

POTENTIALITY AND PERSONS AT THE MARGINS OF LIFE

- John P. Lizza -

A standard argument invoking potentiality in the debate over abortion and the use of human embryos for research appeals to the potentiality that the embryo has to develop characteristics that we normally associate with personhood, such as intellect and will. It is argued that in virtue of this potentiality, the embryo has value and is deserving of some respect, if not all the rights and protections that are normally accorded to persons. In this standard argument, there is an assumption that the development will take place in the “natural or normal” course of events, i.e., in a suitable environment. However, parties in the debate over the moral significance of potentiality often rely on different meanings of “potentiality,” depending on whether and to what extent they consider internal and external factors relevant to potentiality. Moreover, whether potentiality has any moral significance may depend on assumptions about the nature of persons.

In the first section of this paper, I focus on how parties in the debate have diverged on their treatment of how external factors may affect potentiality itself or its ethical significance. In the second section, I identify three alternative views of personhood that have been invoked in arguments over the potentiality of the human embryo: a substantive view, a qualitative view, and a transformative view. Since the evaluation of the moral significance of potentiality seems to depend on which concept of personhood is invoked, I argue that its significance cannot be determined independent of an evaluation of which concept of personhood makes the most sense. Thus, if there are independent reasons for accepting one concept of personhood over another, those reasons will provide an indirect justification for accepting or rejecting certain arguments about potentiality. This paper does not argue for any particular view about potentiality and personhood, as this would require much more extended treatment. Instead, it aims to show how these concepts are inextricably linked and map some of the terrain for the direction that future research should take.

I. Internal and External Factors of Potentiality

With some oversimplification, interpretations of a standard definition of potentiality, such as “an inherent capacity for growth, development or coming

into existence,"¹ have diverged over the significance of the effect that factors internal and external to the embryo may have on its potentiality. Grounding their view in an Aristotelian metaphysics in which things that exist by nature have innate principles to develop in certain ways, some theorists hold that the human embryo has the potential to develop characteristics, such as intellect and will, by definition, i.e., by virtue of the kind of thing it is. According to this account, as long as an embryo is a member of the natural kind, human being, its potentiality to develop in certain ways is not affected by any internal or external impediments. For example, if one identifies the person with the human organism and accepts that the embryo is a human organism, then its potentiality to develop in certain ways is not affected by a defective gene or its location in, for example, a uterus that cannot sustain it or a Petri dish.

Also, in virtue of having the potential to develop characteristics, such as intellect and will, the embryo is an actual person at a certain stage of development. Thus, "person" is treated as a substantial kind term, rather than a phase or qualitative sortal term. Whereas a person may be a child, banker or mayor at different times of its life, a person is a person throughout its life history. The mark of a substantial sortal term is that it applies to the individual as long as it exists, and that it categorizes the individual as the kind of thing it is in some fundamental sense.² Moreover, in this understanding of potentiality, whether the individual has any realistic or practical probability of developing these characteristics does not affect its potential. Thus, it is not that the embryo is worthy of moral consideration because its realization of such potential will make it an actual person in the future. Rather, the fertilized ovum is a person from the moment of conception in virtue of its having such potential. The class of persons includes not only beings with the actual abilities of, say, intellect and will, but also beings with the potential for those abilities. Animals, plants, and other beings are excluded from the class of persons, because they lack the "natural" potential for such abilities.

A good example of the use of potentiality in this sense is evident in the justification given by the United States President's Council on Bioethics in calling for a four-year moratorium on research on human embryos.³ The majority of the members of the Council held that the developing embryo was a being worthy of "special respect" and claimed that those who deny the potentiality of the embryo to become a person lack an understanding of the meaning of potentiality. The ma-

¹ Morris [1975].

² Wiggins [1980].

³ President's Council [2002].

majority stated that to treat the developing human embryo as nothing more than “mere cells,”

(...) gravely mischaracterizes the meaning of potentiality – specifically, the difference between having the capacity to become anything at all (a pile of building materials, for example) and the capacity to become something in particular (an individuated human person or persons)⁴

(...) it denies the continuous history of human individuals from zygote to fetus to infant to child; it misunderstands the meaning of potentiality – and, specifically, the difference between a “being-on-the-way” (such as a developing human embryo) and a “pile of raw materials,” which has no definite potential and which might become anything at all.⁵

