**WHY TRANSHUMANISTS CAN’T SURVIVE THE DEATH OF THEIR BODIES *Ethics, Medicine, and Public Health***

**Special Issue on Personhood and Science in the 21st Century**

**Abstract**

 Our animal bodies inevitably wear down and we cease to exist. Transhumanists envision that we can prolong our existence by sustaining our mental life without all of the original organic parts of our bodies. This might involve undergoing inorganic part replacements that preserve our psychological functions or uploading the information from our brains and persisting in virtue of that information being physically realized. Transhumanists believe the freshly dead can now be cryogenically preserved until scientific developments make repairs and reanimation or inorganic bodies and brain scanning feasible. Such endeavors typically overlook a difficulty plaguing Lockean accounts of persons which is explaining the relationship of the human person to distinct human animal. Problems arise that can only be avoided by identifying the human person and the human animal. This identification and the recognition that we persist in virtue of earlier states immanently causing later states will undermine attempts of transhumanists to survive the deaths of their animal bodies. The funds allocated for researching how to replace our organic bodies would be better spent on learning how to postpone the deaths of those bodies.

**I. Introduction**

High tech millionaires (Peter Theil, Elon Musk, Larry Page, Sergey Brin amongst others) have given transhumanists considerable funds to create technologies that will enable people to survive the death of their organic bodies. I doubt that this is possible but my skepticism is based entirely upon transhumanism’s metaphysical assumptions, not any qualms about the science and technology. My argument goes through even if I grant that every one of the following sci-fi sounding undertakings is technically feasible and will soon succeed: our brains will be scanned and their psychological information uploaded producing conscious “digital ghosts” that can be downloaded into more durable inorganic bodies capable of thought; Much or all of our body and brain can be replaced with functionally equivalent inorganic parts and the result will be, respectively, self-conscious cyborgs or fully inorganic robotic persons; our corpses can be stored in liquid nitrogen and any damage due to dying, death or freezing will eventually be repaired or the information in the brain can someday be scanned and downloaded into a more durable body. Of course, a good number of readers may suspect that each of the above technological endeavors is a “Hail Mary pass into the future.” That doesn’t matter to me. My contention is that if the techniques produced conscious selves, the result would be not our posthumous survival but the creation of mere duplicates of us. We would neither survive the procedure nor be restored to life at its completion.

The fatal flaw of transhumanism is that it assumes the Lockean idea that we are essentially thinking persons who persist in virtue of our psychology being realized but not necessarily in the same organic substance. The transhumanist Randall Koene expresses this Lockean idea:

The goal of substratum independence is to continue personality, individual characteristics, a manner of experiencing, a personal way of processing those experiences. Your identity, your memories, can then be embodied physically in many ways (146).

My contention is that the transhumanists, like Locke, can’t provide an account for the original relationship between the human person and the human animal, nor explain why we are identical to the human person rather than the physically indistinguishable human animal.

Transhumanists who advocate uploading our minds or transferring them into better bodies also don’t realize that they share with Locke the problem that there can be more than one post-scan or post-transplant person with our psychology and no reason to think we are identical to one rather than the other(s). If they do realize there could be multiple instantiations of their psychology, they don’t appreciate how metaphysically problematic this is. Few of us can take the blasé attitude of one “uploader coach” who exclaimed “Never fear multiple versions of yourself – they’ll all update each other just like your family does (O’Connell, 158). What the possibility of multiple instantiations reveals is that something crucial to our identity and persistence is missing in the Lockean-inspired accounts. The lesson is not that we would survive if the number of replicas was kept at just one.

Furthermore, the advocates of scanning and downloading, as well as the fans of cryogenics, fail to appreciate that our persistence depends upon the *immanent causation* of our later stages by our earlier stages which excludes advance technology from being able to transfer us from one substratum to another or posthumously reassemble and repair our remains in ways that preserve our identity.

So the correct answer to queries about the timing of the singularity at which humans transcend their biology (Kurtzweil) is not “near” but “never.”[[1]](#footnote-1) Visionary high tech millionaires who don’t want death to delete their existence would be better off funding the development of medicines and devices that will prevent their bodily deaths rather than replace those bodies.[[2]](#footnote-2) The terrible irony of the latter effort is that such millionaires would be financing an extinction event that they misinterpreted as extending their existence.

