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OPEN PEER COMMENTARIES



## Donation, Control and the Ownership of Conscious Things

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In the Target Article by Sawai and colleagues (2022), one of the research ethics and governance issues considered is the control the human donor of the cells from which a brain organoid is produced should have over organoids that develop consciousness. The authors discuss consent, control in the form of withdrawal of consent, and ownership. They argue in the case of *in vitro* brain organoids “... that there may be cases where cell donors cannot withdraw consent because of organoids gaining consciousness” (Sawai et al. 2022, 88); and that there is also an issue of ownership that needs to be solved if “... the brain organoid acquires some form of consciousness which confers it moral status” (Sawai et al. 2022, 88).

Firstly, it is not clear that a cell donor's right to withdraw consent actually extends to the organoids that have been produced with their cells. If a particular organoid has been produced in accordance with the consent that has been given and used for the purposes that have been consented to, then it is not obvious that the right to withdraw implies the right to terminate research involving the organoid, or to have the organoid destroyed, whether or not the organoid

has some level of consciousness. There is an important distinction between having a right to withdraw the donated tissue, cells, or cell-line from future use (Holm 2006, 2011), and withdrawing an entity which has been produced from those biospecimens but which is no longer merely a collection of those cells. An organoid does not arise spontaneously out of donated cells, although spontaneous organization plays a role in the development of organoids. An organoid is the result of expertise, effort and investment applied to, and manipulation of the donated cells. This undermines the donor's claim to exclusive control through a putative right to withdraw. In relation to already existing organoids, the donor's *unconditional* right to withdraw is, therefore, either non-existent or it only applies when organoids are produced or used outside of the parameters of the consent that has been given. However, in the latter case, the organoid should not have been produced in the first place. Since valid consent was never obtained for the activity, the rights of the donor are not based on withdrawing consent. This entails that the issue of whether the organoid is conscious, and, *a fortiori*,

which kind of consciousness it has, is a red herring in relation to the right to withdraw.

Relatedly, there are other ways in which human donors can assume downstream control of their tissue and cells that extend beyond the right to withdraw consent. Of course, whether and to what degree a donor is able to specify which research projects and clinical applications can permissibly use their biospecimens will depend on the particular model of consent employed by the researchers or biobank (Hofmann, Solbakk, and Holm 2009). This is not to suggest that a donor is at liberty to command or order a biobank to do whatever she wishes. Rather, to the extent that biobanks wish to respect donor autonomy in a non-trivial sense (see, for example, O'Neill 2003), they have an obligation to respect a donor's decisions regarding which kinds of research and clinical applications can make use of her cells. If an organoid were produced from a donor's cells in a way that contravened the terms of permissible use, the donor's "control" over the organoid would be both practically and in principle irrelevant, since the conditions for control were not met in the first place.

In relation to ownership, Sawai and colleagues ask the question of who owns a brain organoid, or an animal transplanted with a brain organoid, that has acquired "*some form of consciousness which confers it moral status*" [italics added] (Sawai et al. 2022, 88). The ownership issue, however, does not turn on whether an organoid or chimeric animal has some form of consciousness and thereby some moral status, but on whether it has full moral status or something approaching full moral status. Most legal systems have no issue with ownership of conscious entities *per se*. There is no legal uncertainty about pet owners owning their pets or farmers their livestock, even though all mammalian pets and farm animals are undoubtedly conscious in the phenomenal sense. This position on ownership may well be wrong, and we may decide to have a wholesale re-appraisal of the legal ownership of animals. However, until that happens, we have no good reason to treat an organoid with consciousness similar to that of, for instance, a pig differently in terms of the possibility of ownership than the pig itself. Pigs and organoids are both biological entities, although only one of them is an actual self-sustained organism. Now, it may be argued that the fact that the organoid is made from human cells makes a difference because it is a *human* organoid and, therefore, somehow special. There is, however, a great risk of equivocation concerning the term "human" here. The fact that an organoid is, to a certain degree,

biologically human does not, at least in any straightforward way, support the conclusion that its particular consciousness must also be qualitatively human. A merely sentient human organoid is still just merely sentient and to say this is a specifically human sentience, that is, a sentience produced by an organized assembly of human cells as opposed to a consciousness that experiences the world in a qualitatively human way, adds nothing. Relatedly, Sawai and colleagues state that they are primarily concerned with phenomenal consciousness and that "it would be prudent to proceed under the assumption that the entity has consciousness for the time being by applying a precautionary principle" (Sawai et al. 2022, 85). The issue here, however, is that we have good reasons to be skeptical in relation to whether the phenomenal content of the consciousness of an *in vitro* organoid is likely to be similar to the phenomenal content of the consciousness of a human. For example, as argued on different grounds by a number of phenomenologically oriented theorists and researchers working in embodied cognitive science, if human consciousness is an embodied phenomenon, then we cannot ignore the role of the human body in determining the phenomenological content of a specific type of consciousness, that is, human consciousness (Clark 2008; Damasio 1994; Gallagher 2005; Lakoff and Johnson 1999; Merleau-Ponty 1962).

Even though there is broad philosophical agreement that conscious entities have moral status—*pace* Descartes few would deny that the ability of animals to feel pain is a basis for a particular kind of moral status (see also Warren 1997)—the disagreement is about which, if any, have full moral status (i.e., roughly the status of a cognitively normal adult human being). The contentious question is whether some types of consciousness in non-human entities is sufficient for these entities attaining full moral status, and what the implications would be for ownership.

The traditional legal point of departure is that all animals can be fully owned, irrespective of their cognitive abilities, including degree and type of consciousness. The law recognizes one type of natural person only (i.e., the human being). The Hohfeldian bundle of full ownership includes the right to destroy, and this is still legally both asserted and accepted in relation to, for instance, gorillas in most jurisdictions (Horton 2021). It has been argued by many, including the authors of the Great Ape Project, that full moral and legal status should be attributed or given to animals that have human-like consciousness, including self-consciousness (Cavalieri & Singer 1993). If we

accept these arguments, then they should apply to brain organoids with this level or type of consciousness, meaning that they could no longer be owned in the sense that animals with *some* form of consciousness can be owned. However, it is important to note that this argument would apply irrespective of the origin of the cells used to produce the organoid. Furthermore, the threshold is not some form of consciousness but considerably higher. It is also important to note that any *in vitro* brain organoid that passed this threshold would be extremely vulnerable because it would not be part of an embodied organism that could sustain it. It would be wholly dependent on being sustained by its producers, who would, therefore, arguably create obligations on themselves akin to the parental obligations human reproducers create when they decide to bring a child into the world (or zoo owners when they enable the reproduction of great apes). Consequently, a prudent organoid producer might try to avoid producing organoids that are even close to passing the consciousness threshold that gives rise to full moral status.

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