Again, invoking the potentiality of the embryo, the majority concluded,

We are not persuaded by the claim that in vitro embryos (whether created through IVF or cloning) have a lesser moral status than embryos that have been implanted into a woman’s uterus, because they cannot develop without further human assistance. The suggestion that extra-corporeal embryos are not yet individual human organisms-on-the-way, but rather special human cells that acquire only through implantation the potential to become individual human organisms-on-the-way, rests on a misunderstanding of the meaning and significance of potentiality. An embryo is, by definition and by its nature, potentially a fully developed human person; its potential for maturation is a characteristic it *actually* has, and from the start. The fact that embryos have been created outside their natural environment – which is to say, outside the woman’s body – and are therefore limited in their ability to realize their natural capacities, does not affect either the potential or the moral status of the beings themselves. A bird forced to live in a cage its entire life may never learn to fly. But this does not mean that it is less of a bird, or that it lacks the immanent potentiality to fly on feathered wings. It means only that a caged bird – like an in vitro human embryo – has been deprived of its proper environment. There may, of course, be good human reasons to create embryos outside their natural environments – most obviously, to aid infertile couples. But doing so does not obliterate the moral status of the embryos themselves.⁶

⁴ *Ibidem*, p. 157.

⁵ *Ibidem*, p. 175.

⁶ *Ibidem*, pp. 177-178.

Although the concept of potentiality has been less prominent in discussion about issues at the end of life, it has figured in the debate over the definition and criteria for death. For example, many scholars have persuasively challenged the current whole-brain neurological criteria for death on grounds that even though all brain function may be lost, there may still be a live, integrated human organism albeit supported by artificial means.⁷ Some of these critics, for example, D. Alan Shewmon, however, go on to maintain that the artificially sustained, whole-brain dead organism retains the potential for intellect and will.⁸ The retention of intellect and will is important for Shewmon, because he accepts the Catholic view that the potential for intellect and will is essential to the nature of human being or person and what makes us in God's image. Shewmon argues that the potential for intellect and will resides not in any organ, e.g., the brain, but in the organism as a whole. Since Shewmon believes that the human organism as a whole may persist through the loss of all brain function, it retains the potential for intellect and will. Shewmon sees the loss of brain function (indeed, the destruction of the brain) as simply an impediment in the actualization of the potential for intellect and will that remains in the organism. Its loss does not affect whether the organism has the potential. He gives an analogy in support of his view: before cataract surgery, people with cataracts still had the potential for sight. Moreover, he claims that even if someone suffered enucleation of both eyes, the person would still retain the potential for sight. Shewmon has thus invoked a "species membership" view of potentiality at the end of life, similar to the view held by the President's Council concerning the beginning of life.

In what may be the most defensible view of the potentiality argument in the abortion context, Jim Stone also relies on a similar interpretation of potentiality but with some qualifications.⁹ Although he believes that factors external to the embryo do not affect the potentiality of the embryo, he acknowledges that some embryos may be genetically defective and therefore lack the inherent capacity for developing in certain ways. However, a genetically normal embryo has a biological potential, the actualization of which involves conscious goods for it, such as self-awareness and social interactions. It is therefore in the embryo's interest to grow up, and this interest grounds a claim to care and protection. This potentiality is inherent in the embryo, does not depend on probabilities of being realized, and is not affected by things external to it. The identity of the embryo with the later

⁷ See, for example, Becker [1975]; Taylor [1997]; Halevy and Brody [1993]; and Shewmon [2004].

⁸ Shewmon [1997]. For a detailed critique of Shewmon's view, see Lizza [2005].

⁹ Stone [1987].

person is critical to this approach. As Stephen Buckle explains, “respect is due to an existing being because it possesses the capacity or power to develop into a being which is worthy of respect in its own right; and respect is due to such a being because it is *the very same being* as the later being into which it develops. The already-existing being is a being which has the potential *to become* a being worthy of respect in its own right.”¹⁰

Stone’s move away from a strict “species membership” view of potentiality is sensible. The problem with the “species membership” view is that there appear to be members of natural kinds that lack the potential for certain characteristics that are commonly had by most members of the kind. Contra Shewmon, there is no more reason to think that an integrated human organism lacking a cortex has any more potential for intellect and will than other living organisms lower on the phylogenetic scale without a brain. Also, the view fails to capture what is morally significant about potentiality, i.e., the realistic possibility or probability of a future person with intellect and will in the world. If internal factors that make it realistically impossible for an individual to develop characteristics like consciousness, intellect, and will, e.g., defective genes or the destruction of the cortex, are ignored in ascriptions of potentiality, such a view may rely on a notion of logical possibility, rather than any notion of realistic possibility. However, a concept of potentiality that relies on logical possibility is, as Joel Feinberg has pointed out, “too promiscuous” to be of much use.¹¹ Any bit of matter is potentially anything in a logically possible sense. Thus, potentiality must be grounded in an empirical theory of what is realistically possible.

