Consequentialism without Consequences: Ethics and Embryo Research

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The legitimacy of embryo research, use, and destruction is among the most important issues facing contemporary bioethics. In the preceding paper, Ingmar Persson and Julian Savulescu took up an argument of John Harris and tried to find some new ways of avoiding its dramatic consequences. They noted that: ''John Harris has argued that if ... it is morally permissible to engage in reproduction ... despite knowledge that a large number of embryos will fail to implant and quickly die, then ... it is morally permissible to produce embryos for other purposes that involve killing them, for instance, to harvest stem cells'' and suggest that this argument fails.

This is a somewhat perplexing and, we believe, deeply problematic paper, perplexing because the argument that Persson and Savulescu present seems self-defeating and problematic because they develop (yet) another view of the moral status of the embryo that is neither coherent in itself nor useful in ethical discussions regarding the fate of embryos. The paper does, however, raise some important questions regarding the ethics of embryo research and the moral relevance of various kinds of potentiality.

Why Persson and Savulescu's Paper Is Misdirected

The Argument Briefly Summarized

In the original paper that Persson and Savulescu purport to criticize, Harris establishes what we will call the Argument from Natural Reproduction, namely: *Given* that Condition X (embryos have equal moral status to full persons) applies *then*:

H0) Natural reproduction and indeed any activities (unprotected intercourse, IVF) that involve deliberate embryo loss ought to be unacceptable, and if they are generally accepted, then embryos cannot have equal moral status; *but* (and regardless of the moral status of the embryo),

H1) Provided that the purposes are of comparable importance,[1] *if* (i) natural reproduction (NR) is acceptable, *then* (ii) embryo research (ER) should be acceptable.

Persson and Savulescu's response seems to be as follows:

PS1) Condition X does not apply, that is, embryos *do not* have equal moral status to full persons. (See p. 52: ''[I]f natural reproduction is to be

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permissible, as it normally is, the moral status of embryos must be lower than that of babies who are assumed to have a right to worthwhile life.'')

PS2) But Condition Y (embryos have some moral standing in view of their Actualizable Potential, AP) could apply (see generally second paragraph p. 55 and discussion of AP on pp. 57–58); and

PS3) if Y applies, then (i) (NR acceptable) does not necessarily imply (ii) (ER acceptable; see p. 55: ''on this view, Harris's claim ... is mistaken'').

The reasons for asserting (PS3) are not clear in the Persson–Savulescu formulation, but they appear to rely on the following implicit claims:

PS3.1) It is wrong to use embryos with AP as mere means (p. 56: ''[ER] consists of using embryos merely as means''), and/or

PS3.2) it is wrong to fail to show embryos with AP equal concern.

These assumptions about the moral meaning of Actualizable Potential require unpacking and analysis, because (as we shall see) they are poorly grounded and may lead to incoherent outcomes; this will be a job for the second part of this paper.

The argument continues:

PS4) Under Y, however, (i) (NR acceptable) could imply (ii*) (ER acceptable on embryos for which implantation has been ruled out, that is, embryos lacking AP).

The Difficulties Summarized

The problems we see with this and the reasons, therefore, why we think Persson and Savulescu's paper fails to make a useful point are these:

HC1) Premise PS1 and the argument leading up to it are misdirected. In the second section of their paper, Persson and Savulescu use an argument along the lines that *if* (i) (NR acceptable) *then* Not-X (embryos do not have equal moral status) to form the basis for their subsequent criticism of the argument presented in Harris's paper. This argument is wholly unnecessary, as the first part of Harris's original argument (H0) says precisely this. But because many people believe both (i) and X to be true, *even if they are logically incorrect to do so*, the second part of Harris's original argument (H1) remains necessary. We are in agreement with Persson and Savulescu that actually X is not true, embryos do not have equal moral status; but the purpose of Harris's argument is to target those who believe the contrary. So there is no purpose, as far as an analysis of the Harris argument goes, to demonstrating that X is not true and then constructing further arguments based on this claim.

HC2) With reference to Premise PS2, there appears to be no good reason given as to why Condition Y should apply; the concept of Actualizable Potential is poorly justified, and previous arguments, of which it is a form, have been shown to fail. Furthermore the formulation of AP is logically incoherent.