**II. Situating Transhumanism**

There is not a single agreed upon definition of transhumanism as it has become a large and diverse movement.[[3]](#footnote-3) Nevertheless, I will quote a description from one of the movement leaders and the editor of *The Transhumanist Reader* that captures its character, aspirations, and flaws.

…transhumanism goes well beyond humanism in both means and ends. Humanism tends to rely exclusively on educational and cultural refinements to improve human nature whereas transhumanist want to apply technology to overcome limits imposed by our biological and genetic heritage. *Transhumanists regard human nature not as an end in itself, not as perfect, and not as having any claim on our allegiance. Rather, it is just one point along an evolutionary pathway and we can learn to reshape our own nature in ways we deem desirable and valuable*. By thoughtfully, carefully, and yet boldly applying technology to ourselves, we can become something no longer accurately described as human – we can become posthuman (More, 4).

I want to stress the italicized transhumanist thread that seeks to replace our biology. I don’t deny the possibility or harbor any great concerns about technology facilitating the survival of our bodies and overcoming those aspect of our biological heritage that lead to our biological death.[[4]](#footnote-4) What I insist upon is that we must remain alive in the biological sense and can’t cheat death by leaving our inorganic bodies behind. I also take issue with the idea that we “can reshape our nature.” Natures, I understand to be essences, and we don’t exist when our essence is replaced or reshaped. But if “nature” is being used to mean innate in the sense that we have instinctual drives and appetites that are natural but can be removed, redirected, or thwarted, then there is no inconsistency. Nor is there an inconsistency if one understands *human nature* to apply to our *human* animals and it is being assumed that we human persons are not identical to a human animal and so not bound by human nature. I, of course, would challenge the claim that we overlap and share our bodily parts with a distinct animal. I would also reject the view that I am identical to an animal (in the way that I am identical to a professor) but not essentially an animal (or a professor) which Kevin Warwick may have had in mind when he claimed: “I was born human. But this was an accident of fate, a condition of merely time and place. I believe we have the power to change”(Clark: 2005, 18).

Where do such ideas come from that we are not identical to an animal or if we are that we need not have been or could have ceased to be so akin to the way I don’t have to be a professor? Aristotle thought we were rational human animals, and essentially so, as did many religious figures like Aquinas. There is, of course, a long philosophical tradition that believes we are mere souls or composites of souls and bodies. But Transhumanists don’t belong to Platonic or Cartesian traditions.

The transhumanist hostility to the body has few predecessors though John Grey slyly comments “Gnosticism is the faith of people who believe they are machines.” One transhumanist, Tim Cannon, Grindhouse Wetware’s chief information officer, complains “I’m trapped in this body” When told he sounded like a Gnostic Heresiarch from the 2nd century, he explained:

But that’s not just a religious idea, man, ask anyone who’s transgender. They’ll tell you they’re trapped in the wrong body. But me, I’m trapped in the wrong body because I’m trapped in a body. All bodies are the wrong body” (O’Connell. 158).[[5]](#footnote-5)

There is actually an interesting conceptual affinity between transgenderism and transhumanism. The transgender and transhumanist founder of Sirius radio, Martine Rothblatt explains:

Freedom of gender, is therefore the gateway to a freedom of form and to an explosion of human potential. First comes the realization that we are not limited by our sexual anatomy. Then comes that awakening that we are not limited by our anatomy at all. The mind is the substance of humanity. Mind is deeper than matter.

I suspect that Rothblatt understands the mind being “deeper than matter” to express not the idea that the mind is an immaterial soul but is information. Rothblatt’s idea might be what Steinhart champions as “digitalism.”

Although digitalists accept the physical sciences, they do not accept the philosophical ideology which regards them as fundamental. For digitalists, the digital sciences are prior to the physical sciences. Information and computation are prior to matter and energy. Physical things are ultimately built up from bits. By embracing bits as their basic objects, digitalists do more than merely reject materialism. Digitalists also reject idealism. Since bit are basic, mind are built from bits as well (Steinhart: 256).[[6]](#footnote-6)

 Rothblatt and Steinhart are fans of mind uploading which enables us to be duplicated but they don’t think souls are duplicated. Plato and Descartes’s soul is not a live option for transhumanists.

