AI Relationality and Personhood

with Fraser Watts and Marius Dorobantu, "The Relational Turn in Understanding Personhood: Psychological, Theological, and Computational Perspectives"; William F. Clocksin, "Guidelines for Computational Modeling of Friendship"; Michael J. Reiss, "Is It Possible That Robots Will Not One Day Become Persons?"; and Léon Turner, "Will We Know Them When We Meet Them? Human Cyborg and Non-Human Personhood."

WILL WE KNOW THEM WHEN WE MEET THEM? HUMAN CYBORG AND NONHUMAN PERSONHOOD

by Léon Turner

Abstract. In this article, I assess (1) whether some cyborgs and AI robots can theoretically be considered persons; and (2) how we will know if/when they have attained personhood. Since our discourses of personhood are inherently pluralistic and our concepts of both humanness and personhood are inherently nebulous, both some cyborgs, and some AI robots, I conclude, could theoretically be considered persons depending on what, exactly, one means by "person." The practical problem of how we distinguish them from nonpersonal AI entities is, however, both more important, and much more difficult to solve. In conversation with various secular and theological accounts of relational personhood, I argue that only by treating AI entities as persons by default might we avoid the potentially catastrophic consequences of mistakenly denying personhood to an entire group of eligible entities.

Keywords: AI; criterialism; cyborg; human; identity person; personhood; relationality

Will We Really Know Them When We See Them?

All human beings are also persons in some sense. The qualifier "in some sense" is necessary, because, like the term "human," "person" resists easy definition, acquiring many different meanings as parts of multiple and frequently disparate discourses across the arts, humanities, and sciences. There is no especially good reason to believe that any meaning is superior to, or more basic than any other, and some human individuals may not be persons in all possible senses. Nevertheless, we manage to apply

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the term accurately and consistently to entities sufficiently like ourselves. As Eric Olson (1999, 53) writes, "There is a fair consensus about what things count as people: no one doubts that you and I and Boris Yeltsin are people, and that houses and bronze statues of people aren't. Although there are disputed cases (foetuses, infants, adults suffering from severe senile dementia), their number is small compared with the number of items we can confidently classify as people or non-people. In this respect 'person' is no worse off than most other nouns… The word 'person' is well enough understood for there to be philosophical problems about people." To paraphrase Supreme Court Justice Potter Stewart's famous declaration, we know them when we see them, even if we find them difficult to define, and we disagree about what they are and how they work. But how confident should we be that this will always be the case? After all, much of modern technology, from the most basic telephone answering machines to the most sophisticated robots and generative AI systems, are specifically designed to mimic particular human capacities and abilities, and sometimes to replace human persons altogether. Our ability to distinguish human persons from nonhuman, nonpersonal entities is now challenged on a daily basis.

For some, the dissolution of the boundary between human and nonhuman is a *fait accompli*. Donna Haraway, in her article "A Manifesto for cyborgs," first published almost 40 years ago, argued that because technology already permeated all areas of human life, the boundaries between organism and machine were already forever blurred: "Insofar as we know ourselves in formal discourse (e.g. biology), and in daily practice … we find ourselves to be cyborgs, hybrids, mosaics, chimeras. Biological organisms have become biotic systems, communications devices like others. There is no fundamental, ontological, separation in our formal knowledge of machine and organism, of technical and organic" (1985, 42). Haraway's concept of the cyborg has been extremely influential, but the abandonment of all possible means of separating organic human from inorganic life still looks premature. Her concept of the cyborg is subtle, and operates at multiple levels, but in a very simple, practical sense, despite the great complexification of the mechanical scaffolding of all areas of human life in the last four decades, there are still very clear boundaries between machines and living organisms, regardless of how much they depend on each other (cf. Geertsema 2006).

We do not treat our home computers, internet-connected smart refrigerators, mobile phone voice assistants, or even fully synthetic robots in the same ways we treat any form of organic life, let alone other human beings. This is not to say we don't care about them in some sense, but we do not relate to them in the same way as our human friends or relations, or even total strangers for that matter. We do not usually worry about the emotional lives of machines because we do not usually believe they have

emotions, and we are happy to upgrade them with newer models when they break because they are functionally almost identical. People are not so easy to replace, even if we can find functional equivalents for some of those with whom we have relationships—second spouses, new employers, or alternative shop assistants, for example. At the very least, almost everyone would concede that the relationships we have with inorganic objects, including those designed specifically with human interaction in mind, are nothing like the relationships we have with other human beings (cf. Smith 2022).

Nevertheless, recent technological developments raise the possibility that however much we may wish to preserve the current status quo (Bryson 2010), our ability to distinguish human from nonhuman will be deeply compromised by the appearance of a new generation of hybrid and synthetic entities, which will incorporate technology in ways unimaginable in 1985 (cf. Barfield 2019). There may come a time, therefore, when deciding what is and isn't human will depend upon resources rather more penetrating than visual acuity. These potential developments inspire much stronger feelings than the gradual diffusion and infiltration of technology documented by Haraway, and are a cause of serious anxiety for some (Sharon 2013).

Since Alan Turing developed his infamous test for artificial intelligence in 1950, the increasing degree of resemblance between human and machine behavior has been imbued with great philosophical and sociocultural significance, and as the discernible difference between them diminishes at a frightening pace, serious discussion about the conceptual boundaries between human persons and intelligent machines are ever more pressing. My primary focus here is on two practically inseparable, if theoretically distinct, questions: (1) whether some cyborgs and fully synthetic AI robots can be squeezed into the diverse range of concepts of persons already at our disposal; and (2) how will we be able to tell if/when some machines deserve to be considered persons? The first question is simple to answer. Once we acknowledge the nebulousness of our current concepts of persons and the inherent pluralism of discourses of personhood, the answer is almost certainly "it depends on what you mean by person." The second question may seem more difficult, but it too might have a simple answer, albeit one likely to antagonize those who prize conceptual and methodological precision—"we'll know them when we meet them."