Edward Covey has argued that such a tie to realistic or actual possibility is part of our ordinary notion of potentiality and what we mean when we say that, if X has the potential to become Y, it must be possible for X to become Y.¹² However, it is unclear what may affect this sense of possibility, when it comes to ascriptions of potentiality. Stone recognizes that *internal* defects in an embryo may affect a particular embryo’s potentiality. However, there is disagreement over whether factors *external* to the embryo can also affect potentiality. For example, Peter Singer and Karen Dawson argue that because frozen embryos exist outside the “natural” course of development and therefore have no realistic or practical possibility for further development unless acted upon, they lack whatever natural potential *in*

¹⁰ Buckle [1988] p. 241.

¹¹ Feinberg [1974].

¹² Covey [1991].

vivo embryos may have.¹³ For Singer and Dawson, potentiality also requires some degree of realistic possibility. If it is highly improbable that an embryo, *in vitro* or *in vivo*, will develop in certain ways, then it makes no sense to attribute the potential to develop in those ways to the embryo. In Singer and Dawson's view, probabilities matter for potentiality.

In contrast, many proponents of the potentiality argument use the concept in its Aristotelian sense where it applies most clearly to biological species. For example, normal, healthy bees have the potential to build hives, because in a "normal" or "suitable" environment that is what they will do. Potentiality is thus teleological, i.e., the intrinsic potentiality or disposition is goal-directed. Bees differ from birds in that they have internal characteristics that in the normal environment cause them to build hives. In contrast to birds, there is a realistic possibility that bees will build hives. Because the potentiality is thought to be intrinsic to the bees, the realistic possibility invoked is not affected by factor externals to the bees that would prevent them from building hives. For example, the fact that some bees will be wiped out by a natural disaster before they ever get to build a hive does not affect their having the potentiality to do so. Nonetheless, the attribution of this potentiality to the bees makes certain assumptions about the natural or normal course of events. Indeed, if there were no assumptions about the natural or normal environment, it is unclear whether any ascriptions of potentiality would make sense.

As Michael Kottow has pointed out, an ascription of potentiality is

(...) a statement about an entity concerning those features that allow a prediction about possible future states of the entity. This statement disregards external influences on the entity and thus restricts the prediction. This is admittedly a narrow view of potentiality, since it disregards that outer influences and interactions do play strong roles in modulating potentiality. But they cannot create it and therefore it is important to restrict potentiality statements to those prospective states or actions that can be directly derived from analyzing the being under scrutiny. One advantage of this approach consists in making potentiality statements more empirical and therefore, less prone to the naturalistic fallacy of attaching ethical considerations to empirical data.¹⁴

Kottow is trying to capture the idea that an entity's potentiality is not affected by things external to it, particularly by how external things may affect the possibility or probability of the realization of the potential and, especially, if ethical decisions

¹³ Singer and Dawson [1988].

¹⁴ Kottow [1984] p. 295.

affect such possibilities or probabilities. Ideally, for Kottow, ascriptions of potentiality should focus on the inherent characteristics of the entity in question, independent of what is external to the entity.

While this view coheres with the assumption that potentialities are a kind of power or disposition intrinsic to entities, it cannot be correct. Predictions entail beliefs about possibility. However, as Kottow himself observes, possibility statements “refer to entities as systems seen in the context of their relationships and interactions.”¹⁵ Hence, insofar as ascriptions of potentiality necessarily refer to possible future states of the entity, potentiality cannot be understood completely in terms of the internal features of the entity. Instead, ascriptions of potentiality to an entity must always be understood against a background of assumptions about the entity’s relation to the world. Thus, a normal human embryo may have the potential for intellect and will, because the normal or natural environment allows for the potential to be realized. If human embryos were regularly situated in an abnormal or unnatural environment that prevented the realization of these potentials, it would not make sense to attribute them to the embryos. But then it may also be questionable whether the embryos themselves were *human* embryos, since it is in virtue of some potentialities, rather than others, that distinguish human embryos from other kinds of things.

