this respect, the girl-like robot, *Alice,* that is designed to allow the elderly to take on the active role of helper or caretaker, seems like a perceptive innovation. Alice asks the older person, for example, to open the window [28]. Alice's conversational repertoire is limited, but the elderly start to treat the robot like a grandchild, a member of the family, and form real attachments [29].

3.3. Singularity, Care, and Dignity "Despite Old Age"

Independently of our particularities, each of us is a "singular", irreplaceable person, leading one's own life, facing one's own death. While the universal perspective focuses on the fact that someone is a person, and whereas particularities are a matter of what kind of person is at stake, singularity is a matter of which irreplaceable person is at stake.

In that regard, a positive aspect of robots is that their capacity to identify the individual in question, and to adapt and personalise their behaviour for any individual human being may someday be much better than that of humans. For instance, robots might learn to decode the speech of people with speech impediments. Again, there are two alternatives for the use of this feature: the robots can be the interaction partner (which might lead to a decrease in human contact), or they can facilitate interaction between humans.

Being someone's parent, child, spouse, sibling, relative, friend or lover involves relationships with their own "logic". In this logic, the other is an irreplaceable, unique, individual. They are not like any other roles or offices one might have, e.g., although I may have several children, each of them is irreplaceable. In relationships of friendship or love, it would be absurd to think that one's friend or loved one can be swapped with someone similar enough. The emotional attachment is to the special, singled out individual.

To be cared for is not exactly to be a "burden". After all, if others enjoy contributing, the so-called burden is often welcome. Furthermore, to the extent that one cares for the other, the well-being or suffering of the other is constitutive of the well-being or suffering of oneself. Or, in regard to professional caregivers, the need to be cared for is the very

presupposition of their very practice. This is not to deny that others work for a person, it is just that the word "burden" suggests that it is done reluctantly.

Many concerns about robotics deal with emotional interaction. One of them is that robots lure people to fraudulent emotional interaction. Robot Alice apparently was able to create emotional attachment in elderly users [29]. This may have happened since we form attachments to what we nurse and care for [30]. But a robot is not capable of genuinely responding to the feelings although the human being may feel so – the one-way emotional attachment, interpreted to some extent as two-way by the human, can be seen as deception [30]. Although Alice, too, is meant to be a robot to assist human relationships and not replace them [29], the deceptive relationship may entail harmful emotional consequences.

Deceptive attachment by a robot may not be of major concern for healthy adults who are aware of the quality of interaction, but how about with children and demented elders? For instance, is it harmful for an elderly person suffering from dementia to form attachments to a social robot? In the study of Niemelä and colleagues [10], caregivers in nursing homes found Paro valuable in that the elderly residents with dementia had positive feelings towards it and they wanted to take care of it. Paro enabled a certain sense of agency in them, instead of just being passive receivers of (human) care. Whether the resident perceived Paro as a robot, seal, or baby during the act of caring, made no difference to the caregivers. Their training encourages them to accept the perception of the elderly. On the other hand, the caregivers perceived that residents could not form long-term attachments to Paro, due to their dementia. With children, the (long-term) fraudulent attachment to a social robot might have a more far-reaching impact, in terms of their psychological development.

Recognising the (harmful) impact on children would most certainly call for regulatory actions. One workable analogy might be digital games with age limits: perhaps the use of social robots and their behaviour in terms of emotional engagement will have to be restricted according to the age of the humans interacting with the robot, or only allow the robots to interact with the child in the presence of a human caretaker.

4. The Social Bases of Self-Respect and Other Positive Relations-to-Self

Recognition from others is the core of the "social bases of self-esteem and self-respect". John Rawls' well-known thesis [31] holds that the social basis of self-respect is one of the primary social goods that are to be distributed fairly, in a just society. Self-respect, self-esteem or a sense of one's worth is, next to rights, liberties, and money and other material goods, one of the necessary preconditions of a citizen's pursuit of a good life. Such positive relations to self are dependent on one's social environment in many readily understandable ways and are researched in greater detail by social psychology. Importantly, a just state does not or cannot directly provide self-esteem; rather the state provides only the adequate social conditions for forming self-esteem (see also [32, p. 273]. While the central element of such social conditions consists in the attitudes of others (respect or esteem) that generate self-respect or self-esteem, the social basis may also include the possession of various goods, such as a clean linen shirt, which enabled the creditable day-labourers of Adam Smith's time to appear in public without shame [33, p. 466]. Thus, the social basis of positive self-relations is broader than merely being directly recognized.

The social basis of self-respect and other positive relations-to-self may well include social robots, even in cases where we would not regard robots, strictly speaking, as parties to relations of recognition. This is especially true in cases when robots enhance our social abilities, and abilities and opportunities to get recognition from other humans. For example, if a robot can understand someone's speech, it can facilitate that person's interaction with other humans. In the future, robots might even improve the status of older people, another matter to consider in connection to equality.

5. Conclusion

Given the rising number of elderly people in the post-industrial countries, and given the economic pressures to lower costs, we are presumably well-advised to examine the risks to human dignity that the introduction of robots may create. The worst fears, in this respect, concern loneliness and the replacement of human contacts with robots. On the other hand, if the role of robots is to complement human interactions, further study of the role of relations in the recognition and the treatment of the elderly is called for, as well as studies of how social robots may enhance the experiences of universal respect, along with recognition of particularities and concern for those with special needs.[2]

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