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Was I Ever a Fetus?

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The Standard View of personal identity says that someone who exists now can exist at another time only if there is continuity of her mental contents or capacities. But no person is psychologically continuous with a fetus, for a fetus, at least early in its career, has no mental features at all. So the Standard View entails that no person was ever a fetus—contrary to the popular assumption that an unthinking fetus is a potential person. It is also mysterious what *does* ordinarily happen to a human fetus, if it does not come to be a person. Although an extremely complex variant of the Standard View may allow one to persist without psychological continuity before one becomes a person but not afterwards, a far simpler solution is to accept a radically non-psychological account of our identity.

It is obviously true that the normal foetus is at least a potential person: it is an entity which will, barring abnormal circumstances or intervention, develop into something incontrovertibly a person. The only question is what moral claim upon us this gives it.

Jonathan Glover (1977, p. 122)

I.

Was I ever a fetus? Is it possible for a healthy human fetus to become you or me or some other human person? One would think so! Both folk wisdom and biological science tell us that each of us spent several months inside our mother's womb before we were born. How could anyone think otherwise?

But many philosophers do think otherwise. At any rate, most recent thinking about personal identity clearly entails that no person was ever a five-month-old fetus, and that no such fetus ever comes to be a person. According to that way of thinking, which I shall call the Standard View of personal identity, what it takes for us to persist through time is some sort of psychological continuity. I shall exist at some time in the future (the Standard View says) only if I can then remember some present experience of mine, or if I am then connected with myself as I am now by an overlapping chain of memories or or by a chain of psychological connections of some other sort (or perhaps by continuity of mental capacities). And I existed at some time in the

past only if I am now related in the same way to myself as I was then: only if I am now connected to myself as I was then by a chain of overlapping memories, or if my current psychological capacities are continuous with the ones I had then.

On the other hand, embryologists tell us that a human fetus that is less than about six months old cannot remember or experience anything, and has no mental capacities worthy of the name. If they are right, you and I cannot now be related to a five-month-old fetus in any *psychological* way. One's psychological contents or capacities could not be continuous with those of a being with no psychological contents or capacities at all. So if the Standard View is right, nothing could be a fetus—or at any rate a fetus that cannot yet think—at one time and a person later on. No person was ever a fetus, and no fetus ever becomes a person.

Let me make this argument more precise. The Standard View comes in two kinds. One view is that some or most of one's mental contents—memories, intentions, etc.—must be preserved if one is to survive from one time to another. The other says that one could survive the loss of one's mental *contents* as long as one's basic psychological *capacities* are preserved in a continuous way. (Just which capacities these are is a point I shall take up later.)

Suppose you get into an accident that destroys your cerebrum but leaves your brainstem and your autonomic nervous system intact. Your memories and other mental contents are irrevocably destroyed, along with your capacity for consciousness and reasoning. Your circulation, breathing, digestion, immune system, and other vital functions, however, are preserved. The Standard View plainly denies that you could survive this. The living human animal left over has no mental capacities worthy of the name. Although his (or its) brainstem functions perfectly well, so that he can wake and sleep, sneeze, cough, swallow, even thrash about with his arms and legs, selective awareness is no longer possible. For all practical purposes, that living human animal has none of your mental contents or capacities.

But a five-month-old fetus has no more mental contents or capacities than such a "human vegetable" has. The reason is that the cerebrum does not begin to function as an organ of thought until synapses begin to connect its neurons to one another; and embryologists tell us that this does not take place until roughly twenty-five to thirty-two weeks after fertilization.¹ Before that time the cerebrum is simply not yet "wired up," and there is no capacity for

¹ Morowitz and Trefil (a biologist and a physicist) argue that the cerebrum cannot function until its neurons can communicate with one another: "Before synapses are formed, the fetal brain is just a collection of nerve cells. The fetus is incapable of awareness or volition." The cerebral cortex "comes into existence as a functional entity" between 25 and 32 weeks after fertilization (1992, chapter six; the quotations are from pp. 116 and 119). Continuous EEG patterns are not observed until about 30 weeks (Flower 1985, p. 246).

conscious awareness or reasoning. The fetus is probably not even minimally sentient at this point.² To be sure, the fetus is unlike the human vegetable in that it can *acquire* mental capacities. But as long as it is a fetus, it lacks those capacities for the same reason as the human vegetable lacks them: the relevant neural structures are simply not there.