One might surmise that Descartes’ view of the body as a machine is an ancestor of the transhumanism view of replacing our organic mechanical body with a better machine. Transhumanists seem to have a Cartesian view of a mechanical body – though, pace Descartes, they hold it is a thinking machine when they describe us as “meat computers.” Transhumanists just wish along with Ray Kurtzweil that we meat computers wouldn’t “have to waste so much complexity of our neurons with life support mechanisms at the expense of information processing capabilities” (O’Connell, 55). Kurzweil believes that in the future we “will be able to port our mental processes to a more suitable computational substrate” (O’Connell, 55). Perhaps that is a recognition that we are already machines and could just become more efficient machines if some silicon and plastic replaces our carbon and water.

Andy Clark perhaps stands out amongst transhumanists in that he believes we are already part metal and plastic machines. He emphasizes that it is a mistake to think cyborgs must have wires and metal underneath or sticking out of their flesh. As he memorably put it, we already extend outside the “skin bag.” Just as we use our cerebellum to store memories, we could or do use our note pads and iPhones to do the same (Clark and Chalmers, 1997). “Such tools are best conceived as proper parts of the computational apparatus that constitutes our mind” (Clark, 2005, 5-6). Clark entitles one book *Natural Born Cyborgs* “because it is our basic human nature to annex, exploit, and incorporate nonbiological stuff deep into our mental lives” (2005, 198) We are tasked not with the question of whether we should become cyborgs, as we already are, “but in what ways we actually shape and sculpt it…seeing ourselves as we truly are will increase the chances that our future biotechnological unions will be good ones” (2005, 198). He announces at the outset of his book that he has not penned a futurist manifest but just seeks to help us “better understand what we already are: creatures whose minds are special precisely because they are tailor made for multiple mergers and coalitions” (2005, 7).

The best source or, at least, the best justification of transhumanist ideas in the philosophical tradition can be found in the Lockean account of personal identity. It can accommodate the transhumanist’s body loathing, body enhancing, body switching, “skin bag” crossing, and the body abandonment through uploading. Locke thought it more likely that we had a soul than not, but that claim is not essential to the doctrine that bears his name. What matters to the persistence of persons is that our psychology continue, not our soul. Locke viewed the prospect of our soul surviving without our idiosyncratic psychology of memories, desires, beliefs and intentions as no more attractive than our existing posthumously as a corpse. Imagine that we lose our memories due to dementia and then death occurs. Our posthumous soul may be capable of thought but any thoughts then would have little to do with our ante-mortem thoughts, none of which it could recollect. A good number of people would not think that they survive if all their memories, desires and distinctive psychological states were lost; many more would not care for such a posthumous future, even if it was theirs, as it would involve them acquiring a completely new mental life.

Locke held onto a traditional religious conception of an afterlife tied to the idea of a final judgment, rewards for the virtuous and punishment for the wicked. If the person in the afterlife had no psychological connections to their ante-mortem self, rewards and punishments would seem unjust. Locke even claimed that if Socrates when awake couldn’t remember his dreams than that wouldn’t be him dreaming but someone else he labeled “Sleeping Socrates” (Locke, 1975, 242). What he means is that the same thinking soul could support different persons. He also held that a persons and her psychology could not only cease to occupy a soul but could switch to another soul. So unlike Plato and Descartes, Locke distinguished persons from their souls. But like the transhumanists, Locke held that psychology is “substrate independent.”

**III. Locke-Inspired Transhumanist Visions of Body Switching and Cyborg Creation**

Locke held it likely that the person’s thought was sustained by an immaterial thinking soul but he left it open that it could be a material thinking substance involved with the production of the person’s mental life. Most modern Neo-Lockeans believe persons to be material beings i.e., composed only of material parts (Shoemaker: 1984; Perry, 2002; Parfit: 1984; Nozick 1981). They also differ from Locke in that they don’t distinguish the person from an underlying thinking substance which thus avoids the problematic consequence of Locke positing that there were two thinkers (the thinking substance and the person) when we want there to be just one. The thinking substance/thinking person relationship is quite obscure. However, the modern day, Neo-Lockean materialist does distinguish persons from their animals. They insist that if you switch your cerebrum with someone else’s, then you would have switched bodies, leaving your original animal behind. What they take to be crucial for your persistence and determining your location is that your psychology continue, and they assume that the cerebrum is responsible and the place for that.