In exploring these two questions, I will examine two possible routes we might take toward qualifying cyborgs and fully synthetic AI robots as persons. The first confers personhood upon entities on the basis of their resemblance to the only completely uncontroversial examples we have of persons—human beings. The closer the resemblance to a human being, both biologically and in terms of physical and mental abilities or capacities, the more likely an entity is to qualify as human. The second seemingly

severs the connection between personhood and humanness on the basis that a superordinate concept of personhood cannot be abstracted from concrete, particular individual human beings. According to this view, personhood is not an abstract quality, but is better understood dynamically as what individual persons do in the process of relating to other persons and their environments. It is irreducible to any constellation of attributes or capacities. If nonhuman entities can also do it, then they deserve to be treated as persons, since persons are simply those entities that appear to understand themselves as persons, and who are treated as persons by other persons.

There are, of course, many other possible routes we might take (see Hubbard 2010), but these two expose key conceptual issues underlying the prospective personhood of AI entities very clearly. They are also of great help in advancing a further major claim of this article—that however we conceive of persons and personhood, there will always be borderline cases that are almost impossible to adjudicate. Whereas, as Olson observes, there are already disputed cases of persons, the unfolding technological revolution seems certain to multiply these entities exponentially. Even if one stipulates that only human beings can be persons, as some Christian theologians have suggested, the proliferation of borderline cases seems unavoidable. Precisely how these entities ought to be treated may turn out to be a much more important and complex issue than whether some intelligent machines can be considered persons.

One final qualification is necessary before proceeding. What follows is not based on any reasoned critique of current or future technology. We are still many years from the advent of anything approximating a synthetic humanlike being. Regardless, the following discussion is not limited to the discussion of currently available technology, or so-called "therapeutic" modifications of the human person (see Chadwick 2009). Rather, I proceed on the basis that human beings may be technologically enhanced in all the ways imagined by science fiction, and that synthetic humanlike minds and bodies will one day be possible. Not everyone agrees this is likely to occur (e.g., Geertsema 2006; Coeckelbergh 2010; Dorobantu 2021), but this maximally different future has especially interesting implications for the understanding and development of the concept of personhood, and it can be explored without embracing the certainty professed by some that it will all come to pass.

What Is a Human Being?

At first glance, the notion of the cyborg represents a significant evolution of, if not quite a clean break from, our working concepts of the human, which rest on a few very prominent criteria. Chief among these is the distinctively human body (cf. Chappell 2011). Nobody, of course, with the

exception of some radical reductionists, believes that our understanding of what it means to be a person can be fully satisfied by an exhaustive analysis of our shared biological heritage, but human bodies are the one thing that absolutely all known persons have in common. This is not a trivial observation, since, as Timothy Chappell (2011, 5) argues, "… the sort of properties that criterialists home in on are not criteria of personhood at all. Rather, they are dimensions of interpretation of beings that we already take to be persons." Given the critically important connection between humans and persons, our concepts of humanness deserve special attention. We had better be quite clear, then, about what being human entails. Unfortunately, despite the fact that we use the term freely and accurately in everyday life, our concepts of the human are exceedingly difficult to articulate.

For now, at least, what counts as human is usually taken to be a question for genetics. It is a very simple conception of the human and, on the face of it, among the most stringent—a single criterion of humanness permitting a simple binary distinction. A genomic conception of humanness is assumed to be the only reliable way to unite all those entities with human bodies, despite the huge variation in their shapes, sizes, configuration, and condition. It renders consideration of all physical and mental capacities irrelevant to the question of whether an organism is human, conferring precisely the same degree of humanness on athletes, chess grandmasters, newborn babies, those with deeply compromised minds, and even seemingly mindless, incommunicative bodies. It is also often supposed to erect a solid boundary between the human and the not-human. Animals, computers, mythical beasts, and so on, however much we might anthropomorphize them, and whatever their legal or ethical status, simply do not qualify.

Unfortunately, a genomic conception of the human quickly runs into difficulties under closer examination, just because there is no definitively human genome. There are rather billions of human genomes that are similar for the most part, but quite different in many important ways. Those parts of our genomes we all have in common with each other (as much as 99.6%) are so fundamental that we share the vast majority of them with other organisms, particularly the nonhuman primates who are our closest evolutionary relatives. Hence Steve Fuller's lament that, "Even at the genetic level, there is no clear cut-off point between the 'human' and the 'non-human'" (2021, 670). There is, then, an irreducible ambiguity about even the most fundamental biological means of understanding the human person. The blurriness of the genetic boundaries between human and nonhuman means we discriminate between them on the basis of features that are more accurately described as typically, as opposed to definitively, human. As Dieter Birnbacher suggests, "…*homo sapiens* is what has been termed a cluster concept, or a concept corresponding to Wittgenstein's

model of family resemblances rather than a concept definable by a purely conjunctive set of necessary and sufficient conditions … In other words, if there are sufficient conditions of membership in the human species, it seems doubtful that there is only one set of them and not a number of alternative conditions" (2009, 98).

This conceptual nebulousness clearly raises a number of problems for any attempt to judge whether something is a person on the basis of how closely it resembles human beings. But even without it, human biology represents a poor theoretical foundation for personhood. Particularly vexing for our current concerns is the fact that biological conceptions of the person cannot specify how far entities can deviate from the typically human form before they cease to qualify as human. For example, how much human body is really necessary to anchor humanness (Olson 1995; Hudson 2001, 2007; Burke 2003)? Considering an entity to be human on the basis of the possession of small quantities of human tissue leads to the ridiculous recategorization of all sorts of chimeras as human, including pigs genetically engineered to grow human organs (Lu et al. 2019), or mice with human ear-shaped cartilage on their backs (Cao et al. 1997), and perhaps even entities like Schwarzenegger's *Terminator*. But if the large majority of an entity is composed of human tissue, what could prevent it being designated human?