There is a further complication once external conditions are assumed in any account of potentiality. Since persons are not simply biological beings but social and cultural beings as well, it is unclear how any account of what a “normal” or “suitable” environment is can be given independently of social and cultural considerations. To do so would involve a distortion of the nature of persons. In contrast to other biological beings, we can shape our environment based on rational consideration of the good and how to best realize it. Thus, it is hard to see how the attribution of potentialities to persons can be given without considering at the same time the nature of a good or suitable environment, which seems to take us beyond strictly biological considerations.¹⁶

¹⁵ *Ibidem*, 297.

¹⁶ This same complication is raised in another way by Roy Perrett [2000]. According to Perrett, a major problem for the standard potentiality argument is that it appeals to the “naturalness” of the kind of potentiality of an embryo to develop in certain ways, but does not provide a justification for why we should conform to nature. “Descriptive facts about biological functions,” Perrett argues,

(...) do not by themselves entail any prescriptive claims. What has to be added is something like the Thomistic distinction between *laws of nature* and *natural laws*, where the former are descriptive statements derived from scientific observation of regularities in nature and the latter are prescriptive statements derived from metaphysical knowledge of the essential

Indeed, it is unclear why external factors in the form of individual or social decisions should not affect our understanding of potentiality, given that any useful notion of potentiality must be grounded in empirical, not logical, possibility. For example, critics of non-heart-beating organ donation, such as Joanne Lynn, have questioned whether such donors are really dead after, say, two or even five minutes of their heart stopping.¹⁷ It should be noted that the concept of “potentiality” and “irreversibility” are complementary concepts in the sense that, if certain functions are irreversibly lost, there is no potential for those functions to resume. Thus, Lynn’s concern can be rephrased as one about potentiality: How can these donors be “irreversibly” dead, if there is the potential for their circulatory and respiratory functions to resume? Lynn is correct that there is some uncertainty that two or even five minutes of asystole renders the cessation of circulatory and respiratory functions irreversible. Also, if we consider the possibility of performing cardio-respiratory resuscitation on these patients, then the physical condition alone is insufficient to conclude that the cessation of functions is irreversible. Many of these donors would have a realistic potential to be revived. However, Lynn ignores other factors that make it realistically impossible or extremely improbable that the functions may resume. For example, respect for the donor’s wish not to intervene and resuscitate puts real restrictions on the possibility of the resumption of functions. The possibility of functions resuming in a patient in the same physiological state but with an advance directive to be resuscitated would be different. The individual and social decisions and actions thus affect the realistic probability and therefore the potentiality of whether the functions may be restored.

In conclusion, ascriptions of potentiality are grounded in assumptions about internal and external factors that affect the possibility of a potential being realized. To avoid the problem of the concept becoming too promiscuous to be of much use, any sensible theory of potentiality must recognize that potentiality is at least dependent on certain internal factors. The potentiality of a genetically defective human embryo *is* different than the potentiality of a normal, healthy one. Sin-

properties of human nature. Knowledge of our essences is then supposed to tell us how we *ought* to behave because of our nature as human beings. (p. 193)

Perrett expresses skepticism that natural law theorists have been able to make sense of the obscure distinction between laws of nature and natural laws and justify why we should not interfere with anything that is “natural.” In particular, Perrett takes issue with Stone’s argument that the potential of the embryo grounds an interest in continued life, because the embryo has a nature that, when actualized, involves conscious goods. Perrett claims that Stone’s argument (Stone [1987] p. 821) assumes the undefended and unobvious claim that “we have a *prima facie* duty to all creatures not to deprive them of the conscious good which it is their nature to realize.”

¹⁷ Lynn [1993].

ce ascriptions of potentiality are made against a backdrop of assumptions about the natural or normal course of events in the world, potentiality is also dependent on factors in the external world. At this point, theorists diverge. Some, like Singer and Dawson, argue that the lack of such normal external developmental factors alters potentiality, e.g., a frozen human embryo has a different potentiality for personhood than an implanted one. These theorists then argue that whatever moral standing potential persons might have does not apply to individuals without that potential. Others regard the potentiality as unaffected by the fact that the embryo may be outside the normal developmental course or that the embryo has little chance of realizing certain potentialities due to external factors. However, even if the potentiality of an embryo is unaffected by such external factors, the fact that the embryo requires external factors in order to realize its potential may affect how it may be treated. Since its future development may depend on the cooperation and actions of others in a way that is not required by other embryos, it may be necessary to weigh whatever moral standing the embryo may have in virtue of its potentiality against competing moral considerations about the responsibility of others to assist in its development.¹⁸

II.