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HC3) The argument presented in PS3 and the reasons as to why, under Condition Y (the AP view of moral status), (i) does not necessarily imply (ii) are not well explained, in that no account of the moral meaning of AP is given, and when these reasons are extricated and examined (PS3.1 and PS3.2), we find that they are themselves logically flawed and lead to inconsistent outcomes.

HC4) If Y (embryos have moral standing if and only if they have AP) applies, then it is not necessary to invoke (i) (NR acceptable) to show that (ii) (ER acceptable). If Y, then ER is acceptable anyway on any embryos that lack AP. Given the definition of AP presented by Persson and Savulescu and in particular the ''social'' element of their formulation, this only excludes the case where ER would preclude an actualization that *would* (NB: not *could*) otherwise occur, that is, taking a woman's embryos when she wants them for reproduction, and that is obviously unacceptable for a whole host of other reasons. This renders the criticism that (i) does not necessarily imply (ii) and the subsequent attempt (in PS4) to construct conditions under which (i) does imply (ii) rather irrelevant.

HC5) Finally, in PS4 the authors add a qualification to (ii) (embryo research and production of embryos for research is acceptable) in the form of (ii*) (when to produce those embryos for reproduction is not a viable alternative), with the intention of excluding the exceptional case already noted above. This, however, does no useful work because, as noted in HC4 above, Y implies (ii) on its own and nobody is suggesting that the exceptional case become the rule! In other words, there is no practical relevance to the added clause in (ii*).

Now, because part of the point of Harris's original paper was to show that *even if* X *then* (i) implies (ii), a paper that disclaims X and denies therefore that (i) implies (ii) but purports to create a new view Y on which (i) implies (ii*), where the difference between (ii) and (ii*) is of no practical import, is itself sterile and without potential.

Preaching to the Choir: It's Not about Moral Status

The argument Persson and Savulescu reject is Harris's argument that sexual reproduction involves the deliberate sacrifice of the lives of embryos and that therefore those who regard the embryo as ''one of us'' cannot consistently defend sexual reproduction nor indeed most forms of protected intercourse. This sacrifice is deliberate because it is known that such sacrifice is the inevitable consequence of unprotected intercourse and therefore those who choose unprotected intercourse or otherwise risk conception also choose such sacrifice. She who wills the end wills the means also. The point of Harris's argument (its only point!) is to operate on the consistency and coherence of the belief that the embryo has full moral status, is literally ''one of us.'' Thus when Persson and Savulescu ''suggest that the moral status of embryos be downgraded'' (p. 57), they make a mind-bogglingly familiar suggestion and more importantly they render their modified argument pointless, because if the moral status of embryos can be downgraded in a way that removes protection of the lives of embryos (as Persson and Savulescu require) and if it is one that has irresistible appeal, then no further

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defense of embryo sacrifice or research is required. Moreover it is doubtful that Harris needs help in arguing that the moral status of the embryo is not one that can protect its life, because he has been making this argument consistently (and he believes effectively) for more that 30 years.[2] Persson and Savulescu go on to point out that,

> in the potentiality view we have sketched, . . . an embryo that has a claim to be something more than an object to be used merely for the benefit of other things, in virtue of its potentiality to become a person, will lose this claim when implantation is ruled out. Its moral standing will then be on par with that of a pair of gametes. (p. 57)

The accounts Harris has given of moral status also have this effect, but neither of these are the arguments we need for those who reject any downgrading of the moral status of the embryo, however convincing.

The Persson and Savulescu version of the potentiality argument also fails for the reasons that all such arguments fail.[3]

In the first four paragraphs of the second section of their paper, Persson and Savulescu argue "if natural reproduction is to be permissible, as it normally is, the moral status of embryos must be lower than that of babies, who are assumed to have a right to worthwhile life. . . . Thus, embryos have no right to worthwhile life" (pp. 52–53). Although this is, we believe, true, it is not news, and the same point was argued more concisely in Harris's original paper: given that "the creation and destruction of embryos is something that all those who indulge in unprotected intercourse and certainly all those who have children are engaged in," it follows that "a certain reverence for or preciousness about embryos is misplaced."[4]

Persson and Savulescu's paper focuses entirely on the second part of the Argument from Natural Reproduction (H1), and their criticisms fail as a refutation of the argument, as we will now demonstrate.

What Is the Point of AP?

Persson and Savulescu state that "[o]ur argument is to the effect that there is a plausible view of the moral status of human embryos, according to which the truth of (ii) does not follow from the truth [of] (i)" (p. 60). By this "plausible view," they mean the theory of Actualizable Potential (AP) that they go on to outline in the fifth section.