Body switching gives rise to the possibility that an afterlife would not require God, just a replacement for your dead body. Transhumanists hope not only for a Godless afterlife but a bodiless one – understanding the body to be a frail one of flesh and bone (Bostrom, 2005). It may be that our psychology can be sustained by an inorganic or better organic body when our body dies. This is, in principle, quite plausible, especially if it is accepted that we are essentially thinking entities. If we are naturally undergoing replacement of our brain’s organic matter over time but still persist because our psychology is *functionally* unchanged by the turnover in matter, then why couldn’t we undergo replacements of our organic matter with sturdier inorganic matter that leaves our psychology (functionally) unchanged?[[7]](#footnote-7) This new body would not last forever, but a series of such bodies might be immortal.

Our transplantation into a new organic body or our body being changed into a bionic one would involve us truly dying in the process and thus we literally would survive our deaths and partake of an afterlife. We would strictly die in the two scenarios because we would cease to instantiate life processes that are necessary for the bodily integration characteristic of life.[[8]](#footnote-8) So even if we are not identical to a living body, if we persons have a body with parts involved in metabolism and homeostasis, then we can die when we cease to possess a living body.[[9]](#footnote-9) That would occur when we are reduced to the size of our cerebrum (an organ, not an organism) or have our organic parts replaced with inorganic ones. In both cases, we no longer instantiate (bodily) life processes.

**IV. Transhumanism’s Lockean Problems**

Since persons are not bodies on the Lockean and Transhumanist accounts, this leads to puzzles about the relationship of the human person to their human animal bodies. Persons can’t be the same as their bodies for they can leave them behind when transplanted. No one can separate themselves from themselves. But living persons are atom for atom the same as their animal or inorganic body. They share an organic brain. So the conundrum is why can’t the animal think if the person can think with the same brain? The early mindless embryo doesn’t go out of existence with the emergence of thought that allegedly indicates the arrival of the distinct person. So there would be two overlapping thinking beings, the person and the organism. This is true even if we follow Clark in thinking of persons as natural-born cyborgs. Earlier there was a mindless embryo, not a cognizing, tool incorporating organism. The embryo’s parts were determined by being caught up in metabolic life processes and recognized by the immune system, not being used as tools for cognition. The organism doesn’t later get tools as parts, not even those that are prosthetics that replace the functions of bodily parts become its parts. Such inorganic entities don’t grow along with the rest of the organism or otherwise get involved in its metabolic, immunological, and homeostatic functions. So positing a non-organic self leads to a pair of thinkers where we would like there to be just one. Metaphysical puzzles abound due to the overlapping thinkers. I suspect that they are sufficient to render the possibility of a Godless afterlife as conceived by the transhumanists to be untenable. I’ll sketch three problems.

First, why are two physically indistinguishable beings (persons and animals) members of different kinds? What could make one a person that is essentially a psychological being and not a living being, while the other physically indistinguishable entity is essentially a living animal that has its psychological traits just contingently? In other words, why can animals survive the loss of their mental life with the onset of a persistent vegetative state but persons cannot when they are atom for atom the same? (Olson:1997, 2001b, 2007)

A second puzzle is how would the person know whether she is the person rather than the animal? (Olson, 1997) Any evidence that she has to think she is the person, the animal would have as well. So she has no reason to think that she is not the animal who is mistaken in believing herself to be a person.

Finally, the co-located animal and person may not even have the same interests and therefore both couldn’t autonomously agree to the replacement of their body. It would be a premature death for the animal body to be replaced by an inorganic body but it would be a way for the person to survive much longer. This will make the simultaneous exercise of autonomy impossible for both the animal and the person.[[10]](#footnote-10)

These problems go away if the human person is identical to the human animal rather than distinct and sharing parts. But if persons are animals and have the nature and persistence conditions of them, then they can’t be transplanted, uploaded or become cyborgs. You would be the mindless patient in the persistent vegetative state left behind in a cerebrum transplant. Nor can material animals be moved by just scanning and downloading information about them. Finally, if you underwent considerable inorganic part replacement then you would not be the cyborg but the organism within the cyborg. And if not enough organic manner remained to compose a life, then you would cease to exist rather than become composed of both organic and inorganic parts.