On the Standard View, then, just as you could not one day be a human vegetable whose cerebrum has been destroyed, you could not once have been a fetus whose cerebrum was not yet functional. In both cases there is complete psychological discontinuity

In fact the Standard View as its proponents state it seems to entail that no person was ever a six-month-old infant either. Probably none of us is connected by an overlapping chain of memories or the like to a six-month-old infant: because its brain is not yet well enough developed, the infant lacks the capacity to remember or intend much of anything. And those who say that we persist just in case our basic mental capacities are preserved usually mean those capacities that distinguish people from non-people: the capacity for conscious experience, self-awareness, and rationality.³ Probably no infant acquires those capacities until a year or more after birth. So if the Standard View is true, you were not present at the event we loosely call your birth: you didn't appear until several months later. One could avoid this consequence by claiming that only more primitive mental capacities are necessary for us to persist, the kinds of mental capacities that even newborn infants have. If so, you could presumably survive the loss of all of your mental contents now, as a mature person, and even your capacity for rationality and self-awareness. Although no one may actually hold this view, it is still a version of the Standard View. Since I am going to argue that psychology is completely irrelevant to personal identity, I shall concentrate on the question whether I was ever a fetus. But if we restrict our attention to views that some philosopher has actually held, what goes for fetuses goes for infants as well.

² The biologist M. Flower says that even pain, the most primitive state of awareness, is not possible until the cerebrum connects with the thalamus at mid-gestation (1985, p. 247). The embryologist C. Grobstein writes, "The available facts speak against the presence of an imaginable state of sentience prior to twenty weeks and for a period of uncertain duration beyond—in all likelihood to at least thirty weeks, when cortical maturation and connectivity noticeably rise" (1988, p. 130; see also pp. 54f.).

³ According to Nagel, I survive as long as I retain the capacity for conscious experience and my ability to reidentify myself via memory (1986, p. 41). Unger says roughly that I survive as long as my capacities for reasoning and consciousness are preserved (1990, pp. 109 and 144). Others are less specific. Johnston, for example, after criticizing accounts of personal identity based on continuity of mental contents, says simply that one survives as long as one's mind continues on (1987, p. 78).

II.

Judging from the published debate on personal identity in the past few decades, most philosophers seem confident that some version of the Standard View is right.⁴ If so, most philosophers are committed to the position that nothing is ever first a fetus and later a person. This would be surprising enough were it not for the fact that most philosophers also say the opposite. In discussing the moral status of the unborn, all parties usually agree that a human fetus is at least a potential person in the sense that it might later be a person. It *is* possible for something to be an unthinking fetus at one time and a person later on; each person *was* once a fetus. This is taken to be just as obviously true as the Standard View is taken to be. Yet few ethicists see any need to argue against the Standard View, and few friends of the Standard View claim that debates about abortion, infanticide, or the like are otiose.⁵ Why?

The problem might not have occurred to them. This is not as flippant as it may sound, for personal identity is typically discussed in a way that prevents one from asking whether any person was once a fetus. Philosophers who think about this topic invariably ask when a *person* picked out at one time is identical with a *person* picked out at another time; or they ask when someone who exists now is the same person as someone who exists earlier, or later. If this is the right way to ask about our identity through time, then whether I was once a fetus is not a proper question. If being a person means having certain fairly sophisticated mental capacities such as rationality or self-consciousness, a fetus is not a person, at least not yet; certainly it is not a person in the sense of something to which the Standard View might apply. And one could not be the *same* person as something that is not a person at all. If one's having once been a fetus implies that one is the same person as a fetus, it turns out to be an analytic truth that every person is always a person. In that case it is self-contradictory to say that I, a person, might once have been a non-person, such as a fetus. Or if it is not trivially *false* that I was once a fetus, this issue at least falls outside the topic of *personal* identity. (In fact the way in which questions about personal identity are typically put rules out several important rivals to the Standard View.)