We believe that the AP view of moral status has no plausibility at all, and, in any case, this is not an argument of which they seem confident, because they later state (on p. 55) that "for present purposes, it is not necessary to defend this view of human embryos. We merely wish to show that, in this view, Harris's claim that his argument from (i) to (ii) has the virtue of sidestepping debates about the moral status of embryos is mistaken." But if it is not necessary to defend this view (and, indeed, we are of the opinion that this view is indefensible), then why should we accept its use to find flaws with Harris's argument, let alone to justify the necessity of offering "a revision of Harris's argument"? There is little purpose in showing that if one adopts a view that there is no good reason to adopt, an argument (H0), which is in any case not intended to be applied to this view which they admit does not work, fails. Moreover, if one does take this view, then

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there is no need to construct a modified version of Harris's argument from the acceptability of natural reproduction to the acceptability of embryo research, because embryo research would then be justifiable in virtue of the moral status of the embryos.

The rationale behind Persson and Savulescu's attempt at constructing the AP view of moral status seems to be that, in their own words, they are attempting to develop "a possible view of the moral status of embryos that would make it at least logically consistent to support natural reproduction with high foreseeable embryo loss but oppose the intentional killing of embryos" (p. 52) in support of their position "that there is no logical inconsistency in engaging in natural reproduction with a high embryo loss but opposing embryo research" (p. 52). Persson and Savulescu may be right to claim that there is no logical inconsistency here, but this is true if and only if the doctrine of double effect holds;[5] however, neither we nor, we think, Persson and Savulescu believe the doctrine of double effect to be tenable.[6] Alternatively, if one values natural reproduction and other uses of the embryo differently, then this statement could hold true provided that natural reproduction is justified because its greater value outweighs the wrong done by sacrificing embryos, whereas the value of embryo research is not sufficient to justify the sacrifice; but this is just the position that Harris's argument from natural reproduction has refuted.

The Problem(s) with Actualizable Potential

Persson and Savulescu's argument relies on their construction of a particular view of the moral status of the embryo that they term "actualizable potential." This is not a new theory; indeed, it has been raised in at least one form before and roundly criticized in that incarnation by one of the present authors![7]

No Good Reason

The first difficulty with the doctrine of AP is that there is no good reason to develop such a view. The original argument (H0), we believe, holds even in the case of Equal Moral Status (a more stringent position than AP), and, therefore, there is no need to create an attenuated version of moral status and a revised version of the argument to match. There are further problems, however, with the justification given for developing the concept of AP in the first place.

Persson and Savulescu state, by way of justification for adopting AP, that "[c]ommonsense morality apparently gives some moral weight to the potential of embryos to become persons" (p. 55). Since when, however, has "commonsense morality" been a convincing reason to discard consistency and rationality in philosophical debate? It must be pointed out that commonsense morality also gives moral weight to all sorts of other irrelevant factors, as well as endorsing views that are clearly absurd—for example, commonsense morality used to tell us that homosexuality was wrong, whereas slavery was acceptable.

Moreover, AP in the form presented by Persson and Savulescu is unlikely to appeal to advocates of commonsense morality, let alone to any other groups who might hold views on the moral status of embryos. Those at one extreme who defend the embryo's absolute right to life would reject the criterion of "actualizable," whereas, for those who subscribe to a view of moral status based on

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capacities such as sentience and self-awareness and the possession of rights and interests, potentiality is irrelevant because people either have rights or interests or they do not. Quite apart from any genuine philosophical justification provided, which, as we will go on to argue, is scant in itself, Persson and Savulescu's version of AP states that "a baby born in a civil war and extreme famine may have no actualizable potential to become an adult person" (p. 58), and would presumably therefore allow the same sorts of destructive research on such an infant as on embryos that lack AP. It is unlikely that this is a position that anyone relying on common sense to determine morality would endorse!

Beyond the lack of justification for introducing it, however, there are serious problems with the doctrine of AP in itself, both in its use of potentiality as a ground on which to base moral status and the use of the concept "actualizable" to qualify that moral status. Let us revisit Persson and Savulescu's formulation of Actualizable Potential, the essence of their argument. They assert that AP forms the grounds for some sort of moral standing, in that "spare embryos, which cannot be implanted ... have no moral standing because they have no actualizable potential" (p. 57).

