

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.

This essay explores the border between things that are unquestionably machines and things that are unquestionably human, for the purposes of deciding in a legal context whether a given entity is a "natural person." This question has deep roots in Greek philosophy ranging all the way to the present, and many ramifications of it are explored, somewhat to the cost of readability and coherence. Yet the conclusions are worth the trip, as the author finds support from areas as disparate as neurobiology and ethics to claim that *how* an entity is constituted should be as important as *what* the entity does.

An increasing body of research in the areas of psychology and biology indicates that human behavior cannot be modeled as the product of separate and distinct functional elements, either within the brain or within the whole body. Both scientific evidence and the results of introspection tell us that the way our minds work is inextricably entangled with the way our bodies work. Emotions, subconscious brain processes, and our physical environment all influence the workings of our minds in a way that AI systems cannot duplicate, almost by definition. These factors all contribute to what Gervais terms "sapience," which he prefers as a characterizing noun over "sentience" (the ability to feel pain or pleasure).

He considers the case of a thing which is a mixture of human and machine. Near one end of the scale it might be a human with one artificial limb. Near the other end, it might be a machine that uses human-derived neurons. Rejecting the idea that adding up the percent of human DNA in such an entity would work, he then examines the old "triune" idea of the brain as a primitive reptilian part, an emotional or limbic part, and a rational part based in the neocortex. This model has also been found wanting, as the parts interact and do functions in a collaborative way that makes the three-part division unilluminating.

In this brief review I would like to focus on what the author believes is the right way to answer the question of what is a natural person, in the legal sense. As he states in his conclusion, he believes the right approach is to ask *how* an entity does something as well as simply *what* it does. A being with moral agency, rationality, and a biological embodiment should be regarded as a natural person. If any of these three features are missing, it is something other than human.

Perhaps wisely, the author dodges what he calls the age-old physicalism-dualism debate. But that debate may hold an important viewpoint on the issue that the author edges up to but never fully engages with. That viewpoint is the Aristotelian-Thomistic one which says that the mind consists of two types of powers—sensitive (perceiving, remembering,

imagining) and intellectual (conceiving, understanding, judging). The author cites several sources which agree that the formation of concepts is an important aspect of rationality, but neglects the line of thinking represented by e. g. Mortimer Adler (*The Difference of Man and the Difference It Makes*(1967)) and this reviewer's "Artificial intelligence and its natural limits" (Stephan & Klima, 2021, *AI & Society*, 36:9-18). These sources indicate that any dimensional (physical) object individualizes (particularizes) what it receives. Because the human mind can receive a concept such as circularity without having to envision or embody a particular circle, for example—seeing that which is common to all circles without having to deal with any particular circle—the intellect cannot be a thing with dimensions. In other words, the human intellect is a non-material entity.

This idea would seem to be at least as determinative for natural personhood as that of biological content, rationality, or moral agency, and perhaps the author will consider it, even if only to reject it, in a future revision.

Overall, this article is a valuable contribution to a needed body of work that the legal profession, and by implication society in general, will need in order to deal with the rapidly changing fields of AI and cyborg-like bodily enhancements, things toward which we are heading like a freight train without its brakes.

A list of typographical corrections follow with page numbers referring to .pdf pages.

2 --- Correction: "outset what the Essay" (not "he Essay")

2 --- Correction: "a wholly different question" not "whlly"

13 --- Change "does can neither to" to "can neither"

13 --- Correction "no makes" to "makes"?

15 --- "it is this Essay's belief" --- just out and say author's. Essays don't have beliefs.