So the "fetus problem" may have been overlooked simply because philosophers, encouraged by an entrenched theory, have inquired about personal identity in way that prevented them from seeing it.

⁴ The Standard View has been defended in one version or another by Grice (1941), Lewis (1976), Noonan (1989, pp. 12f.), Parfit (1984, p. 216), Perry (1972), Quinton (1962, p. 403), Shoemaker (1984, p. 90), and Wiggins (1967, pp. 57f.), in addition to those mentioned in note 3. A recent anthology (Kolak and Martin 1991) includes nine articles on personal identity. Only one of the nine, a 1970 article by Bernard Williams, opposes the Standard View, and it is not by coincidence one of the oldest of the book's twenty-eight essays.

⁵ Exceptions are Stone (1987) and Warren (1981). Unger (1990) thinks he can avoid the problem; I discuss his view in section IV below.)

But there is a more interesting explanation. Perhaps the friends of the Standard View *have* thought about the “fetus problem,” but they don’t see it as a problem at all, or at best as a minor, technical matter. They may defend their view in the following way:

“Admittedly most of us would be a bit surprised to learn that we did not come into the world as a microscopic embryo, but rather as a well-developed fetus, at least six months after conception (or even as an infant, a year or so after birth). But if we understand it correctly we shall see that this is not an important point. It is not even clear that it conflicts with anything we all believe. When we learned at our mother’s knee that each of us spent some time inside the womb before we were born, or that human fetuses or infants develop into and become adult human beings, perhaps we did not learn that each of us is *numerically identical* with a fetus or an infant, but only that a fetus or infant, as it develops, *gives rise to* or *produces* a person. When we say that the sparks became a conflagration, or that Slovakia and the Czech Republic were once a single country, we are not implying, absurdly, that one thing is numerically identical with more than one thing. So there is a sense in which one thing can ‘become’ something numerically different from it, and a sense in which one thing can ‘once have been’ another thing. So even if none of us is numerically identical with a fetus—even if no one thing is ever first a fetus and later a person—it is not clear that this conflicts with any established biological facts, or with anything that every enlightened person believes. It is still true that a fetus ‘develops into’ and ‘becomes’ a person in the sense that there is a continuous process of self-directed growth that begins with a fetus and ends with a person.”

This reply misses the point of the “fetus problem.” There might be a loose sense of “becoming” and of “having once been” according to which an F’s becoming a G (or a G’s having once been an F) does not imply that any one thing is first an F and later a G, but only that an F in some sense engenders a G. But this loose sense is not the one that figures in folk wisdom about how we came to be. I was once a child. This does not mean merely that some child engendered me, or that I developed from a child. It means that some one thing—I—was first a child and later an adult. Your five-year-old daughter finds her baby brother disgusting, and you remind her that she, too, was once an infant. You do not mean merely that she developed from an infant. You mean that she herself, not some *other* thing, once weighed twenty pounds, nursed at her mother’s breast, cried at night. In the same way, when you learn that you weren’t brought by a stork, you learn that you were once a fetus in just the sense as you were once a toddler, later an adolescent, and so on. At any rate there does not *appear* to be any deep logical difference between saying, in the ordinary course of life, that I was once a toddler or an adoles-

cent and saying, in the ordinary course of life, that I was once a fetus, or that I once lived inside my mother's womb.