Actualizable Potential is then defined as follows:

> An embryo has the potential to become a person if it has the appropriate genes, proteins, and other internal structures that, given a certain environment, enable it to develop into a person. Whether this potential is actualizable depends on whether the relevant external conditions, be they biological or social, obtain that are sufficient to enable the embryo to realize its potential. (p. 57)

The Fallacy of Potentiality

The potentiality argument admits of only two interpretations. Either it is interested in end states (or later states), and the entity with potential has value because the end state is valued, or important either intrinsically or instrumentally, and this value is such that the potential for it must be protected and actualized. This argument has familiar weaknesses.[8] Or, the potentiality argument is elaborated in terms of a rather different principle that Harris has called "the principle of waste avoidance."[9] In this interpretation, potential should not be wasted either because of Dworkin-like considerations of investment[10] or because waste is a bad thing or because the waste of this thing is bad, which reinvokes the classic potentiality argument.

The potentiality of something, or some things, has moral importance on the assumption that actualizing a particular potential is what matters. We would not worry about what precisely it is that has the potential to be a person, or an adult human being, if persons or adult humans did not matter. We are only interested in the potentiality argument because we are interested in the potential to become a particular, and particularly valuable, sort of thing. If the zygote is important because it has the potential for personhood, and *that* is what gives it a special moral status, that is what makes it a matter of importance to protect and actualize its potential; then whatever has the potential to become a zygote must also be morally significant *for the same reason.*[11] Those with their "eyes on the prize" value potentiality for personhood not because the potential is contained within

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"one organism," but because it is the potential to become something the actualization of which has moral importance.

The view adopted by Persson and Savulescu, that "an embryo has the potential to become a person if it has the appropriate genes, proteins, and other internal structures that, given a certain environment, enable it to develop into a person" (p. 57), thus seems inapt. Perhaps they are trying to say something about intrinsic viability and embryo loss, for example, that loss in natural reproduction is somehow less bad because the embryos that are lost lack AP. This would not be very useful to them in any case, because at least some of the embryos lost in natural reproduction are lost for reasons other than lack of AP (that is to say, reasons other than nonviability), but, otherwise, this construction does little work toward their argument and seems to throw the weight of the argument back onto externalities.

Actualization, Not Actualizability, Is What Matters

For Persson and Savulescu, an embryo with AP has greater moral status than one which does not have AP

> because an embryo that has a claim to be something more than an object to be used merely for the benefit of other things, in virtue of its potentiality to become a person, will lose this claim when implantation is ruled out. Its moral standing will then be on par with that of a pair of gametes. (p. 57)

Persson and Savulescu have, however, a slippery and ultimately incomprehensible notion of moral status. They start by implying (in the passage above) that the embryo has AP in vitro and, hence, can claim the moral status this allegedly implies, but that the embryo "will lose this claim when implantation is ruled out." In a subsequent passage, though, they make it clear that "an embryo in a petri dish lacks actualizable potential to become a person" (p. 57). This inconsistency probably arises simply from a lapse in concentration, but the malaise is deeper. The problem is that if something is valuable, has moral status, in virtue of its potential *and only in virtue of that potential*, then it is the actualization, not the actualizability, of the potential that matters. As they emphasize in the passage already quoted, "[B]ecause an embryo . . . has a claim to be something more than an object to be used merely for the benefit of other things, in virtue of its potentiality to become a person," that claim to protection rests on the importance of protecting the person the embryo will become. It is, by hypothesis, nothing in itself but everything in virtue of its potential. Potential that is "actualizable" but will not be actualized is nothing because it is personhood, not the potential for it, that matters. Thus the potentiality of an embryo is only respected where all reasonable attempts are made to actualize the potential and protect the entity that supposedly has the valued potential. The valuing of an entity for its potential is expressed only by reasonable attempts to actualize the potential. AP is clearly offered as a value-conferring property and must therefore include a maximizing or at least a protecting imperative, for maximization can be achieved only by addition (maximization) or by nonreduction (protection). But Persson and Savulescu advocate neither for AP embryos. Without maximization or protection

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we have *consequentialism without consequences,*[12] *because if the potential (the good consequences) are not realized or protected once realized, the value conferring element is absent.*

Consider again the crucial passage in which Persson and Savulescu explain how the moral status that goes with actualizable potential is gained and lost:

> [A]n embryo that has a claim to be something more than an object to be used merely for the benefit of other things, in virtue of its potentiality to become a person, will lose this claim when implantation is ruled out. Its moral standing will then be on par with that of a pair of gametes. (p. 57)

In this view, if an embryo will lose its claim to actualizable moral status "when implantation is ruled out" it will not gain this status unless and until implantation is ruled in. But, in a passage so memorable that it instantly sprang to mind on reading the above, Julian Savulescu has eloquently insisted that "[w]hat happens when a skin cell turns into a totipotent stem cell is that a few of its genetic switches are turned on and others are turned off. To say it doesn't have the potential to be a human being until its nucleus is placed in the egg cytoplasm is like saying my car does not have the potential to get me from Melbourne to Sydney unless the key is turned in the ignition."[13] Here Savulescu clearly believes that skin cells have actualizable potential and his automotive analogy is quite right in one sense; if what matters is getting from Melbourne to Sydney, then his car has that actualizable potential and he eloquently explains what is needed to actualize it. It follows that skin cells have the actualizable potential to be persons and so, of course, do eggs and sperm and those embryos produced as part of sexual reproduction. Of course, for other reasons, Savulescu might not actually end up in Sydney, so we must now turn to how he deals with what Harold Macmillan memorably described as "events, dear boy, events."[14]

The Problem with Actualizability

Because Persson and Savulescu are neither against abortion nor the creation of embryos for research, they have no trouble with either ending the actualizability of potential nor in ruling it out *ab initio.* Nor do they (in some moods) see any reason not to move an in vitro embryo from the status of actualizable to non-actualizable potential. They are thus simply not serious about potential, not least because they show no interest in, nor feel any obligation to, maximize or protect it. Assisted reproductive technology produces tens of thousands of embryos annually. Most of these start off with actualizable potential, which they lose when their genetic parents decide they are no longer needed and allocate them to research or to destruction as they please, and as far as we know Perrson and Saluvescu have no objection to this either. But it gets worse:

> As we conceive of the concept of actualizable potential, the concept of potentiality refers to states *internal* to the being and the concept of actualizability refers to states *external* to the being that together cause it to actualize its potential, for example, a normal human embryo that has a potential to become a person to become such a person. Thus, such an embryo in a petri dish lacks actualizable potential to become a person

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> because it is not in an environment that allows it to become one, whereas such an embryo in a normal uterus has this actualizable potential. Likewise, a baby born in a civil war and extreme famine may have no actualizable potential to become an adult person, for, due to social conditions, that individual will never become a person. (pp. 57–58)

But what about an embryo in a Petri dish destined for implantation into the receptive womb of a willing mother versus an embryo in a normal uterus whose owner has been the unfortunate participant in a one-night stand and is about to take the morning-after pill to ensure no unwanted consequences? Consider again Savulescu's fully functioning car on a day when he has decided to go to Sydney and on a day when he has decided to scrap it? Savalescu seems to believe that the consequences of thinking "I will scrap my car because I never wish to drive this car to Sydney" have somehow affected what we might call his car's existential status, which is what AP must involve. In the Persson–Savulescu account Savulescu's car loses its actualizable potential to get from Melbourne to Sydney *in virtue* of his decision to scrap it, whereas one might think the rational owner would decide to scrap his car because it had lost its potential for desired journeys.

Actualizability in the view Persson and Savulescu present depends on events and third-party intentions. It is, as they say, not a state of being, not internal, but a function of externalities. If this is right, then it will never be known whether or not an embryo, nor yet a fetus, nor yet a newborn has actualizable potential until the potential is actually actualized! Like the condition of being "toti-potent" in cells, it is not unequivocally detectable in advance of the embryonic cells demonstrating their capacity to develop all parts of the organism, including the extra-embryonic elements. Persson and Savulescu's unhappy example of the civil war babies confirms this. Of all the babies "born in a civil war and extreme famine" some, perhaps many, will perish, but almost certainly not all. And equally almost certainly, it will not be known in advance which will be which. How then can anyone respect this enhanced status of actualizable potential? How can it affect what we do or do not do to and with the embryos or children in question?