The notion of the cyborg exposes these kinds of conceptual issue exceptionally starkly. In practice, the problem of how much organic human tissue can be removed before an entity ceases to be human is never encountered because the limits of survivability are reached long before the question is worth asking, but, in theory at least, cyborgs are a quite different proposition. Although the large majority of the technological enhancements envisaged by transhumanists pose no threat to the humanness of the subjects thus transformed (see Birnbacher 2009), as the proportion of organic human tissue relative to synthetic material in a body decreases, there must inevitably come a point where an entity ceases to be human in a strictly biological sense, even if they might remain human in other possible senses.[1] Must we then reach a consensus on the question of "How many carbon-based organs must a robot have to be considered a human being and how many silicon-based organs must a human being have to be considered a robot?" (Campa, Corbally, and Rappaport 2020, 802). I doubt very much that any such consensus could ever be reached on organ count alone.

Even if we could agree on a minimum human tissue quotient for qualification as a human person, it is abundantly clear that not all body parts carry equal weight in the exam. A human being with a prosthetic arm is still human, even if the arm ends with twelve fingers and can bend I-beams, but the overall humanness of an entity controlled by an entirely artificial brain, however human the rest of its body, is much more difficult

to defend (Burke 2003). But, just as with all other types of human tissue, it is not remotely clear how much human brain is necessary to qualify as human. Our unshakeable belief in the enduring humanness of at least some brain-damaged individuals makes it clear that some parts of the brain are superfluous to the concept of humanness, but which parts? Different answers to the question of what it means to be human have tended to diverge on the capacities they consider most central, so why would they not diverge on the relative importance to humanness of the brain regions that enable and support those capacities? Does the primary visual cortex matter as much as the hippocampus? And, for that matter, which parts of the parts of the brain that matter most matter most? The search for more and more basic features, occupying more and more senior positions in the overall hierarchy of human constituents is doomed to failure.

What if we change track and ground personhood not in human bodies, but in the abilities that those bodies enable? Of particular interest, according to this approach, are the cognitive abilities that are often supposed to set us apart from all other organic life forms. Unfortunately, this appears to be no less problematic since identifying distinctively human mental traits is as hard as identifying distinctively physiological traits. Indeed, regardless of the criteria we choose, every criterialist approach to defining personhood runs into the same difficulties—the only really universal human characteristics are not uniquely human. A steady stream of research documents other animals that are able to perform physical and mental tasks of similar types, if not of comparable complexity or practiced skill, to those previously deemed the exclusively human (cf. Laland and Seed 2021). Other primates display humanlike self-awareness (DeGrazia 2009); even nonmammalian animals—for example, corvids—use tools on occasion (Rutz, Hunt, and St Clair 2018); orcas carefully plan and coordinate their actions while hunting (Visser et al. 2008); elephants mourn their dead (Bradshaw 2004); chimpanzees, it has been argued, possess moral agency (Andrews 2013); and so on, and so on. Each of these studies demonstrates not just the manifestation of humanlike capacities in other organisms, but also the variety of behaviors that may constitute evidence of particular capacities, and the different degrees to which certain capacities might be realized.

Even if we concede that human beings do these things differently, in a more complex way, or to a higher standard than other animals, we are left with the problem of deciding on the range of abilities and proficiencies that might qualify a given entity as a person. Just how self-conscious does one have to be, for example? As self-conscious as a gorilla? A dolphin? A Macaque? Ought persons be able to do algebra? Are mentally impaired human beings not persons? And if not, do people with degenerative neurological conditions gradually cease to be persons over time? There is no principled way to reach a decision on these matters, and if we cannot

decide what constitutes distinctively human cognitive life, then we cannot discriminate between personal and nonpersonal cyborgs or AI robots on the basis of their instantiating such abilities if degree of human resemblance is the sole criterion, even if we can all point to examples of entities that clearly fall on one side of the fence or another.

The lack of clarity in the rules of how to discriminate human from nonhuman makes the border between the human cyborg and the nonhuman cyborg so thin as to be practically invisible. There must be an event horizon where a human entity slips into the nonhuman domain, but its precise location will be almost impossible to discern. To be absolutely clear, I am not suggesting that there are no plausible answers at all to these questions. Rather, the problem is that these questions have multiple plausible and equally defensible answers, and we have no principled way to choose between them. The "best" answer will always be determined by the context in which the question is asked and the subjective biases of the questioner, since how we decide something is human appears to be as much a matter of personal preference, instinct, or intuition as the result of a rational, balanced, reasoned, process. This, it is interesting to note, is a fact that philosophical thought experiments on the subject of personhood from John Locke to Derek Parfit have always depended upon to justify their reasoning. As a result, the boundary between the human cyborg and the nonhuman cyborg—or between the human and the nonhuman—is not just thin, it is constantly moving depending on what one deems indispensable, and there is plenty of opportunity for disagreement. Between the terminator and the human with a pacemaker, one can imagine an infinite number of hybrid entities whose theoretical status as persons remains in limbo for the time being.

So, how far have we progressed toward answering the two main questions set out at the beginning of this article? The first question, whether some cyborgs and fully synthetic AI robots can be squeezed into the diverse range of concepts of persons already at our disposal, can already be partly answered affirmatively. The personal status of AI robots will be addressed in detail below, but it is already clear that our concepts of the human are clearly both sufficiently nebulous and sufficiently ambiguous to accommodate a diverse range of human bodily forms and, consequently, at least some hybrid, cyborg entities. If human beings can be persons, then, on this view, so can at least some cyborgs. In fact, the range of cyborg entities that may qualify as persons on this basis alone is likely to be quite wide, just because the range of forms that this concept of the human is able to accommodate is also quite wide.