The same goes for embryology. If, as one might think, it is a biological fact that I was once a fetus (in some sense of "having once been"), then it is also a biological fact that I once lived inside my mother's womb, weighed less than a pound, and had gill slits. And that I once had gill slits certainly entails that there was once something with gill slits and that I am (numerically identical with) that thing. At least anyone who would deny this has got some explaining to do.

So folk wisdom and modern embryology seem to tell us quite plainly that each of us was once a fetus, in the sense of being numerically identical with one. It would be surprising indeed if this turned out to be false.

But there is more. The claim that nothing is ever a fetus at one time and a person later on faces serious philosophical problems as well. I turn to them now.

III.

Suppose, as the Standard View would have it, that I came into being six or seven months after I was conceived, when the normal course of fetal development produced the first mental capacities worthy of the name—or a year or more after my birth, when the normal course of infantile development produced those mental capacities that distinguish people from non-people, such as rationality and self-consciousness. Suppose that the fetus my mother bore during all or most of that period—or the infant my mother nursed—is numerically different from me. What became of that fetus or infant? One thing is certain, on our proposal: it did not come to be a person. Nothing started out weighing less than an ounce and grew until it weighed 150 pounds; nothing started out as a glob of a few dozen or a few hundred cells, began to acquire its first crude psychological features several months into its life, and later studied philosophy. At some point (or during some vague period), perhaps some six or seven months after the fetus was conceived, a young human person, or thinking being, appeared. What happened to the fetus then? The Standard View allows for two possibilities. One is that the fetus ceased to exist, and a person (I) took its place. The other is that the fetus survived but never came to be a person: it merely came to share its matter with a person numerically different from it (me).

Neither option is easy to believe. The first tells us that it is logically impossible for a human fetus to come to be a normal, adult human being: the fetus *necessarily* ceases to exist as soon as its nervous system has developed enough to make thought possible. Each human fetus (or infant) must perish in the act of bringing forth a human being. This would be one of the most remarkable and one of the saddest facts in all of natural history—assuming, at

any rate, that embryos of *other* mammal species manage to survive to adulthood. We should want to know why a fetus should perish simply because, in the course of carrying out the program encoded in its genes, it (or rather its successor) came to be able to think. This is not the sort of thing that typically causes an organism's demise. We can understand the view that one necessarily perishes if one *loses* one's ability to think; but that one should perish by virtue of *gaining* that ability is absurd. (Some human fetuses with damaged brains can develop into children or even adults, but not into people strictly so called; they cannot become rational. Perhaps they, unlike normal fetuses, *are* capable of surviving beyond six months.) We should have to be told more about what sort of change a living thing *can* survive, for this proposal would show our ordinary thinking on this subject to be inadequate. Biology would have to be revised to account for these novel insights. This is hardly an attractive view.

The second option says that a human fetus does survive the normal development of its nervous system and grows into an adult human animal, just as we all thought. But in spite of that development it never comes to be a *person*. No human fetus ever comes to be one of *us*, the beings to whom the Standard View applies. Rather, at a certain point in a fetus's development, the atoms that make it up begin to compose something else, a second being, and *that* thing is the person. You (a person) now share your space and your matter with a human organism, and it is the organism, not you, that started out as a fetus. That organism is numerically different from you because it began to exist before you did (and because it has different dispositional properties: *you* could not survive without psychological continuity, but the animal accompanying you manifestly can—or at least it could, and did, at one time).

This view entails that, although we are material beings, we are not human animals: we are not members of the species *Homo sapiens*. Apparently we are not organisms at all, in spite of appearances—even though we are alive and are composed entirely of living tissues arranged in just the way that the tissues of a living human organism are arranged. Not, at any rate, unless *two* organisms could be composed of the same matter at the same time, living together in a sort of intimate symbiosis; but even those who believe that two things can occupy the same place at the same time deny that this is possible for two things of the same kind (e.g. Wiggins 1967, pp. 48f.).