Actualizable Potential Lacks Moral Meaning

It is necessary to their argument that Persson and Savulescu accept that AP confers some sort of dignity and moral standing upon its possessors that would require us to act in a certain way toward them, whereas entities without AP lack such status. Although such dramatic changes in moral status do not matter for cars, which have value only instrumentally, the same is not true of embryos for those who accept any enhanced moral status for such creatures, including status derived from AP. Consider a laboratory technician in the fertility clinic who finds an embryo left in an icebox on the bench, without any instructions as to whether it is destined for the wastebasket or the womb. What should she do with it? Is its potential actualizable or not? As Harris and Stanton have commented previously, "[I]t is not clear why [third party] intention is relevant to the moral status of the entity in question"[15] any more than it would be in terms of, say, the possession of rights or interests.

Simply according something a nominal enhanced moral status in virtue of potentiality is pointless and indeed hypocritical if the claim to protection it

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implies can simply be "ruled out" and the moral status implied thus changed at will. It would be like saying that slaves have the actualizable potential to be free but denying any moral reasons to free any particular slaves.

To illustrate this, imagine a woman undergoing in vitro fertilization (IVF) who has had created for this purpose six embryos. All are currently possessed of AP, according to Persson and Savulescu's definition, because as yet none of them are spare and all are desired for reproductive purposes. Current IVF practice dictates that a maximum of two embryos be implanted. The woman accordingly selects (at random, as the Fair Lottery principle would dictate) two embryos for implantation; one successfully implants, is carried to term, and completes the woman's family. In so doing, the woman has transformed the four remaining embryos from AP to non-AP, by the Persson–Savulescu definition; but we (and we believe Persson and Savulescu) cannot possibly argue that she was wrong to do so; otherwise no embryos prepared for IVF should ever be implanted, for in fulfilling the reproductive needs of their prospective parents they are negating the actualizable potential of their siblings! Moreover, the status of the four remaining embryos may change again if the woman, having been made cognizant of the possibility of donating her embryos for implantation to third parties, now decides to do so—making the potential of these embryos actualizable again until some subsequent recipient decides that her family is now complete and consigns the embryos to the dustbin of history or, more usefully and ethically, to research.

Fair Lotteries

Persson and Savulescu suggest selection by fair lottery (FL) is acceptable but direct selection (DS) is not in relation to actualized (real) persons. They then attempt to apply this to embryos that, although they may have AP (however that is defined), are *not yet* real persons. Persson and Savulescu do not assert that possession of AP confers the same moral status as an actualized person. Why, then, should an argument regarding what we ought or ought not to do to persons have any bearing by analogy on what we may or may not do to entities with AP? Admittedly Persson and Savulescu do acknowledge that "the analogy . . . breaks down" (p. 55) but they offer no good reason why we should apply the same moral reasons to our treatment of AP embryos as to persons properly so called, and, in fact, doing so would lead to outcomes inconsistent with the authors' position as expressed elsewhere.[16]

Imagine again our woman seeking IVF treatment, with six embryos all waiting to be implanted, but add now the fact that her reason for seeking IVF treatment is that she and her reproductive partner are carriers of a genetic disease and want to have a child free from this health burden. All six embryos are in possession of AP (because the genetic disease we are imagining here does not prevent them from growing to personhood, though the life of sufferers is filled with hardship when compared to nonsufferers).

If the FL/DS argument made in relation to actual persons holds for AP entities, then we are barred, morally speaking, from choosing which embryos to implant, which should survive, on the basis of which are "healthy" and which are not. The FL method requires that "we regard each patient as an end to an equal extent by giving her the same chance to survive (and pursue her ends) as any other." The embryos in this scenario, however, are not regarded as ends to an equal extent; their chance of

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survival is predicated on whether or not they happen to possess the right combination of genes. We would, I think, regard it as morally unjustifiable to discriminate between the "Five Patients" in Persson and Savulescu's scenario on the grounds of disability or disease and to practice direct selection against those already unfortunate enough to suffer disadvantage.[17] If we are likewise wrong to determine the embryos' fate in this way, then the entire practice of preimplantation genetic diagnosis must be regarded as morally abhorrent, and although there are some who would attempt to argue this, we do not think Savulescu is among them![18]

We may forestall a possible objection that, in the case of DS, it is "stipulated that there is no morally relevant ground for selection" (p. 54), while one might argue that the expectation of reduced quality of life (or reduced "life expectancy, social usefulness, etc.") of the person who would result from a diseased embryo does constitute such a morally relevant ground. Quite apart from whether our authors are correct in asserting that reduced life expectancy or social usefulness *is* a morally relevant ground for choosing whose lives are more valuable,[19] let us reimagine the preimplantation selection scenario where the ground for selection is one that Persson and Savulescu themselves class as morally irrelevant: sex. Once again, the FL/DS argument as applied in relation to these AP embryos would prevent us from selecting embryos for implantation on the basis of sex. But this is something that Savulescu himself has argued strongly in favor of allowing on many separate occasions.[20]

Creating Embryos for Research or Not at All?