As advocated by its proponents, the moral significance of potentiality has been seen to turn on making the case that the embryo is the same individual person as the person who later has the actual capacity for those traits. This is in accord with the traditional Aristotelian/Thomistic understanding of potentiality as accounting for the changes that a natural kind of thing undergoes. However, “potential” and “potentiality” are frequently used in contexts far removed from a discussion of Aristotelian natural kinds. For example, someone might say, “Paavo has the potential to win several gold medals at the next Olympics” or “That hunk of marble has the potential to become a great sculpture, as Michelangelo intends to start working on it tomorrow.” Appeal to such potentials may also be used to justify certain moral claims, e.g., “Paavo *should* continue to train” or “I don’t care about the granite but *be very careful* when moving that hunk of marble.” In these contexts, potentiality refers to some internal properties and to some degree of realistic possibility for some end to be realized. When “potentiality” is used in this way, the potential is more dependent on *particular* internal characteristics and ex-

¹⁸ As Judith Jarvis Thomson [1971] pointed out many years ago, even if the embryo is a person, it does not necessarily follow that others have a moral obligation to provide whatever it takes for it to live.

ternal factors than when it is used in the more Aristotelian sense of an innate property to develop in certain ways by virtue of being a member of a certain natural kind. In addition, the potentiality in question usually involves (1) the realization of some accidental rather than essential property of whatever realizes the potential, e.g., Paavo becomes a gold medalist or (2) the transformation of one kind of thing into another, e.g., the marble becomes a sculpture.

Thus, an embryo's potential to develop characteristics like intellect and will can be treated in at least several ways. First, the potential to develop in this way may be construed as a change within a single substantial kind (human being or person), where being a member of the kind with certain potentialities is what garners the being moral standing. In this view, "embryo" is like "child," "adolescent," and "adult" in that all of these terms denote different phases in the development of a person. "Person," however, denotes the substantial kind of which the others are phases or qualitative specifications. As noted above, the President's Council on Bioethics, Shewmon, and Stone treat potentiality in this way.

Second, the potential to develop characteristics like intellect and will may be interpreted as a human being becoming a person in the sense of acquiring the *quality* of being a person. In this interpretation, "person" is treated as a phase sortal or qualitative specification of some substance sortal, e.g., "human organism," and moral standing is associated with being in a personhood phase. Singer and Dawson treat person in this way.

A third option is to treat the development of whatever characteristics may be sufficient for personhood as involving a transformation of one kind of thing into another, similar to the kind of transformation that takes place when some matter, e.g., a piece of marble, is transformed into a sculpture. In this view, "person" is treated as a substance sortal, though it refers to a different substantive entity than the human being. For example, in Jeff McMahan's view it refers to a mind, a substantive entity with the capacity for consciousness. For McMahan, the realization of the human embryo's potential for intellect and will thus involves a transformation of kind. A human organism, with which we are not identical, is transformed into a person, with which we are identical.¹⁹

¹⁹ McMahan ([2002] pp. 302-316) offers arguments against the identification of the early embryo with the person that later develops. He concludes that early abortion is unproblematic, since it does not involve the killing of a person. Later term abortions are more problematic for McMahan, since later in gestation the embryo will have been transformed into a person, i.e., for McMahan, an embodied mind. He then applies a theory of time-relative interests to argue that such persons have limited interest in their future, which affects the ethics of how they may be treated.

A view that construes the relation between the human organism and person as one of constitution also coheres with this transformative view. Lynne Rudder Baker, for example, holds that constitution is a *sui generis* relation between two kinds of things that we commonly admit into our ontology.²⁰ Human persons are thus treated neither as identical to the human organisms that constitute them, nor as qualitative specifications or phases of them. Instead, they are distinct though unified and interdependent substances. While Baker does not identify a moment when a person comes into being, she holds that having a rudimentary first-person perspective, which she believes is developed at birth or shortly before, is essential to personhood.²¹ On this transformative view of personhood, the moral significance of the embryo's potential for developing into a person thus has to do with its potential to transform or be transformed into a person.²²

The main point of these observations is simply to note that this divergence in the meaning of "potentiality" poses a challenge to evaluating the ethical arguments based on potentiality, as the disagreement over the significance of potentiality may stem from a disagreement over the theory of "personhood" invoked in the discussion. For example, two standard objections are often raised to the moral significance of an embryo's potential to develop characteristics that we associate with personhood. However, both of these objections assume that "person" is a phase or qualitative sortal term, rather than a substantive one. Thus, if they are directed, as they usually are, against proponents of the potentiality argument who accept a species or other substantive view about persons, these objections may miss their mark, because they may beg the question on the nature of persons.