The claim that you and I are material objects but not animals is more than simply odd. It undermines the Standard View by making it uncertain whether you and I are people at all. If you could be biologically indistinguishable from an organism without being an organism yourself, perhaps something could be psychologically just like a person without really being a person. If there are pseudo-organisms, indistinguishable from real organisms, there might also be pseudo-people, indistinguishable from real people. The organ-

ism you now share your matter with (the one that started out as an embryo a few months before you came into being) appears to be just such a pseudo-person. It is not a person, for it was once a fetus, and the Standard View is not true of it. Moreover it could survive without psychological continuity, as no person could. Nevertheless that organism is conscious and intelligent if you are; at any rate its behavior and the states of its brain are no different from yours. You think you are a person. That animal thinks so too, and with the same justification; yet it is mistaken. In that case, how do you know *you* aren't making the same mistake? For all you know you might be the animal—the former fetus—rather than the person. There would seem to be an even chance, and no evidence could decide the matter. So even if the Standard View were true, we could not be confident that it applied to *us*. But it is absurd to suppose that we might so easily be mistaken about whether we are people.⁶

You may doubt that the human animal that accompanies you, according to this view, can think or speak English, even though it is a perfect duplicate of you as you are now. But no currently available theory of intentionality could accommodate this. What could possibly account for such a radical difference in ability? The person and the animal are neurologically and behaviorally identical, and their surroundings are the same. They are far too similar for one of them but not the other to be a thinking being. (And what are we to tell our colleagues in the life sciences? That *Homo sapiens*, in spite of appearances, are in fact *less* intelligent than their evolutionary cousins? That a human fetus, although it can *engender* a highly intelligent being, can itself only develop into a singularly stupid adult primate? This is not the sort of thing that one can learn by reflecting on personal identity.)

Some philosophers find all of this more palatable in conjunction with a Quinean ontology of temporal parts, according to which concrete objects such as ourselves do not strictly endure through time, but are stretched out in time like events, and consist of earlier and later parts (Quine 1950, Lewis 1971). We exist at different times by consisting of different temporal parts that “occur” at different times. On this view a person might be simply a proper temporal part of a human organism: that part of the organism that exhibits psychological continuity. The organism’s “fetal” parts that cannot think are not parts of the person. So no person was ever a fetus.

⁶ Someone may say that our singular personal pronouns always refer ambiguously to both an animal and a person, and so one could not be mistaken in this way. But those who say this typically go on to say that utterances with ambiguous reference are true only if they come out true on all (or most) disambiguations. In the present case, that would entail that the sentences ‘I am a person’ and ‘the Standard View is true of me’ are not true on typical occasions of utterance, since the relevant predicate is true of one of the referents of ‘I’ but false of the other. So this doesn’t solve the problem.

In the same way no adult was ever a child, strictly speaking, for an adult consists of those temporal parts of an entire human organism that are fully mature, just as a person consists of those temporal parts of the organism that can think. In fact (according to Quine and Lewis) each phase of your career corresponds to a different thinking being. The “four-dimensionalist” needs a theory of English semantics that somehow hides these strange consequences of her ontology and makes our ordinary beliefs, such as that all women start out as girls, come out true.

The temporal-parts ontology is a complex topic, and it would take us far beyond the scope of this paper to discuss it adequately. I would only point out that it has unattractive consequences of its own, and that most friends of the Standard View seem to reject it.⁷

IV.

The Standard View as I have stated it entails that none of us could once have been a fetus, or perhaps even an infant; and I argued that this is no minor, technical problem but a major embarrassment. But some will think I have attacked a straw man. The “fetus problem” is easily avoided, they say, and arises only if we state the Standard View incautiously. They propose a subtle variant of that view. Since I am a person now, they say, I can exist at some *future* time only if my mental features are preserved. But I may have existed at some *past* time even if I did not have any mental features at all then. Although lack of mental continuity prevents me from ever becoming (in the sense of being identical with) a corpse or a human vegetable, it does not prevent me from having once been a fetus. We are not essentially people, since we start out as unthinking embryos; but once one is a person, one cannot cease to be a person without ceasing to exist. They propose a time-assymetric account of personal identity.