A further demonstration of the inapplicability and outright disutility of AP as a guide to any sort of moral action is found in Persson and Savulescu's exposition of what they consider to be the consequences of its application:

> when the creation of embryos for research purposes becomes an issue, creation for reproduction is almost invariably not a realistic alternative. So, the relevant question is whether, when implantation of embryos is excluded, we can act wrongly toward an embryo by creating it and using it as mere biological material rather than not create it all. (p. 57)

But when is implantation of embryos excluded? This is a breath-takingly broad question that is scarcely narrowed by their later formulation, "[o]nce the reproductive needs of a family or society have been satisfied." (Which is it, the family or the society? Or both? And which society?) The imposition of this condition, however, leads them to add what should be an unnecessary qualifying statement to Harris's original argument: "it is morally permissible to produce embryos for other than reproductive purposes that involve killing them . . . when to produce them for reproductive purposes is not a viable alternative" (p. 58).

What does it mean to say that "to produce them for reproductive purposes is not a viable alternative"? The addition of the qualifying statement either amounts to the platitudinous assertion that you should not take a woman's embryos for research (or create them for research) when she wants them for reproduction, which is obviously right in whatever view of moral status you choose to take, or it says that you should not produce any embryos for research—or, for that matter, allow any *spare* embryos to be used in research—until all reproductive needs of

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every person who might want them are fulfilled *and* there are no ''sisters of the embryo''[21] willing to host them.

The final obvious statement in this series of obvious statements is that ''it is, of course, permissible to use embryos that have already been created and that will otherwise be destroyed'' (p. 58). This is where the ''actualizable'' component of AP has difficulty establishing any moral meaning whatsoever. Why would or should they otherwise be destroyed? If the AP they have before we decide they ''should'' be destroyed does not preclude us from deciding to destroy them, what bearing does it have on what it is permissible to do with them before we make that decision?

Conclusions

In a paper Savulescu and Harris jointly authored in this journal in 2004[22] they say the following:

> [W]e both agree that natural reproduction is a creation lottery. Natural reproduction is a practice that involves the creation of a population of embryos for the purposes of creating a new human being and that involves the unavoidable death of 80% of those embryos, where the alternative to this practice is not to create any new human beings. To put this more generally, *a creation lottery involves the creation of a population of embryos for the purpose of creating a new human being, and this practice involves the unavoidable death of some of these embryos.* Those, such as embryo rightists, who believe that natural reproduction is permissible are logically committed to the permissibility of running creation lotteries. (our emphasis)

There can be no doubt that what Persson and Savulescu call ''embryo nightmare'' is just such a permissible creation lottery. The phrase: ''for the purpose of creating a new human being'' was not intended (at least by Harris) to convey the idea that the creation lottery was justified if and only if there was a conscious prior intention to create a new child; how could it, as so many births are unintended and neither embryo rightists nor other defenders of natural reproduction regard the process as indefensible absent the prior intention to create a new human being? What Savulescu and Harris should have said is that a creation lottery involves the creation of a population of embryos *with the chance of* creating a new human being and this practice involves the unavoidable death of some of these embryos.

In creation lotteries the odds are immaterial (we do not even know the precise chances in natural reproduction). What matters for the argument and to those who value the embryo is that creation lotteries offer *a* chance, *the only possible chance of life* to all participants equally and are therefore in the interests of all participants.

But although embryos and oak trees can have interests in some sense, the interests of neither are intrinsic; the realization or thwarting of those interests is of no interest to the acorn or the embryo. The potential to be a majestic tree whose spread shades the village smithy[23] does not inspire the acorn, nor does the prospect of becoming a prison door cause it remorse, nor the thought of firewood dread. Actualizable potential is not unimportant; it is, as Harris argued in *The Value of Life*,[24] an essential dimension of life's value for creatures capable of

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valuing life, but for those, like acorns or embryos, who cannot value their lives or even be aware that they have lives, it is necessarily a matter of indifference.