**V. Uploading People and the Duplication Puzzle**

If we have a body, then we are organisms and must remain so. A meat computer can’t survive the transformation into a silicon computer. An alternative interpretation is that we are not the computer but the instantiation of the program. This may be thought to avoid the previous section’s problem of two spatially coincident, part sharing, embodied thinking substances. We are not our bodies, nor do we even have bodies as the mainstream of the Lockean tradition maintains. Instead we are instantiated in bodies and we could become instantiated in new bodies or even reside on-line in cyber space.[[11]](#footnote-11) This makes us like an series of mental events (Campbell: 2006). But it seems like a category mistake to claim we are a series of mental states. We have beliefs, our beliefs don’t have beliefs. Olson dismisses the view as akin to claiming that a dancer is really just a series of movements across a stage (2011). Anyway, leaving these worries aside, we will focus in this section upon the problems of duplication and causation if people are viewed as ultimately psychological information or a series of mental events.

There is a neo-Lockean idea that information about our mental states can be placed in another brain and we would be located there even if none of our matter is transferred. Shoemaker (1984) once held this view but has since abandoned it. The idea is that essential to us is the psychological information stored in our brain. That information can be retrieved, scanned, and uploaded. If your brain is destroyed in the scanning process and another human brain is rewired as yours was and thus comes to instantiate your psychological information, then you would have switched bodies.

One problem with this scanning, uploading, and re-embodiment approach is that it doesn’t involve the requisite immanent causation of an entity’s earlier states causing its later states (Zimmerman). Imagine a future in which a duplicate of you popped into existence at the other end of the galaxy. This is due to just a freak cosmic occurrence and is no way causally tied to your properties here on earth. Furthermore, assume you would be annihilated by a North Korean nuclear warhead the moment before your duplicate materialized. Few of us would believe that is you on the other side of the universe. Why not? Well, there isn’t any causal connection between your last moments and the duplicate’s emergence. So a cause is needed; but not any cause. If you weren’t destroyed but were scanned and that information sent to Mars and a body constructed just like your Earth body, few people aware of the scanning on Earth and the qualitatively identical construction on Mars would wonder which person you were. Even less would think that you have ceased to exist like an amoeba that divides and produces two duplicate amoebas. The best explanation of why you are still on Earth is that the person there is causally linked to you in the appropriate manner. That person’s earlier belief, desires and intentions immanently caused the later beliefs, desires and intentions. There was no intermediate third party controlling a Star Trek-like teletransportation device causally involved that scanned and duplicated your mental states. When immanent causality is lacking we have produced a duplicate, not partaken in space travel or even earthbound uploading. We’ll return later to this important notion of immanent causality.

It won’t help to abandon immanent causation and just insist that the Earth person is identical to the pre-scanned person since he is the “closest continuer” (Nozick) as both his psychology and body are retained on Earth while the Martian is only a psychological continuer. The problems is that duplication will reappear with or without closest continuers. Let’s look more closely at the latter scenario. Imagine before your brain is destroyed that it is scanned by two scanner and then information is sent to machines on both Mars and the Moon that use cell banks there to make duplicates of your body. Which person would be you? There are now two equally good candidates for being you. If you think you would be the first one sent and made, imagine that two scanners simultaneously registered your information and beamed the information respectively to equally distant teletransporters that created qualitative duplicates at the same time. To claim that you were one rather than other would involve the arbitrariness of claiming that when a cell divides, one of the duplicates is identical to the original. And it is not plausible to instead claim that you are the program, an abstract object that can be multiply realized. Nor is the result of duplication that you come to participate in a collective mind like Star Trek’s Borg as you don’t telepathically experience “from the inside” any “we thoughts.”

Philosophers typically maintain that we don’t survive if there are two objects with equally good ties to the original person. So we persist as long as there is only one person that instantiates information about our psychology or there is some other reason that makes one person the closest continuer even when the psychological ties are held equally between two candidates. Thus philosophers put forth an identity criterion where the identity of x and y across time consists of psychological relation which hold *uniquely* (Parfit: 1984; Nozick 1981; Shoemaker, 1984).

However, such a position means that what is called *The Only A and B Rule* will be violated. Any account that construes persons as fundamentally determined by psychology will fall prey to the rationale behind the *Only A and B Rule*. The transhumanist will have to hold an account of identity similar to Parfit (1984). Such a criterion for personal identity across time is that A at T1 is identical to B at T2i if and only if there is the i) the appropriate relation R (psychological continuity and connections) between A and B and ii) their being *uniquely* the possessor of such a relation.

