

Review of: "[Essay] Not Quite Like Us? — Can Cyborgs and Intelligent Machines Be Natural Persons as a Matter of Law?"

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Potential competing interests: No potential competing interests to declare.

Review [for *Qeios*] of the paper:

Not Quite Like Us? — Can Cyborgs and Intelligent

Machines Be Natural Persons as a Matter of Law?

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This paper addresses an interesting, challenging, and relevant question as posted in the subtitle.

The main arguments of the paper are reflected from the following two sentences from its abstract:

“Using a transdisciplinary methodology, including philosophy of mind, moral philosophy, linguistics and neuroscience, this Essay aims to situate the difference in law between human and machine in a way that a court of law could operationalize. ... The Essay draws a line that separates human and machine using the way in which humans think, a way that machines may

mimic and possibly emulate but are unlikely ever to make their own.”

The relevance of the paper is shown in another couple of sentences in the abstract: “This is not a purely theoretical exercise. Courts have already started to make that distinction and making it correctly will likely become gradually more important, as humans become more like machines (cyborgs, cobots) and machines more like humans (neural networks, robots with biological material).”

There is much to learn and ponder in reading this paper. Here, some disagreements are briefly pointed out.

First, a most basic point is this. The most important distinction between humans and other animals (at least higher animals which are sentients) is the different degrees and ways of sapience, as we are all sentients (though also likely of different degrees). However, the most important distinction between humans and AI's is not these (different degrees and

ways of sapience), as the paper under review seems to focus on. Rather, it is the presence of sentience in humans and the absence of sentience in AI's, at least for now and the next several centuries if not longer, perhaps forever (Ng 2021). This basic difference is also related to those on moral capability (both as an actor and as the one affected), free will, etc. It true that sentience being a subjective property, may be much more difficult to establish. However, ways to reduce these difficulties are possible both conceptually (Ng 1995) and in practice (Ng 2016, 2017).

In the last sentence of the second last paragraph on p.3: "machines will begin to exhibit more and more signs of self-awareness". I think these are only misleading signs for apparent self-awareness, not real self-awareness, or even just awareness/consciousness.

Secondly, related to the previous point, the paper under review "attempts to demonstrate why 'sapience' seems more apt than 'sentience' to capture the properties and type of behaviour that may allow machines someday to claim a legal status" (last sentence of the third paragraph of Section II on p.4). A full argument why the opposite view to this is more acceptable requires a full paper. Here, I will just note that, AI's have long since being able to beat grand masters in chess (as far back as 1997), not to mention average players like you and I. However, since these AI's are not sentient, they are more like some instruments we use, like a hand calculator or a computer, much less closer to a human person than a budgie.

Thirdly, "The term 'sapience' *when applied to humans* can be defined succinctly for now as the unique way in which reason and emotion interact in our brain and body and guide our behaviour and that, according to Darwin (and many others after him), puts us at the pinnacle of the animal kingdom" (First sentence of the first complete paragraph on p.5; or lines 4-6 on p.5). Though this interaction is there and important, it is not essential, in principle, for the presence of high sapience.

Fourthly, the argument on Sub-section 1.2 outlining "A more recent approach labelled 'constructivist', ... posits that the human brain is best viewed as a computational prediction machine" (Lines 5-6 on p.10) is not persuasive to the present reviewer. Humans are not machines. We engage in prediction, but being sentient is more salient.

Fifthly, "Descartes (who interestingly referred to animals as 'machines' because they cannot speak) and many others since him have done so" (third and second last lines on p.11). Despite the authority of Descartes, this view is a clear mistake. Inability to speak the complex human language does not mean that animals are not sentients and should not be regarded as machines. If they were, we would not need any 'prevention of cruelty' to them (recalling RSPCA). Also, some animals use some simpler forms of language, as mentioned on the 4th line on p.12.

Sixthly, "humans and machines will never think exactly alike (Dennett, 2013)" (line 16 on p.13). This may well be true, but the more important difference is that machines may likely never be sentient.

Seventhly, "Wise noted that common law courts tend to 'accept autonomy, but not sentience, as a sufficient condition for legal personhood' (Wise, 2013, 1286)" (second and third lines on p.16). Though sentience is not a sufficient condition for personhood, it should be a necessary condition. Hence, unless being sentient is necessary for having autonomy, autonomy should not be sufficient for personhood either.

Eighthly, “human beings are the only animals that exhibit moral behaviour” (4th last line on p.16), citing Bradie (1993). This common belief have been strongly challenged in recent decades by many researchers in animal behavior, with compelling evidence of moral behaviour in many species, including not only primates, but rats and pigeons (e.g. Rowlands 2012, Monsó 2018).

Ninthly, “There is (for the predictable future) an *irreducible gap between human and machine*. It lies in part in biological embodiment, with all that that implies, and our moral yet far from entirely rational mode of thinking—our form of sapience. That gap, and the unique way in which humans think, create and invent, should be the focus of the law when operationalizing a distinction between human and machine” (Lines 7-10 on p.19; or the last few sentences of Sub-section 1.7; italics original). This fails to put sufficient emphasis on sentience and free will.

Finally, the paper contains quite a number of simple typos, including missing spaces, at: 4th line from bottom on p.4; 1st line of the second last paragraph on p.3; last line on p.5; second line of the second complete paragraph on p. 6; third line of the second last paragraph on p.7; first line of the last paragraph on p.7; first line of the last paragraph of Section IV on p.8; last line on p.9 (possibly also some words missing); line 8 on p.10; line 12 on p.10; line 17 on p.11; line 10 from bottom on p.15; first line of Section IX or line 7 on p.17; line 15 on p.17; 3rd last line on p.17; first line of the second paragraph of Sub-section 1.7 on p.18.

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