We remain convinced that those committed to creation lotteries cannot object to embryo research or, indeed, to any other sacrifice of embryos where the justification of such sacrifice is of importance comparable to the chance of creating new life. Harris's original *reductio* of the position of those who condemn embryo sacrifice but who persist in acts that might lead to procreation therefore stands and remains an indictment of the hypocrisy of much opposition to embryo research. We modestly recommend that Persson and Savulescu continue to actualize their tremendous philosophical and moral potential by finding arguments to promote the goals we all share, namely, the defense of embryo research and other uses of science and technology that make both life and the world better.

Notes

1. An important condition that Persson and Savulescu's reconstruction omits.
2. Harris J. *Violence and Responsibility*. London: Routledge & Kegan Paul; 1980; Harris J. *The Value of Life*. London: Routledge; 1985; Harris J. The concept of the person and the value of life. *Kennedy Institute of Ethics Journal* 1999;9(4):293–308.
3. See note 2, Harris 1999.
4. Harris J. Stem cells, sex, and procreation. *Cambridge Quarterly of Healthcare Ethics* 2003;12(4):353–71, at p. 364.
5. The doctrine of double effect turns on intention: If this were to hold, then the intentional destruction of embryos in research would be unacceptable whereas their unintended but foreseen destruction in natural reproduction would not and vice versa.
6. For a discussion of the doctrine of double effect see note 2, Harris 1985:43ff. This has been considered at some length in the case of embryo research and reproduction in a previous exchange in this journal: see Savulescu J, Harris J. The creation lottery: Final lessons from natural reproduction: Why those who accept natural reproduction should accept cloning and other Frankenstein reproductive technologies. *Cambridge Quarterly of Healthcare Ethics* 2004;13(1):90–5; Savulescu J. Embryo research: Are there any lessons from natural reproduction? *Cambridge Quarterly of Healthcare Ethics* 2004;13(1):68–75; Harris J. Sexual reproduction is a survival lottery. *Cambridge Quarterly of Healthcare Ethics* 2004;13(1):75–89; see note 4, Harris 2003.
7. Stanton C, Harris J. The moral status of the embryo post-Dolly. *Journal of Medical Ethics* 2005;31(4):221–5; Cameron C, Williamson R. In the world of Dolly, when does a human embryo acquire respect? *Journal of Medical Ethics* 2005;31(4):215–20.
8. See note 6, Harris 1985; see note 2, Harris 1999.
9. See note 6, Harris 2003.
10. Dworkin R. *Life's dominion*. London: Harper Collins; 1993:Chapter 3.
11. Here we rely on arguments elaborated by Harris; see note 2, Harris 1999.
12. Or Utilitarianism without utility.
13. Savulescu J. Should we clone human beings? Cloning as a source of tissue for transplantation. *Journal of Medical Ethics* 1999;25(2):87–95 at p. 91. It is clear that Savulescu does think a skin cell has actualizable potential.
14. Harold Macmillan, while Prime Minister of the United Kingdom, allegedly replied when asked what might interfere with his plans "events, dear boy, events."
15. See note 7, Stanton, Harris 2005:221.
16. See, for example, Savulescu J. Sex selection: The case for. *Medical Journal of Australia* 1999;171(7):373–5; Savulescu J. Procreative beneficence: Why we should select the best children? *Bioethics* 2001a;15(5–6):413–26; Savulescu J. In defense of selection for nondisease genes. *American Journal of Bioethics* 2001b;1(1):16–9.
17. See Harris J. Is there a coherent social conception of disability? *Journal of Medical Ethics* 2000;26(2):95–101; Harris J. One principle and three fallacies of disability studies. *Journal of Medical Ethics* 2001;27(6): 383–8; Harris J, Sulston J. Genetic equity. *Nature Reviews Genetics* 2004;5(10)796–800.

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18. See note 16, Savulescu 2001a.
19. See note 17.
20. See, e.g., note 16, Savulescu 1999 and 2001b; Savulescu J, Dahl E. Sex selection and preimplantation diagnosis: A response to the Ethics Committee of the American Society of Reproductive Medicine. *Human Reproduction* 2000;15(9):1879-80.
21. See Harris J. *Wonderwoman and Superman*. Oxford: Oxford University Press; 1992:47.
22. See note 6, Savulescu, Harris 2004:90.
23. With apologies to Henry Wadsworth Longfellow and to George Orwell for changing trees.
24. See note 2, Harris 1985.

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