As for the second question, which asks how will we be able to tell if/when some machines deserve to be considered persons, the discussion so far provides little cause for optimism. If we judge the personhood of an entity by the extent to which they resemble human beings, regardless of

which abilities or capacities we select as the qualifying criteria, there will always be some practically irresolvable borderline cases, which will likely meet some criteria for authentic personhood, but not others. Given that some purely organic human beings will also fail to qualify as persons depending on the qualifying criteria we choose, the emergence of cyborgs may not seem to present a novel theoretical challenge to our embedded intuitions about personhood, but cyborgs may bring certain issues to a head, in the sense of forcing decisions to be made on matters that we have been content merely to debate until now. After all, although our concepts of humanness are flexible, they cannot be infinitely so, and although the boundary between the human and the nonhuman is very difficult to draw, it will have to be drawn somewhere if borderline cases increase exponentially. For the time being, we are free to apply instinct, intuition, common sense, or whatever we want to call it, in deciding what is and is not human, but wherever we draw the dividing line, we run the risk of welcoming some entities into the fold of personhood that we would intuitively rather exclude, and excluding others we would rather welcome.

So far, I have focused on the conceptual difficulties presented by cyborgs, but we can also easily conceive of wholly synthetic entities that raise similar problems if we remain committed to the idea that personhood should be awarded on the basis of human resemblance. Since these entities lack human bodies, one potential means of qualifying as persons is instantly closed to them, but they may yet resemble human beings sufficiently in other ways to deserve further consideration. The vast majority of such entities seem likely to be stranded in the borderlands between persons and nonpersons while we debate interminably the relative merits of bodily and nonbodily constituents of humanness, before deciding arbitrarily where to draw the dividing line. Intuitively, the replicants from Ridley Scott's *Blade* Runner, who are all but physically and cognitively indistinguishable from human beings, the Terminator, and Commander Data—a humanlike, but entirely synthetic entity whose primary story arc over seven seasons of *Star Trek: Next Generation* centers upon his contemplation of the extent of his own human resemblance—are not equally deserving of borderline person status. It is not easy, however, to articulate what might get any of them over the line to authentic personhood. Perhaps an alternative, less strictly criterialist approach to conceptualizing personhood might serve us better, and potentially minimize, if not completely eliminate, the number of borderline cases that might arise? So-called relational approaches to personhood seem especially promising in this regard.

Who Is a Person?

One increasingly prominent conception of personhood in a variety of different fields rejects the notion that it can be identified with abstract

humanlike attributes or capacities (such as brains, reflexive self-awareness, or human-like emotions), preferring instead to focus upon questions surrounding the activity of the whole individual entity in a complex social and physical environment. For these theorists, personhood is something one achieves and enacts by virtue of being embodied and embedded in mutually constitutive relationships with other people and the world over time (Turner 2013; Heersmink 2018; Wallace 2019). The umbrella term "relational" is often used to describe this general way of thinking about personhood, but it is important to note that relationality means very different things to different people (Turner 2013).

The particular relational approach I want to explore in the context of nonhuman personhood views persons as concrete individuals rather than members of an abstract category of entities, and entails a much more radical view of relationality than the more traditional social psychological notion that persons are born into, and develop within, complex social environments, but exist somehow independently from them. On this view, relationships are not just arrangements that preexisting entities enter into, or things that happen *to* people, but are rather conceived as integral to their personhood. Where criterialist approaches typically focus upon static, universal, natural biological, and cognitive characteristics of human personhood, these radically relational approaches emphasize its social and temporal constructedness. Personhood is assumed to emerge from personal relations over time. It is not a possession or an attribute, but a continuous process of becoming. At any given moment, persons are the unfinished, unfolding histories of their relationships—both the products of prior interaction and the foundations of their future selves. And because relationships are necessarily historically and geographically contingent, this understanding of persons means they are unique, unrepeatable, and nonsubstitutable concrete entities, even if they bear a family resemblance to each other. All persons are likely to have some things in common, but their personhood is not grounded exclusively in those common features.

Supporting this view of the person by synthesizing its temporal and relational dimensions (Turner 2013) is the notion of narrative identity, contemporary versions of which are grounded in a broad array of works by philosophers, phenomenologists, psychologists, and constructionists of various kinds (Menary 2008; Heersmink 2018; McAdams 2018). For these theorists, persons are both created and maintained over time through the telling of stories about themselves and the stories that others tell about them. They are at once the subjects and objects of those stories, which emerge from tangled webs of historical relationships, and are inconceivable in isolation from them. Through narrative, individuals acquire their senses of being continuous over time and are able to present themselves to themselves and others as singular beings throughout and across different

relationships. From this perspective, it is nonsense to conceptualize persons and personal identities in isolation from each other—as if persons exist prior to the construction of their identities—since persons are as much the products of the narratization of experience as its instigators.

But unlike the majority of psychological accounts of personal identity, narrative approaches to identity do not simply transfer the locus or seat of personhood from the bodily to the cognitive realm. Bodies are not assumed merely to be the possessions or vehicles of autonomous centers of consciousness, but are themselves essential constituents of the relational activity that constitutes personhood. As Calvin Schrag observes, "The body as lived is not an external indicator of an 'I' or a 'me' residing somewhere within it. The body as lived is veritably *who* I am … the self-identity that one articulates in one's story-telling is always entwined with a self-identity of bodily intentionality and motility" (54). Crucially, although there is growing conviction in places—particularly among those committed to the notion of the embodied mind (see Clark 2008; Shapiro 2011)—that distinctively human bodies underpin, even partially constitute, distinctively human cognitive processes, this in no way suggests that the capacity to narrate a personal history of relating to the world depends upon anything exclusive to the human body. At most it means that human narratives require human bodies as much as human minds. As stories of the whole individual person, narrative approaches to identity inherently resist psychological attempts to subdivide the human being, and thereby ground the answer to the question of "who" an individual person is in any single specific attribute.