Consider again the scenario in which a person’s brain is scanned, destroyed, and two copies are made, one on Mars and the other on the Moon. Each copy “contains” or “realizes” psychology sufficient to render the person with the post-scanning brain identical to the person who existed before his brain was scanned and destroyed. That is, if the procedure of copying had resulted in the destruction or non-production on Mars of one of the two possible rivals, the original person would have survived on the Moon. However, brains configured on Mars and the Moon according to information garnered from the scanning, each recipient of the scanned information would have equally good claim, given relation R, to be the original person. Thus the uniqueness clause (sometimes called the “no-branching clause” has to be included in the personal identity criterion to avoid violating the principle of the transitivity of identity since the original person can’t be identical to two persons who are distinct from each other. Thus something extrinsic to the relationship of the person on Earth and the person on Mars - the person on the Moon with the other copy of the brain - is what keeps the original person from being identical to the person on Mars.

Building that uniqueness clause into an analysis of identity violates the rationale behind the *Only A and B* rule (Hawley)which restricts questions of whether A is identical to B to their internal relationship, the existence of a C being irrelevant. Hawley argues that accounts which violate *The Only A and B Rule* should be rejected because they posit “unexplained existences.” The thrust of Hawley’s thesis is to explicate the intuition that there is something suspect about solving the fission or duplication problem by a no-branching or uniqueness type of clause that is found in the so-called closest continuer accounts of Parfit, Nozick, Shoemaker and others. Her point is there are unexplained correlations where things are dependent upon each other for their existence or demise but in a *noncausal* manner. So if the pre-scanned Earth person would be the person in the Mars body after the brain reconfiguration in accordance with scanned information if it wasn’t then for a psychologically continuous competitor person in the Moon body, then the person in the Moon body can prevent person on Earth from surviving. And this prevention would occur without there being any different causal interaction between the parties in this case than in cases where the Earth person survived as the person in the Mars body and when he didn’t. It is causally unexplained and quite odd that the Earth person stands in the same causal relationship to persons in the Mars or Moon bodies when he survives and when he doesn’t. In each of the cases where identity is preserved and where it is not, the same cerebra are scanned and destroyed or created and reconfigured. The causal relationship between the Earth person and the person in the Mars body is no different than when Earth person is that very person and when the person in the Mars body is not identical to the Earth person. Likewise for scenarios when the Earth person is identical to a person in the Moon body and when there is a person there who is not identical to the Earth person. One would have thought that the Earth person should be causally related in different ways to the person in Mars and Moon bodies when the Earth person is identical to that person and when he is not.

The second explanatory anomaly involves the claim that the person in the Mars body would not be that person if it wasn’t for the existence of the person in Moon body likewise being psychologically continuous with the Earth person. So the person in the Mars Body owes his existence to the person in the Moon body, and vice versa, but there are no causal connections between person in Mars body and the person in the Moon body despite the existence of each playing a role in the creation or sustaining of the other. It would be a different person in the Mars body that is psychologically continuous with the Earth person if the person in the Moon body person didn’t exist. But if there is a person in the Moon body psychologically continuous with the Earth person, and a person with the Mars body is psychologically continuous to the Earth person, then that not only prevents the earth person from continuing to exist, but it also *noncausally* brings it about that a different person inhabits the Mars body than would have been the case if the Moon body person didn’t exist. Likewise, it brings it about that a different person inhabits the Moon body than would have been the case if there was no one in the Mars body psychologically continuous with the Earth person

Therefore, Hawley provides us with reasons for denying that an identity criterion should include a uniqueness clause that says A and B are identical unless there is an equally good competitor C. Thus you won’t be identical to one person (or their information that would configure their mind) as long as there was not another person with similar information instantiated. Scanning and uploading and downloading persons depends upon an identity criterion with an uniqueness clause, but Hawley suggests no theory of our identity should include one. Thus we should look for an account of identity not susceptible to duplication puzzles. I think the theory of personal identity known as “animalism” can satisfy this need as animals can’t reappear somewhere else merely by using information about them to construct a mental or physical duplicate.

**VI. Cryogenics and Reassembly**

Unlike Lockeanism, animalism identifies human persons and human animals. They are not two distinct but overlapping thinking entities, but one and the same entity referred to with different terms. Human persons are animals with certain sophisticated psychological abilities such as self-consciousness or rationality. That animal existed before it acquired personhood and could exist after it is lost and lapses into an irreversible coma. No new entity came into existence with the onset of any kind of mental life, the animal just became a thinking person. Being a person is like being a student. You may be identical to a student but you are not essentially a student. You can cease to be a student without going out of existence. Likewise, animals can cease to be a person without going out of existence.