Peter Unger has proposed such an account. He writes,

The person X now is one and the same as the person Y at some time in the future if, and only if, from the present realizer of X’s psychology now to the physical realizer of Y’s psychology

⁷ See e.g. van Inwagen 1990a; Olson 1994. Another option I haven’t room to explore here is to conjoin the Standard View with Geach’s theory of relative identity (Geach 1962, sec. 31; Olson 1994). On this proposal I am the same *organism* as a certain fetus, but not the same *person*. But my being the same organism as that fetus does not entail that I am absolutely identical with it, nor does my not being the same person as that fetus entail that I am absolutely distinct from it. There is simply no such relation as “classical” or “absolute” identity. The Standard View would then tell us when the relation *same person* obtains, while the Biological View that I recommend below would apply to the relation *same organism*.

at that future time, there is sufficiently continuous physical realization of enough central enough aspects of X's present psychology... (1990, pp. 140f),⁸

Unger (pp. 5f.) claims that his view permits me to have existed at some time in the past—as a fetus, for example—without now bearing any interesting psychological relation to myself as I was then, but prevents me from surviving the loss of my basic mental capacities once I have them. I may not have started out as a person, but once I have become one there is no going back.

Unger's proposal is importantly incomplete, and it is not clear how to complete it in a coherent way. If I was once a five-month-old fetus, his account cannot be the whole story about my identity, or even the whole story about my survival into the future. The reason is that Unger's formula did not apply to me before I became a person. As a fetus I managed to survive without any psychology at all, physically realized or not. Unger's view was not meant to apply to me then. It applies only to beings that are *already* people (it begins, "the *person* X..."). This suggests (and here I am interpreting Unger, not expounding his stated position) that Unger's criterion simply went into effect a few months or years into my career, when I became rational and self-conscious, while before that time some other criterion of identity—presumably one that requires only "purely animal" continuity—applied to me. The "personal" criterion of identity replaces the "fetal" criterion when one becomes a person, much as new legislation may supersede an old law. If Unger did not tell us what it takes to survive as a merely potential person, that is because he was concerned with personal identity strictly so called—what it takes for one to survive once one has become a person.

So we might try developing Unger's proposal in this way: a fetus that exists now and has no mental features at all exists at a later time just in case something at that later time is "biologically continuous" with that fetus (the "fetal" criterion of identity). Once that fetus becomes a person, though, it exists at a later time only if its psychology is preserved (Unger's "personal" criterion). But this is incoherent. Suppose a certain fetus, Mary, grows into a person. Later a head injury destroys all of her mental features and leaves only a living human vegetable. That human vegetable is then biologically continuous with the fetus that Mary once was—i.e. with Mary herself. Our proposal, though, tells us that Mary the fetus is numerically identical with any future being that is biologically continuous with it. So the fetus *is* the human vegetable, and Mary has survived her traumatic accident. Unger's "personal" criterion, though, tells us that Mary cannot survive such a thing.

⁸ In other words, "For you to exist at a future time...there must be the continuous existence, from now until then, of your particular basic mental capacities" (p. 116). To keep things simple I have omitted several qualifications that Unger makes, including a "non-branching" requirement.