How does this turn to relationality contribute to the debate of whether AI entities can be persons? As far as the specific goals of this article are concerned, it advances the discussion in two important interrelated ways: first, by severing the connection between humanness and personhood, and second, by dramatically expanding the range of possible entities that might consider themselves to be persons, and accepted as such by others. If personhood emerges continuously in and through the relationships of individual entities with each other and the world, there is nothing about this process that limits it to human beings. We are all persons inasmuch as we are created and renewed in the writing and telling of personal stories. If both entirely synthetic AI robots and cyborgs that do not quite qualify as human are nevertheless treated as persons inasmuch as they are partners in reciprocal relationships in all the same ways as human persons, then why should they not come to tell similar stories about themselves? And since they too must be understood as unique, singular, nonsubstitutable, embodied entities—if they are constituted in part by their relationships so that they too are continuously developing histories of unique relational episodes—then on what grounds could we deny they are concrete individual persons like any human being? When understood in these terms,

unmodified and enhanced human beings, the human born cyborg whose organic body has been gradually but completely replaced by functionally equivalent technology, and Star Trek's Commander Data are all undeniably persons. This is not to say that any artificial entities necessarily qualify as persons in all possible senses permitted by our pluralistic discourses of personhood but in this particular sense they are persons to the same degree as any human being.

Unfortunately, but also unsurprisingly, this conclusion does not tie up all the loose ends of our discussion. Despite its obvious appeal in some respects, this relational account leaves some critically important issues unresolved. In particular, the very practical problem remains of how we can actually identify those entities that should subsequently be treated as actual persons instead of mere borderline cases of persons or "nearly persons." In everyday life, we strictly control our attributions of personhood, bestowing it upon others intuitively on the basis of our own self-experiences as living human beings. Regardless of which theoretical positions we endorse, we cannot help but compare candidates for personhood to the only examples of persons of which we are currently aware—other humans. This echoes a point argued forcefully by Chappell (2011), who supposes that criterialists have it back to front in their attempts to define persons. We do not decide humans are persons by running through a checklist of qualifying criteria, he suggests, but rather assume they are persons on the basis that they have already been identified as human. Only then, he suggests, do we look for confirmatory evidence of our intuitions. It is a process that routinely results in both false positives and false negatives, neither of which usually have very severe consequences.

Whereas we can certainly conceive, as so many science fiction writers have, of entities that are so humanlike we would not hesitate to treat them as persons, how could our self-experiences form the basis of a belief in the authentic personhood of something that appeared to be very different from ourselves? On what criteria could we possibly decide this if the single criterion that we habitually use to infer personhood—humanness—is absent? In these special cases, Chappell concedes, the criterialists may be right after all. We must require special evidence to sway our opinions, even if we do not object in principle to the notion that nonhuman entities can be persons.

So, what resources might assist us in this task? Tests have been devised to identify evidence in machines of capacities believed to be unique to human beings, such as self-awareness, for example, but it is never clear that passing such tests means very much (Bringsjord et al. 2015). There is always the possibility, common in AI research, that machines have been very carefully engineered to mimic persons, their responses, and emotions (Leite et al. 2012), and to address whatever idiosyncratic tasks have been posed by specific tests. Those machines are more often described as

zombies than persons (Bringsjord et al. 2015, 499). Comparable tests for a machine's ability to construct a unique identity from its history of relating to, and being related to by the external world, are just about conceivable, but whether a machine's passing of those tests constitutes real evidence of relational personhood if that is the sole purpose for which it has been engineered, is much more debatable.

At the root of the dilemma is the fact that if we conceive personhood in explicit opposition to the concept of the abstract individual as radical relational approaches have done—if personhood is not rooted in any particular capacity—then there is nothing quantifiable to test for. Even though the generation of personhood must depend upon certain physical and/or mental capacities, including perhaps the capacity for self-narration, because personhood is not synonymous with those capacities, one cannot logically infer it from their apparent instantiation in an individual entity. Looking for evidence that a machine is structuring "memories" in a narrative form is identical to the process of checking that its programming is working as it should. There is no test for the sense of being the self-same unique individual over time. Indeed, since personhood is seen more as a way of being in and relating to the world than an attribute of any kind, and as constituted in part by relations with others, it is not immediately clear how any sort of test for authentic personhood might be devised in the future, nor what the difference between a pass and a nearly pass on such a fictional test might be. And so, we remain stuck with the inescapable problem of identifying qualifying criteria for personhood based on a concept of the prototypical human being and, consequently, the generation of yet more irresolvable borderline cases of personhood. Degree of human resemblance, it seems, is all that really matters in the end.

Whereas I hope it is clear from the discussion to this point that some cyborgs and some AI robots can unproblematically be declared persons according to at least some ways of conceptualizing personhood, I have not tried to argue that the personal status of AI entities should therefore be universally accepted. I have rather been concerned to show only that our conceptions of personhood are untidy enough to accommodate a range of other entities alongside human beings, and that this untidiness simultaneously makes the practical task of adjudicating borderline cases of personhood extremely difficult. It should also be apparent that, given the ease with which AI entities can be theoretically accommodated, anyone wishing categorically to exclude these entities from being persons had better have a good reason. In the final section of this article, we will examine some Christian theological accounts of personhood that appear, perhaps unwittingly, to exclude AI robots on the basis of certain *a priori* assumptions derived from their distinctive theological anthropologies. These accounts reinforce the importance of recognizing the inherent pluralism of discourses of personhood, and help clarify the distinction

between an entity's identification as a person and their treatment as a person. Simultaneously, the focus of several theologians upon the concreteness of individual personhood emphasizes the very practical nature of the problem presented by the potential proliferation of borderline cases of AI personhood.