What does Transhumanism look like if persons are not distinguished from animals? The transhumanist claims our body or remains can be frozen after we die and then sometime in the future reanimated. Robert Ettinger’s *The Prospect of Immortality* launched the idea of cryogenic suspension. “Freeze the body in liquid nitrogen and preserve the body until a time when technology is advanced enough to repair the frozen damage and reverse the original cause of the deanimation.” Once the technology is obtained that can cure whatever we died from, offset any deterioration that occurred between death and freezing, as well as undo any damage due to freezing (crystal formation), we would be thawed and spring back to life. This does require that one die in the hospital and not in an explosion in the wilderness where one’s body can’t be preserved before considerable decay. But I don’t think it will even help if someday, the matter we had at our deaths could be tracked and reassembled just as Star Trek-like teletransporters do in science fiction.

My concern with cryogenics is not scientific but metaphysical. If death involves the loss of the life processes that produce the biological integration constitutive of life and our continued existence, then even fairly intact remains may have to be reassembled (somewhat) for the parts to instantiate life. But I’ll argue below that the reassembly involves a duplicate, not the original person. So my worry is that freezing the body comes either too late to restore you to life because the requisite reassembly is impossible or it occurs before you die and you are suspended rather than dead.[[12]](#footnote-12)

Readers might wonder what is wrong with reassembling a body, especially one that is mostly intact, unlike that reassembled by teletransporter technology. Well, they both suffer from the same problem. What the future doctors in cryogenic centers will have to do is something in principle the same as the teletransporter operators. In both cases they will be reassembling your parts in a way that makes a duplicate of you who might mistakenly think he is you. To help see why, imagine that a child’s sand castle is destroyed by an ocean wave and her parents put it back together. Would that be the original sandcastle? It seems not to be the original because the parts (grains of sand) are not where they are because the child put them there but because the parents did. So by analogy, it may be that even God come the Resurrection or Spock or Scotty at the controls of the Star Trek teletransporter can’t reassemble the same organism that dies and decays by configuring the very same atomic parts in the manner that they were before death, but would instead have brought into existence a duplicate. The parts are not where they are because of earlier life processes. They fail to be “immanently caused,” that is, the later parts and states of the reassembled human animal body are not where they due to the causal powers of their body’s previous biological parts and states (Zimmerman). They are where and how they are because of the intentions and interventions operators of the devices. This renders the person a duplicate of the deceased, just as the reassembled sand castle is a duplicate and not the original restored to existence.

If we living animal bodies don’t go out of existence at death, then it seems that we persist as a corpse. If that corpse is reanimated, then we would live again. However, I think we go out of existence at death and don’t become a corpse. At our death, there are remains that don’t compose a body any more than the cremains in an urn. What looks like a body is no more one than a Hollywood set façade is a house. The corpse doesn’t maintain and acquire parts like the living organism. Life processes are required to acquire or maintain parts. The alleged corpse would even seem to get parts through processes of decay (corpses smell because of new parts produced by putrefaction) and coroners sewing removed parts back into the corpse. That is not how the living can obtain parts. Such processes would produce foreign bodies within or attached to the living. Since the part/whole relationship of a substance like an organism should not be disjunctive (one disjunct for living organisms and one for deceased organisms) and it would need to be to accommodate posthumous composition, it is better to claim that organisms aren’t identical to their posthumous remains (Hershenov: 2005, 2009).

Readers will likely resist my claim that living bodies aren’t identical to dead bodies or perhaps instead insist that if there is enough structure found in what are remains rather than a corpse, reanimating them resurrects the original person rather than produces a non-identical duplicate. But I fear that there is no principled way between reassembling scattered parts and a corpse that has last the integration characteristic of life but has been frozen before its complete decomposition occurs. What can distinguish some reassembly of an earlier organism from complete reassembly? The natural response is to appeal to there being considerable structure remaining in the freshly preserved corpse. But is that anything more than appealing to intuitions about visual similarity? At death all the microscopic chemical relationships characteristic of life stopped (Olson, 1997). It looks like the same body but that is just due to macro similarities. It won’t function if thawed, unlike cryptobiotic organisms that just need heat to begin metabolizing again. Similarity of structures mean nothing if there isn’t similarity of function and the cryogenically frozen corpse can’t function when thawed. Earlier states of life aren’t causing the later states. The remains need to be rearranged. That suggests reassembly, no different in principle from teletransportation.