So the criterion of identity that applied to me when I was a fetus must still apply to me now, when I am a person, and whatever criterion applies to me now must have applied to me when I was a fetus, if I ever was one. A thing cannot exchange its criterion of identity part way through its career for a new and incompatible criterion. There has to be a single, unitary criterion of identity that applies to something throughout its career. We might try incorporating Unger's incomplete, "personal" criterion into a complete, unitary criterion that applies to me throughout my career, as an embryo, as a fetus, as an infant, and as a person—a criterion that would allow me to survive without any psychology at all as a fetus, and without rationality as an infant, but which would not permit me to survive the loss of my basic mental capacities once I have acquired them.⁹ Since what it takes for a fetus to survive is different from and incompatible with what it takes for one to survive as a person (on the Standard View), this sort of account will be irreducibly disjunctive. A human being would undergo a kind of ontological metamorphosis when it becomes able to think. Those "animal" functions that were once essential for it to go on existing become irrelevant to its survival (except in a derivative way, insofar as biological continuity typically accompanies and causes the preservation of one's mental features). Although this might be a way to avoid the contradiction that arose two paragraphs back, we should still have to say that one's persistence consisted in different things at different times, depending on the circumstances. I do not know whether such an account could be made coherent (unless perhaps it were conjoined with something like the ontology of temporal parts discussed earlier). It would certainly not be very attractive.

⁹ To give the reader an idea of what such a criterion would have to look like, here is my best attempt to produce one:

If x is a human being (e.g. you or I) at a time t , then for any y that exists at a later time t^* ,
 $x=y$ if and only if

- (i.) y is at t^* psychologically continuous with x as he is at t ; *or*
- (ii.) x is not a person at t and y is not a person at t^* and x is at t biologically continuous with y as he is at t^* , and nothing that is a person between t and t^* is then biologically continuous with x as he is at t ; *or*
- (iii.) x is not a person at t and y is a person at t^* and there is a time t' between t and t^* such that there is a person z at t' who is then biologically continuous with x , and nothing is a person biologically continuous with x at any time between t and t' , and y is at t^* psychologically continuous with z as he is at t' .

The first disjunct tells us what it takes for one to survive once one has become a person. The second applies to the period before one was a person (before one could think). The third has to do with the transition from non-person to person; it tells us which future person an unthinking fetus or infant will be. Roughly, a fetus is identical with any future person who is psychologically continuous with him, the fetus, as he was when he first became a person.

V.

I would propose a far simpler and less problematic solution to the “fetus problem.” You and I are living organisms. Although we are not always people, we are always organisms, and we have our criterion of identity by virtue of being organisms and not by virtue of being people. What it takes for us to survive is the same throughout our careers: we persist, as other animals do, just in case our biological *lives* continue. At any point in my career I survive if and only if my vital functions—those complex biochemical and mechanical activities of my atoms by virtue of which they compose a living organism—are preserved. These “animal” functions do not appear to require any mental activity or mental capacities. A human vegetable that can be kept alive with only a feeding tube is still a living human animal, even though its cerebrum is completely destroyed. (Thanks to its intact brainstem, it continues to organize its internal activities, such as metabolism, circulation, digestion, growth and development, and immune reactions, in the way that is uniquely characteristic of living organisms.) Moreover, the human vegetable appears to be the *same* human animal as the human being who was once rational and intelligent, for one’s biological life was never disrupted. An anencephalic baby is also a living human organism, even though it never had a cerebrum. So is a four-week-old human embryo: it has its own closed circulatory system, its own blood type, its own immune system, the beginnings of its own primitive nervous system. So I started out as an unthinking embryo, and if things go badly I may end up as a human vegetable—as long as my biological life continues. We might call this the Biological View of personal identity.¹⁰

The “fetus problem” does not arise on this view. A human fetus or infant does not perish when it becomes able to think (unless that process somehow interrupts its biological life), nor is there any reason to say that it becomes coincident with a thinking being numerically different from it. The fetus or infant simply comes to be a person, just as it may later come to be a musician or a philosopher. And as a person it continues to survive as long as its biological life continues, just as it did when it was a fetus. A person may cease to be a person and still exist by losing her mental capacities, just as a musician may cease to be a musician and still exist by losing her musical abilities or habits.