Human, Nonhuman, and Nearly Human Persons

Nobody could spend more than five minutes researching the subject and conclude that Christian theologians in general are in any way hostile to the spread of technology in the modern world that may potentially enhance human being, or even lead to the creation of other conscious, intelligent entities. Concepts of the "created co-creator" (Hefner 1993) have been deployed optimistically alongside extensive and thought-provoking analyses of various readings of the *imago dei* (Herzfeld 2022; Dorobantu 2021), and there have been abundant discussions of the theological implications of transhumanism and posthumanism, almost all of which are moderately celebratory in tone (Cole-Turner 2011). These examples represent just a few especially active areas of theological engagement with AI over the last twenty years. Many theologians, especially feminist theologians, also welcome concepts of the cyborg inspired by Haraway as a positive disruptive force in theological anthropology that exposes the paucity of entrenched static (patriarchal) ideas of human persons and celebrates diversity and change (see Kull 2001). Almost nobody seems terribly concerned that the emergence of AI robots will destabilize our concepts of human beings or their roles in God's creation. Some note with apparent bemusement that since Christian theology is already replete with nonhuman persons, AI robots should cause it no conceptual problems at all (Campa, Corbally, and Rappaport 2020, 805).

Given that notions of relational personhood in all disciplines typically share a mutual disregard for abstract (and perhaps internalist) concepts of the person, one might expect to be able to tease out a similarly unified position on the prospective personhood of nonhuman entities among those who embrace the turn to relationality in a broad sense.[2] This is apparently not the case. Above, I suggested that the human status of AI robots depended on the extent to which we are able to divorce the concept of humanness from the concept of personhood, and in at least one sense, in a purely secular context, the separation between the two can be made very clear. From the perspective of theological anthropology, despite the ubiquity of relational accounts of human being, and even a growing theological interest in narrative concepts of identity and processual views of personhood more generally, "human" and "person" are not always easily divided. The extent to which one is comfortable with the relative independence of

the terms depends on precisely how one's relational view of personhood is derived.

For example, focusing on the importance of particularity to the concept of person, as opposed to the concept of the individual, orthodox theologian John Zizioulas argues "Personhood is not about qualities or capacities of any kind: biological, social or moral. Personhood is about hypostasis, i.e. the claim to *uniqueness* 'in the absolute sense of the term" (1991, 45). Zizioulas' solution to the problem of human particularity is to ground it explicitly in a notion of the person as hypostasis that he bases upon his understanding of the Trinity. Identifying God the father as the personal cause of both the son and the spirit, he argues that the Trinity is a "primordial ontological concept" rather than a notion that is somehow added to the divine substance. Here, "person" is accorded ontological primacy over substance, and personhood is understood as constituted only in communion. Hence, Miroslav Volf (1998) writes, "the Father never exists alone, but rather only in communion with the Son and Spirit; the other two persons are the presupposition of his identity, indeed of his very existence…The communion is always constituted and internally structured by an asymmetrical-reciprocal relationship between the one and the many" (78–79).

Zizioulas' interpretation of the Cappadocian fathers thus leads him to conclude that particularity too, as integral to the notion of person (which he takes to be identical with hypostasis), is ontologically primary, and emerges in communion with others. The concepts of relationality and particularity, then, are also inexorably conjoined in the concept of the human person, created in the image of God. Whereas relationship is ontologically primary in Zizioulas' anthropology, AI robots, even if they look, act, and think precisely like human beings, and mimic human relational capacities perfectly, seem unlikely to qualify as persons. This is because the only two sorts of entity that can properly be described as hypostases are human and divine persons, and human persons only because they participate in the relation of the son to the Father through baptism. For Zizioulas, the ontological foundation of human personhood depends fundamentally on the Christological context, and AI robots, however humanlike they might be, must be excluded.

David Kelsey on the other hand, rejects the sort of social Trinitarianism exemplified by Zizioulas because he objects to the way Zizioulas identifies hypostasis and the idea of the human person. Indeed, as Pickstock (2011) and Alistair McFadyen (2012) note, Kelsey is curiously unconcerned with the doctrine of *imago dei*, despite its ubiquity in the rest of contemporary theological anthropology. His relational anthropology is grounded instead in what he terms the "ultimate context" of anthropology—the unique way in which God relates to human beings. Kelsey (2006, 2009) devotes considerable time to differentiating the term "person" from other terms that

describe human beings or aspects of human beings in their "proximate contexts," by which he means the physical and social environments of their quotidian existence. For Kelsey, "person" has a very narrow technical theological meaning, which should not be confused either with "individual" or "human," and certainly not with "hypostasis." Since the word "person" is so deeply entrenched in all areas of Christian thought, Kelsey's own preferred terminology has not gained much traction in subsequent theological anthropology.

Reflecting on the story of Job, Kelsey attaches special importance to the notion of Job's "having been born as his creation" (2009, 291). Persons, he suggests, are more accurately described as "human living personal bodies" (308). Unsurprisingly, then, he too explicitly disqualifies synthetic AI robots (as well as extraterrestrials) from personhood, not on the basis that they can never relate to others as humans do, or manifest the same psychological capacities, but simply because they are not human. He writes: "If (a) what theological anthropological claims refer to are what God creates in our having been born, then (b) what God creates in our having been born is actual living human bodies and he identifier of the class of human living bodies, is (c) human DNA. AI is an abstract operating program for a computer, not a concrete body of any kind; robots are not organic—that is, 'living bodies'; extraterrestrials presumably do not have human DNA" (259). Throughout his brief assessment of nonhuman entities, Kelsey specifically addresses the question of their humanity, rather than their personhood, but the implications are the same, and he is willing to treat cats, dogs, aliens, and AI robots as equally nonhuman for his theological purposes.