**VII. Conclusion**

*Foreign Policy* devoted an issue to “The Most Dangerous Ideas.” Frances Fukuyama’s essay answered that that transhumanism is the most dangerous idea. He worries that the “first victim of transhumanism might be equality” (2004, 42). He also fears that the transhumanists don’t appreciate the linkage of our traits and so “Modifying any one of our key characteristics inevitably entails modifying one of our complex interlinked package of traits and we will never be able to anticipate the ultimate outcome” (2004, 43).

These are not my concerns, however significant they are. What should really worry us is that if some of our best scientific minds and most influential citizens seriously pursue the belief that our best prospect of survival consists of replacing their organic bodies. They would be eliminating people and producing duplicates. The tragic irony of this is that neither those who will be eliminated nor those persons that replace them will know that this has happened. Now that is a dangerous idea.[[13]](#footnote-13)

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1. Kurzweil entitled his popular book *The Singularity is Near: When Humans Transcend their Biology.* [↑](#footnote-ref-1)
2. Transhumanists should instead hope that the health sciences reach “longevity escape velocity.” That is, as each year goes by, they can extend lives for more than a year. [↑](#footnote-ref-2)
3. Here is an early definition from the *Transhumanism Reader*. “Philosophies of life …that seek the continuation and acceleration of the evolution of intelligent life beyond its currently human form and human limitations by means of science and technology, guided by life promoting principles and values (More: 1990, 3). [↑](#footnote-ref-3)
4. I don’t even want to claim it is bad to create cyborgs who are part organism and part cybernetic machine. I would just want to insist that you are not the cyborg but, at best, its organic component. [↑](#footnote-ref-4)
5. Anders Sandberg speaks wistfully of “morphological freedom” [↑](#footnote-ref-5)
6. Steinhart defends a “digitalism” where there is no identity across time either before or after uploading. He insists that that there are no selves or substances, just distinct states though they instantiate an invariant program. He writes, “Things persist by turning into different things.” 257. Nevertheless, he considers this process of stages a satisfactory resurrection. Since I’m interested in your literally surviving death, I won’t explore Steinhart’s Parfit-inspired idea here that having non-identical entities psychologically tied to you posthumously should matter just as much to you as being the subject of those states. But see the (2017) critique of Parfit’s idea penned by Taylor and myself. [↑](#footnote-ref-6)
7. Unger (1990) and Baker (2000) defend inorganic body replacements upon these grounds. [↑](#footnote-ref-7)
8. For the details about how even persons that overlap but are distinct from organisms can still die, see my “Why Psychological Accounts of Personal Identity can Accept a Brain Death Criterion and Biological Definition of Death,” forthcoming in *Theoretical Medicine and Bioethics* [↑](#footnote-ref-8)
9. Or if the parts are *added* to our bodies, we don’t expand but are found within the cyborg as just the organic creatures. Organisms have their parts individuate by being caught up in the lives of the organisms and inorganic parts will no more become parts than our glasses. Serving a function that our body serves or should serve if healthy, is not enough to make something a part of your organism (Olson 1997) [↑](#footnote-ref-9)
10. It won’t matter if the person is four dimensional and not spatially coincident with the organism but arising later and perhaps ceasing to exist before the animal in the present world but able to survive the death of the animal in a possible future world. Their interests will come apart and autonomy will be impossible. See Hershenov and Taylor (2017) for other examples of conflicts between overlapping persons and animal. [↑](#footnote-ref-10)
11. This approach can trace its roots back Edmund Law, Locke’s editor, who interpreted Locke to be arguing that persons are modes of substances rather than substances or substance-like. See also LoLordo 2010 for support. [↑](#footnote-ref-11)
12. The latter is the view of Max Moore, who runs Alcor, the world’s largest cryogenics storage facility. Moore, who earned a Ph.D. in philosophy at USC after writing a dissertation on Parfit, refers to the bodies in his facility as patients for they are not dead but merely suspended. Death isn’t the stopping of a key organ like the heart but the setting in of decay However, if the aim is to return from the dead, then by definition, that will mean being reanimated after one’s body has lost the integration that is constitutive of life. [↑](#footnote-ref-12)
13. There are no conflicts of interest. [↑](#footnote-ref-13)