The Biological View does not entail that I came into existence at conception. The human organism that I am was probably never a fertilized ovum. When a fertilized egg cleaves into two, then four, then eight cells, it does not become a multicellular organism. Those cells adhere only loosely, and their growth and other activities are not coordinated in the way that the activities of an organism’s cells are coordinated. The embryological facts suggest that this

¹⁰ For a more detailed statement of this view see van Inwagen 1990b, especially Section 9.

human organism (the one that I think I am) did not come into being until as long as two weeks after conception.¹¹

The Biological View is not a version of the Standard View and cannot be made compatible with it, for if the Biological View is true one can survive without any mental features at all. This becomes obvious when we consider a famous thought-experiment. Imagine that your cerebrum is cut out of your head and implanted into another, producing someone whose mental contents and capacities are physically continuous with yours. If the surgeons are careful to leave your brainstem and other organs behind, the empty-headed thing left over may be a living, breathing human organism (like an anencephalic baby only bigger and more pathetic). Is that brainless human animal the animal whose brain was removed? We don't appear to have created a *new* human animal by removing your cerebrum. I think it is clear that the animal has simply lost an organ, just as it would if we had removed a kidney or a lung. For all we know, removing the cerebrum need not disrupt the animal's life, for the organs of the lower brain that direct and coordinate its vital functions may be left intact. We certainly haven't pared an animal down to a naked cerebrum, removed it from what was once its own head, and then grafted a new head, arms, legs, and other parts onto it. A detached cerebrum is not a living organism at all, any more than a freshly severed arm or a detached kidney is an organism. Although it is composed of living cells, it cannot coordinate its activities in the way that a living organism can. So if you are a particular human animal, you would not "go along with" your cerebrum if it were removed from your head, as the Standard View entails. Instead you would simply lose your cerebrum and with it your mental capacities. The person who ends up with your cerebrum in the "transplant" case could not be you, if you are an animal, for he is not the animal that you are. He does not have your biological life.¹²

On the Biological View, then, continuity of psychological contents or capacities is neither necessary nor sufficient for us to persist. Psychology is *irrelevant* to personal identity (except indirectly, insofar as psychological and purely biological continuity often occur together).

Do we really need such drastic measures to avoid the "fetus problem"? Couldn't we save the Standard View by saying that a human being persists as long as *some* of its mental capacities are preserved, no matter how primitive? And given how little is known about the development of the fetal nervous system, isn't it at least thinkable that the brainstem of a five-month-old fetus might realize such capacities? Such an account would have none of the virtues of the Standard View. It would allow that you or I might one day be a

¹¹ For more on this matter see Grobstein 1988, especially pp. 26–28, and van Inwagen 1990b, pp. 156f.

¹² For a more thorough discussion of these points see Olson 1995.

human vegetable, for even if one's cerebrum is destroyed, the brainstem may remain intact and realize as much psychology as a fetus has at five months; and friends of the Standard View universally deny that one could survive such a thing. It would also mean that if my cerebrum were transplanted into another head there would be *two* beings psychologically continuous with me: the one who has my cerebrum and my mental contents, and the brainless fellow, who has that minimal amount of mental continuity, realized in his brainstem, that would be sufficient for my survival if he had no rivals. The transplant story would have to be treated along with other "fission" cases like the famous story in which one's cerebral hemispheres are cut apart and transplanted into two different heads. If one could not survive in this "classic" fission case, as most friends of the Standard View say, then for the same reason one could not survive a cerebral transplant either. But if we have to deny that I should survive as the recipient of my cerebrum in the transplant case, and if we must accept the possibility that a person might survive as a human vegetable, we might as well accept the Biological View.

In any case, this move would not solve the problem. A human organism has no nervous system at all when it first comes into being as a microscopic embryo. So if you need even some minimal sort of mental continuity in order to survive, you could not have come into being when that human organism that generated you came to be. In that case we have returned to the dilemma of Section III above: either that organism perished when it began to develop a nervous system and was replaced by you, or it continued to exist and is now an adult human being numerically different from you. It doesn't matter whether you came into being two weeks or two years after that human organism that generated you appeared; the problem is the same. The only sound solution to the "fetus problem" is the Biological View.¹³

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