Given that it is a work of theological *anthropology*, there is no particular reason why Kelsey should address the personhood rather than the prospective humanity of robots. A subsequent observation that we cannot know much about the eschatological future of robots, and their reconciliation with God because we don't know much about how other entities might be capable of responding to God, implies that he mostly views the question as tangential to his core thesis. We should note, however, that Kelsey is unlikely either to object to the notion that humanlike AI robots might be considered concrete *individuals*, even if they are not formally persons in a technical sense, or to deny them the rights and protections afforded to human beings. This brings Kelsey in line with what Chappell (2011) argues is essentially the humanist's retort to accusations of "speciesism," which refers to the claim that only humans can be persons—denying an entity membership of a particular species does not "…imply that members of other species could not be drawn into the moral community of the human" (14). In Kelsey's anthropology, "individual" plays much the same role in its relation to "human individual" as "person" plays in secular accounts of the relationality of personhood. Certainly, his sympathetic

treatment of Stephen Lukes' (1973) critique of abstract individualism develops his own thinking about the paucity of postenlightenment thinking about human beings in which Lukes' term "concrete person" is functionally replaced by "concrete individual" without any apparent loss of Lukes' intended meaning.

Kelsey is not alone in carefully skirting the issue of synthetic personhood in theological discourse. The question of the personhood of AI robots remains theologically sticky precisely because of the extra ethical and ontological weight the term "person" carries over and above "human." Many perceive no urgent need to pin their colors to any particular mast, when the future for AI is still so uncertain, and so judiciously choose not to overcomplicate what is already a very fluid field of research with unnecessary philosophical speculation. For Noreen Herzfeld, for example, the question of AI personhood must remain unsettled because no synthetic entity as yet approaches the necessary capabilities, but she appears reluctant to discuss AI robots in such terms at all. This is partly because, she suggests, personhood "…represents a binary choice – either something is a person or it is not" (2023, 14), a choice that she sees at odds with the multiplicity of meanings and demands upon the term "person." Our understanding of what it means to be a person, she concludes, is "simultaneously too vaguely defined and too specifically applied" (14). She continues, "Legal systems demand yes-or-no answers, while our intuition finds no easy demarcation, no identifiable line, the crossing of which confers personhood" (14).

Since the early days of theology's interest in the technology of the future, Herzfeld has pioneered an insightful understanding of the *imago dei* after the manner of Karl Barth, which locates intelligence of all kinds firmly in the relational sphere, linking action to response, and meaning to emotion. Thinking of intelligent nonhuman entities in terms of relationships, she asserts, can "account for a spectrum of intensity and an ambiguity that personhood cannot" (2023, 14), and for these reasons she apparently prefers to eschew the categories of person and personhood altogether. Whether or not this is a sustainable position as waves of new technology break over us must remain an open question for now.

In the absence of a consensus about the personal status of AI robots, recent theology's contribution to the debate is still extremely useful in several ways, and not only because of the historical influence that theology has exerted on our understanding of human beings, especially upon the relational conception described above and various personalist philosophies more generally. Most importantly, perhaps, it reinforces the point that this is not an abstract debate that can be conducted entirely in isolation from the lives of the concrete individual entities under discussion—both human beings and potentially cyborgs and AI robots. There is more at stake here than the numerical expansion of a group of faceless abstract entities. Individual AI persons ought to matter as much as any other persons. This point is significant enough to deserve further exploration.

It seems likely that the vast majority of cyborg and synthetic entities will be borderline cases of personhood just because there are more ways to build machines that aren't obviously persons than there are ways to build machines that obviously are. These borderline cases of personhood represent an imminent practical problem for any just society because of the possible implications of their *mis*classification. Misclassifying the remains of long-deceased ancestors or relatively simple machines as human has no meaningful repercussions. Similarly, the misclassification of nonhuman cyborgs or entirely synthetic AI robots as human should not have implications that reach too far, even from a theological perspective. But whether or not one classifies a given entity as a *person* matters a great deal because of the numerous entitlements of persons, which are denied to animals and machines (see Hubbard 2010; Smith 2022). Many of the major social issues of the day are centered upon historical or contemporary instances of the large-scale, catastrophic denial of personhood to certain groups.[3] We should not be blind to the possibility that AI persons could suffer a similar fate.

Our discussion up to this point suggests it will be incredibly hard not to hopelessly mismanage the future adjudication of AI candidates for personhood, but there are good reasons not to be too despairing. As I have tried to show, the theoretical pluralism, and the nebulousness of our concepts of personhood are not so much the result of philosophical failure as they are built-in mechanisms to cope with the fact that human persons already take so many different forms. What appears on the surface to be theoretical and conceptual imprecision might be seen in another light as invaluable theoretical flexibility. I have suggested in several places that we rely on intuition as much as formal criteria when we critically assess the claims to personhood of borderline cases. Intuition, in this case, can be understood as what guides an extremely flexible decision-making process. And this notion of intuition might also help us sketch out the bare bones of an acceptable strategy for dealing with the issues raised by rapidly advancing AI technology.

We each make numerous decisions about whether it is appropriate to treat something or someone as a person in everyday life. These include decisions about how to interact with severely mentally compromised individuals, people in permanent vegetative states, and even other animals including nonhuman primates. They also include failed attempts to engage automated response systems in conversation, and decisions about whether to worry about the rustle in the bushes at the bottom of the garden at night, or whether the speechlike sounds we can hear, but not clearly locate, are emanating from a human being. In each case, we presume we are interacting with other persons until either our presumptions are vindicated or we realize we are mistaken. Sometimes, no final decision can be reached and the interaction ends unsatisfactorily. Each of these examples is also evidence of the fact that neither cases of mistaken identity nor

uncertainty arising from the attempted adjudication of apparent borderline cases of personhood are new phenomena.