The first objection holds that the fact that something may become a person is not a good reason for treating it now as a person. Peter Singer points out that, if it were, "Prince Charles, who is a potential King of England, would now have the rights of a King of England."²³ Stanley Benn use a similar analogy: a president-elect may be a potential president but that is not a reason for treating the president-elect now as an actual Commander-in-Chief.²⁴ These analogies make sense, because they employ phase sortal terms ("prince," "king," "president-elect," "Commander-in-Chief"). However, most proponents of the argument from poten-

²⁰ Baker [2000].

²¹ Baker [2005] p. 44.

²² The transformative account of potentiality may be required by a view that construes the relation between the human organism and person as one of constitution. For more on this constitutive view, see Baker [2000] and Lizza [2006] pp. 63-93.

²³ Singer [1995].

²⁴ Benn [1973] p. 102.

tiality hold that the embryo is a phase in the development of a human being or person, just as child or adult are phases. Thus, the fact that an embryo or child may become an adult does not entail that we should accord the same rights to the embryo and child that we do to adults. However, proponents of the potentiality argument hold that “person” denotes the substance sortal of which “embryo” is a phase. Thus, an embryo does not become a person, but is already a person in virtue of its inherent capacity to develop in certain ways. By analogy, because “caterpillar” and “butterfly” denote phases of the kind *Lepidoptera*, it makes sense to say that a caterpillar is potentially a butterfly. However, that alone is not a reason for attributing some properties of butterflies to caterpillars, e.g., winged. However, it makes no sense to say that a caterpillar has the potential to be of the kind *Lepidoptera*. In virtue of its potential to develop into a butterfly, it is already of the kind *Lepidoptera*. In the case of embryos, proponents of the potentiality argument, like Stone, claim that certain rights and protections accord to persons at any stage in their development, and it is those rights and protections that apply to the embryo.

The second objection is a *reductio ad absurdum* argument about the significance of potentiality.²⁵ Critics of the argument from potentiality claim that to say that the embryo has the potential to become a person is to say that if certain things happen to it, it will eventually become a person. However, the same thing can be said about the unfertilized egg, sperm, and, perhaps with cloning technology, every human cell. However, if this is the case, then not only would abortion and contraception be wrong, but we would probably be obliged to actualize all of the potential persons represented by these cells. Since the argument from potentiality seems to entail this absurd conclusion, it should be rejected.

This second objection also treats “person” as a phase sortal, rather than as a substance sortal, since personhood is understood as a property that something need not have throughout its life-history. However, proponents of the potentiality argument treat personhood as essential to things that are individuated and identified under the substance concept “person,” and go on to argue that embryos, but not unfertilized eggs and sperm, cannot be so individuated and identified. Unfertilized eggs and sperm are of a different kind. Again, parties in the debate are using “potentiality” in different ways due to a difference in how they understand the nature of persons. Thus, whether potentiality has moral significance may depend on prior ontological commitments about personhood. Its significance can therefore not be evaluated independent of the ontology of persons.

²⁵ See, for example, Peter Singer [1995] and John Harris [1985] pp. 11-12.

In conclusion, more work needs to be done on identifying the kind of material conditions necessary for ascriptions of certain kinds of potentialities. Even if one holds that a human being has the potential to develop intellect and will by virtue of the natural kind of thing it is, conditions such as anencephaly, total brain failure, and permanent vegetative state pose a significant challenge to the claim that individuals in such states have any potential for intellect and will. Indeed, if natural kinds are defined by their potentialities, these cases also challenge whether individuals in such states should be correctly classified as human beings. In addition, ascriptions of potentiality are made against a background of assumptions about external conditions. If potentiality entails realistic possibility, as Covey has claimed, and if external conditions affect realistic possibility, then further argument is needed for why external conditions, whether involving human decisions or not, should or should not affect ascriptions of potentiality. Finally, disagreement over the ethical significance of potentiality appears to stem from disagreement over whether *person* is treated as a substance or phase sortal and whether the actualization of a potential can involve a transformation in phase or substance. It may be impossible to evaluate the ethical significance of potentiality arguments without addressing the ontological issue of whether persons are fundamentally substantive entities or phases of some other, more fundamental kind of thing.

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