Oversold, unregulated, and unethical: Why we need to respond to robot nannies

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Sharkey and Sharkey (this issue) present us with a dystopian view of the near future. They explore the possibility of a world in which the use, or more properly the misuse, of robot nannies, causes our children to suffer from a lack of appropriate care. There is, they claim, convincing psychological evidence that this lack will cause serious harm. This response is neither a challenge to the technological possibility of this particular dystopia nor to the psychological evidence of harm. It is rather an attempt to ask what, if anything, we should do about it.

That is not to say that the claims of Sharkey and Sharkey are beyond challenge. As they admit, the science of maternal deprivation is subject to periodic revisions and challenges in scientific psychology. For example, the highly influential claims made by John Bowlby in 1951 to the World Health Organization (Bowlby 1951) were subsequently often read as stressing the importance of the child's bond with its mother. In fairness it should be stressed that Bowlby used the phrase 'mother (or permanent mother substitute)' Michael Rutter in his classic Maternal Deprivation Reassessed (Rutter 1971) disagreed with Bowlby on many points but, significantly, not in any way that could possibly justify the substitution of robot carers for human ones. A considered view of the scientific evidence must conclude, with the Sharkeys, that there is serious risk of damage to children from the excessive use of robot nannies.

In a political climate requiring parents to work long hours, psychologists might well be pressured to find evidence that children do not need quite so much parental attention. I could also bring to mind some philosophers who would steadfastly claim that nobody, not even an infant, would expect a robot to be able to perform the exclusively human duties of a nanny. However, this response will take the position that such challenges would be mistaken and, in some cases, morally wrong also.

We can accept the Sharkey's claim that robot nannies of increasing sophistication will be built in the near future. For the most part this research and development will most likely be done in the Far East: particularly in Japan, Singapore, and Korea. The geographical location is important. Not only do these countries at present have significant technological leads in building caring robots, they also have a very positive cultural valuation of such machines. The actual word 'robot' is of Czech origin and to Europeans it tends to suggest a - maybe problematic - automated worker (Capek 2001). European cultures have a more cautious approach to robots in general. In this case, it seems such caution is justified.

The need for codes and legislation

There is extensive law covering childcare in the UK. However, the law does not specify a minimum age below which children can be left unattended. As things stand the Children and Young Persons Act 1933 makes it illegal to leave a child "in a manner likely to cause unnecessary suffering or injury to health". Whether or not a child left in the sole care of a robot nanny would fall under this legislation would have to be tested in court. The case might not be clear-cut, particularly if it involved claims based on the sort of long-term emotional damage mentioned by Sharkey and Sharkey.

It is reasonable to assume that we are not likely to see such a test case for some years, even after the use of robot nannies becomes widespread. Even then we cannot be sure of the outcome. In the absence of legal precedents covering this area, we could start moving towards guidelines and eventually legislation now. My personal view is that we ought to begin this process more or less immediately. The opposing view - that there are more pressing social problems and more urgent matters for legislators demands respect, of course. An important conclusion of this response must be therefore that this debate should be public. It is certainly not too soon to bring these issues to a widespread audience.

The law is perhaps not the best way of protecting children from the risks outlined by Sharkey and Sharkey. A likely scenario is that affluent parents will purchase robots, developed and built in the Far East. It would not be illegal or unethical to purchase childcare robots. It would not be illegal or unethical to use them as toys or as family entertainment. At recent public events, I have been surprised at just how widespread the use of robotic toys is among middle-class children in Britain and just how strong the emotional bonds to these robots are – both in children and parents.

The ethical problems arise, as Sharkey and Sharkey point out, when a robot nanny is used to substitute for human care to a degree that is psychologically damaging to the child. To continue with the scenario, parents may start with good intentions about limiting the use of the robot. They may intend to always be in an adjacent room and effectively instantly available. They may even rigidly limit the time the child spends alone with the robot. However, in a world where those in work can be under extreme pressure and a 'long hours culture' still prevails these good intentions may be overcome or progressively reduced. A child who is strongly attached to a robot nanny may be happy to be left alone with it for longer and longer periods. The ability of the parent to see and hear from the robot's point of view via their mobile phone will undoubtedly help generate the impression that the situation is perfectly safe. There will come a level and manner of usage which brings dangers to the child in the way pointed out by the Sharkeys. This would be clearly an unethical use of a robot nanny.

It is, and will probably remain, almost impossible to define sharply the exact point which the use of the robot nanny has become excessive and therefore unethical.