Our interactions with other entities are not characterized, in the first instance, by the application of strict criteria, which allow us to classify some of them as persons once and for all and others as something else entirely. Rather, they are characterized by an openness to the possibility that a given entity is a person, and a willingness to believe this is so until it is proven otherwise. As Chappell observes, "to treat someone as a person is not to put a tick in the box by her name, to show that she has passed some inspection or met some standard of rationality or self-awareness or emotionality or whatever….To treat someone as a person is to engage with him as the kind of creature to which that ideal applies. So to treat him is not, at the deepest level, a response to his behaviour at all, but to his nature. To see some creature as a person is to take an attitude to that creature, which, before any behavioural evidence comes in, is already different from our attitudes to creatures that (we think) aren't persons" (2011, 9–10).

Chappell's argument is that the criteria by which we decide some entities are persons, may well represent essential aspects, attributes, or dimensions of individual persons, but they should not be mistaken for *tests* of personhood. From this perspective, the ascription of personhood to anything or anyone is an ongoing, incomplete process involving trial and error. It is a process that may see personhood granted and rescinded many times, but however it ends it begins always with the assumption that the other entity is a person like us. Exactly what counts as good evidence for personhood will differ from one person to the next, as one would expect if the process is guided more by individual intuition than strict rules. Intuition, here, is what motivates an individual to draw the dividing line between persons and nonpersons in one place and not another. In some cases, this means extending personhood to cats and dogs, and to others, sadly, it means denying personhood to particular groups of human beings.

This view resonates particularly strongly with the relational approaches to personhood described above. Lukes' and kelsey's concept of the concrete relational individual, for example, sees individual personhood as emerging from and developing through concrete interactions between individuals and their worlds. Personhood is neither a state nor a quality, but an incomplete history of relations that can be viewed partly as the product of ongoing negotiations between individuals treating each other as persons. This is a dialogical process that Alistair McFadyen (1990) describes in terms of the call to personhood that one individual issues to another and the free response of the other that answers such a call. Although both McFadyen and Chappell have specifically human persons in their sights, there is no reason why the process of establishing whether other sorts of entity, including AI robots, and cyborgs, are also persons should play out any differently.[4]

At the risk of sounding both too flippant and too optimistic, then, maybe the best approach to the expected appearance of AI entities resembling human persons sufficiently closely to be considered persons is simply to embrace the nebulousness of our concepts of personhood and to keep on behaving exactly as we currently do. We may not be able to pin down precisely what will convince us that particular AI entities are persons, but there is no reason to doubt that we will know them when we meet them. Formal tests for robot personhood may be forthcoming, but we should at least consider the possibility that they will be no better than the tried and tested strategies we have employed throughout human history.

In conclusion, I have suggested that the two main questions of this article have relatively straightforward answers, despite the enormous complexity of the field. Although they are straightforward, they remain, in many ways, unsatisfying, precisely because they embrace the complexity of the concepts involved and resist the reduction of the problem to something altogether neater and easily quantifiable. In response to the first question, of whether our extant concepts of persons can stretch to include AI robots, I have argued unequivocally in the affirmative. Some AI robots could theoretically also qualify as persons despite their inhumanness. The only reason for denying this would be an ontological commitment to the principle that only human beings can ever be persons—a principle that appeals to an unrealistically simple conception of human being. The second question, concerning the problem of how we will be able to tell when machines should qualify as persons remains, unfortunately, as thorny as ever. Whichever criteria we use to identify authentic personhood, the line between qualification and disqualification is so thin, and so arbitrarily placed that we will certainly disqualify some that intuitively we would rather qualify and vice versa. We have little choice, I have suggested, but to continue to rely on the intuitive, trial-and-error–based processes of differentiation that have served humanity adequately so far. We should accept that we will sometimes make mistakes, and that not everyone will agree with our decisions, but there is nothing lost by treating synthetic AI entities as persons by default. This approach is not without precedent. As Bryson (2010, 2) notes, something similar to this default position was implied by Daniel Dennett's "intentional stance," according to which rights of agency should be accorded to anything that appeared to be acting in an intentional manner, simply because of the unbearable costs of misclassifying a sentient being as nonsentient. Why should we treat AI entities any differently?

Acknowledgments

This work was supported by a grant from the Templeton World Charity Foundation to the International Society for Science and Religion, TWCF 0542.

Notes

1. Conversely, we might also imagine a case whereby a machine gradually becomes fully human as a result of extensive human tissue grafting, or even an entity travelling the full circle from machine to human and back again.
2. The importance of the notion of relational personhood to theological anthropology is by now very well established, but, mirroring the secular human sciences, there is a large variety of ways to unpack this idea (e.g., Anderson 1982; Zizioulas 1985; McFadyen 1990; Medley 2002; Shults 2003; Kelsey 2009).
3. The notion that AI robots should have legal rights and protections is a rapidly expanding area of research characterised by many of the same themes as discussions of robot personhood. Joshua Smith's *Robot Theology* (2022) is a comprehensive overview of this field, which makes these connections very clear. However, the question of the legal personhood of robots represents just one discourse or strand of AI personhood research, and the putative legal rights of robots do not depend directly upon their being granted personhood *per se*. Like animals, national parks, and other public spaces, robots could be granted certain legal protections without receiving many of the other rights typically accorded to human persons.
4. Research conducted by Marchesi et al. (2019) demonstrated that human persons do sometimes adopt the intentional stance toward humanoid robots, even when there is no suggestion the robots are acting on the basis of anything other than programming. Further research by Willemse and Wykowska (2019) confirms that robot behavior has a strong influence on how they are perceived by humans and the sorts of social interaction that are likely to follow.

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