What Robots Still Can't Do
(With Apologies to Hubert Dreyfus)
Or: Deconstructing the Technocultural Imaginary

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Abstract. This is the short summary of the keynote presentation given by Simon Penny at the Robophilosophy 2018 conference on Thursday, February 15, 17.00-18.15h in Vienna, Austria.

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1. To Anthropomorphise is Human

It is not well known, outside art-historical and archaeological circles, that classical (Greek, Roman, Egyptian, etc.) sculpture was polychromed (painted) to look as lifelike as possible. Often gemstones were used to simulate eyes. In the seventeenth century, clockwork automata (such as the "the writer" by Pierre and Henri-Louis Jaquet-Droz, and Jean-Frédéric Leschot 1768-1774) emulated not just human appearance but sophisticated skills such as writing or playing piano. In the 1970s in the USA, Duane Hanson, using advanced plastic resins, produced astonishingly lifelike sculptures of ordinary people.

- General thesis: Anthropomorphism has been a characteristic of human culture for millennia.

Art has always exploited the most sophisticated available technologies. The current generation of AI and anthropomorphic robotics are just the most recent iteration of this trend. The idea that inanimate matter can come to life is, it seems, as old as humanity itself: Pygmalion and Galatea, The Golem, Pinocchio, Frankenstein. Characters like Star Trek's Data are our versions of an old, old preoccupation. Why are we so driven to make machines that look like us, or some idealized version of us? Anthropomorphic robotics is not just a technology, it is our technological vehicle for our myths. In 1995, I wrote a short article for the 150th anniversary issue of *Scientific American* subtitled "why do we want our machine to seem alive?" (main title "Living Machines", September 1995). It seemed a relevant question then. It seems more relevant now.

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2. What is the Sense in Gendering Machines?

It is important to recognise that whatever the technology involved, these 'robots' are also, always *representations*. Representations of desires and fears, fantasies, taboos or social norms. David Hanson's Sophia and the robot sex dolls now on the market are troublingly alike in their representation of an 'ideal' woman, in (simulated) age and appearance. Ageism, sexism, genderism—like some out-of-control teenage id, the robotics industry is guilty of them all. These things fuel the popular imagination. Hardcore engineers will dismiss such concerns as trivial. And business people will say their products are driven by market forces. *We sell what sells*.

A contemporary artist has a more sophisticated take on the whole idea. Jordan Wolfson's *"(Female Figure)"* is a highly sexualized robotic representation which simultaneously undermines eroticism. *It is "[…]this psychologically horrifying, abject animatronic woman who gyrates to pop songs while fixing her predatory stare on the viewer. In terms of disjuncture, she's both the witch and snow white at once, a young woman and a crone, male and female, real and fake."* [1]

The image of the human/machine—from Maria in Fritz Lang's Metropolis, to C3PO to Terminator—has provided a foil for concerns about technology and society. But now, the images of our technocultural imaginary are inscribed upon—or embodied as—the technology itself. Technology becomes art. And given the emulations of behaviour made possible by sensors, computational and robotic technologies, anthropomorphism extends beyond appearance, beyond bodily dynamics, to speech, gesture and personality. Again, art has already explored the possibilities, from the chilling HAL in Kubrick's 2001, to the pathetic Marvin in Douglas Adam's Hitchhikers Guide to the Galaxy.

3. What is a Social Robot? What has the Ethics?

Machines can operate in social contexts. But are those technologies themselves 'social'? What does it mean to be 'social'? Conventionally we speak of 'social media'—media that facilitate sociality. But that media is not itself 'social'. There is a lack of precision in many discussions of the ethics of social robotics. The social robots of the 21st century are very like the clockwork automata of the 17th century. The 'writer' writes in beautiful script. He can (be programmed to) write different things. But does he know what he is doing? When you ask Siri "what is social robotics?" she performs a web search. If being a social creature implies self-awareness, there is no such thing as social robotics. So let's be more precise and speak of machines which give a good impression of taking part in social interactions.

In yet another film scenario (Her), a guy falls in love with a robot. We probably do not want a robot to fall in love with us, or conversely, to develop a nasty grudge against us. (But drones *will* choose their own targets and self-driving cars *will* choose who to run over. That technological trajectory is, it seems, a given). But a self-driving car with road rage?—not a pleasant thought. Can you imagine a robot bickering with you like your teenage son or daughter? It's bad enough that Microsoft Word thinks it knows better about some spelling or punctuation, and autocorrects, but can you imagine a word processor with OCD? A robot that won't step on the cracks on the pavement? Or refuses to take plane flights? No, we don't want this. Remember Marvin the paranoid android—a chronically depressed robot who was disgusted by self-satisfied automatic doors?

There's something quaint and reassuring about the discrete humanoid robot. We believe we know where it begins and ends. Here our instinct for anthropomorphism betrays us. The extent of our own individuality is a subject for philosophical debate, but in the realm of robotics, individuality is a redundant concept. Not in the sense of personality, but in the sense of distributed systems. We seem to foster a misguided idea that robots, social robots, are like us, quasi-autonomous individual actors. A robot, be it your self-driving car or the drone flying overhead, is a node or an end-effector in a dispersed, global network. If we ignore this larger context, we delude ourselves.

We have lots of clever machines around us: phones, cars, surveillance systems, but do we want them to be, like US corporations, legally persons? We need to be very clear whether we're talking about robots that *have* ethics, or robots that have been programmed to function according to an agreed ethical code. I have no problem with the latter. The former seems to imply selfhood. The ascription of selfhood, awareness or consciousness to machines is problematic. Some seem to think that computer sentience is an inevitable result of continued technological development in the path we are already on. When asked when we would achieve true artificial intelligence (Kurzweil's singularity), John Haugeland pithily responded: "*When a computer gives a damn*".[2] He went on to argue that there is no reason to assume (and lots of reason not to assume) that we can get there from here (*here* being Boolean procedures running under a von Neumann architecture, axiomatically rooted in the matter/information dualism). I agree with Daniel Dennett, a conscious or self-aware computer is not something we necessarily want or should want.

It is symptomatic of the technocentric nature of conversations about the ethics of social robotics that we think the problem, and its solution, lies in AI (bad AI or better AI). This is consistent with the technological pragmatism and lack of reflexivity which has characterized the discipline of AI since its inception, as Philip Agre made clear two decades ago [2].

References

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[2]   P.E. Agre, "Toward a Critical Technical Practice: Lessons Learned in Trying to Reform AI" in: G. Bowker, L. Gasser, L. Star & B. Turner (eds.), *Social Science, Technical Systems, and Cooperative Work: Beyond the Great Divide*, New York & London, 1997, 131-158.

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[2] In an interview in the film "Being in the World": https://www.imdb.com/title/tt1515195 (June.05,.2018)