This does not affect the argument. The existence of twilight does not entail that there is no difference between night and day. The dystopian future of robot nannies causing serious psychological damage to children could easily arrive by stealth and is clearly something we should work to prevent.

If waiting for the courts or the legislature to provide law seems ineffective or slow we might also consider producing codes of practice to guide both the manufacturers and purchasers of robot nannies. Such codes could be agreed in a much shorter time horizon than legislation. In as much as they prove useful, future legislation would take them into account. In some fields, such as electrical wiring, the code of practice drawn up by the professional body, although having no formal legal authority, is taken as defining the technical requirements in any legal dispute. BCS, The Chartered Institute for IT, is beginning to take up this task in Britain (Whitby 2008, Harris et al 2008)

This is not to suggest for one moment that professional codes alone will prevent the dystopian outcomes outlined in the Sharkeys' paper. They are a start, nothing more but a something that could be commenced immediately. Ethically far worse is the fact that the present complete absence of any guidelines leaves a situation in which the worst side of commercial pressure will work to not only make the technology freely available, but also to encourage unethical lines of development. The Sharkeys suggest that manufacturers will overplay the human-like features of their products and neglect to mention the dangers. This seems inevitable and professional codes could at least put some sort of a brake on this tendency.

In the particular case of robot nannies there are some obstacles to proceeding in this fashion to develop professional codes. This is an area of very different cultural expectations. As has already been remarked, the most likely manufacturers of this technology will be based in Far Eastern countries where they have far more positive cultural valuations of robots. International agreement may prove very difficult, if not impossible, to achieve. It is highly likely that the purchasers of robot nannies will find a warning in the packaging or, more likely and much less effectively, on-screen requiring an 'agree box' to be ticked before proceeding with the start up. This is nothing more than a crude attempt by manufacturers to pass legal responsibility to the users of the technology. Any professional codes should make clear the ethical responsibilities of manufacturers and not pass all responsibility to users. The next section looks at this in more detail.

The present lack of any guidelines whatsoever from professional organizations is a problem barely touched on in the Sharkey's paper. This at least, is something that could be changed with a little more effort.

The problem of responsibility

A number of the concerns raised by Sharkey and Sharkey bear directly on a wider problem in the ethics of robots and computing in general. This 'problem of responsibility' is the common practice of not placing responsibility for any undesirable consequences of computing products with the designers and builders of those products. (Whitby 1996).

Historically we have been remiss about blaming programmers and designers for the bad consequences of their products. Too often they have been able to pass blame to the user. Sharkey and Sharkey correctly point out the wrongness of this approach in the case of children emotionally damaged by the use of robot nannies. There is, on balance, reliable scientific evidence that sustained lack of human contact will serious psychological and emotional damage to children. Those who wish to develop and market technologies that carry this risk need to justify their actions. It is not ethically acceptable to build it simply because we can. Neither is it ethically acceptable to sell it, knowing these risks.

It is, of course, important not provide excuses for bad parents – particularly those who knowingly and deliberately misuse robot nannies but, as Sharkey and Sharkey point out, parents and carers may be mislead about the emotional competence of the robotic product. Manufacturers should not be able to get away with misleading portrayals of their products.

This sort of overselling is clearly unethical but it would not be overly pessimistic to expect overselling of robot nannies. Explicit or not, the motives of those attempting to develop this technology are often to produce machines which can replace human carers. For the cultural reasons mentioned in the previous section, it may prove very difficult to impose ethical standards on manufacturers of robot nannies. That is no reason to abandon the task. Public debate, professional codes, and eventually legislation all have a role to play.

Conclusions

Sharkey and Sharkey point out a serious problem that merits serious attention. In particular, there is a need for more research on the basics of human-robot interaction and on the psychological impact of all sorts of 'caring technologies'. The ethical issues and possibilities of psychological damage go wider than just robot nannies.

Guidelines are needed urgently and we should work towards these. The Sharkeys are right to say that the technology is advancing rapidly and may be in widespread use before legal precedents can be set. This is worrying and merits widespread debate. Leading public debate on these issues is a task not only for ethicists, layers, and politicians. Roboticists and psychologists (like the Sharkeys) are key to this

debate because only they can counter any excessive claims by manufacturers. All present caring technologies are markedly inferior to human care. It is true that human carers can on occasion be neglectful or worse but this is an argument for better care, not for the substitution of technologies known to be inferior.

This would indeed in many ways be a crying shame. However, there are steps that can be taken. We should start now.

References

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