CONTINGENT MATERIALISM

BY

DAVID J. COLE and ROBERT FOELBER

In the neo-classical formulations of J. J. C. Smart, U. T. Place, and D. M. Armstrong,[1] materialism was defended as a contingent doctrine. We are material objects, physical organisms, so the theory went, but this is a purely contingent fact. We could have been some other sort of thing, perhaps even immaterial spirits. But many data support the hypothesis that we are in fact material. Of late, however, the idea that materialism could be *contingently* true has been repudiated by a number of materialists (e.g. Bernard Williams and Wallace Matson)[2] and others (e.g. Saul Kripke and Alvin Plantinga). According to the new breed of materialist, our materiality is an *essential* feature of ourselves. Metalinguistically, the new thesis is that the proposition "we (persons) are material objects" is necessarily true. This necessity is however compatible with materialism being a scientific *hypothesis*, supported by evidence, rather than necessary *because* analytic. Metaphysical necessity and epistemic aprioricity must be distinguished; necessary truths can be discovered, a posteriori.

The growing popularity of essentialism as to substance among both materialists and immaterialists is due to recent developments in the theories of reference, identity and necessity.[3] In particular, the acceptance of the doctrine of the necessity of identity has made contingent materialism, with its apparent commitment to contingent identity, unattractive to many philosophers. If Jones just *is* his body, then the contingent materialist seems to be committed to holding that for some material x (Jones' body), Jones = x, but contingently so; but this is impossible if identity statements are necessary if true.

Despite this and other arguments for essential materialism, however, we hope to show that contingent materialism is a consistent and conceptually correct account of human beings. In particular, we hope to show that a human being is the sort of thing that could become immaterial, even if now material. Such contingent materialism can be embraced independently of the acceptance or rejection of the coherence of contingent identity.

I

Essential materialism, a doctrine about human persons, follows from the more general metaphysical doctrine of substance essentialism (P):

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(P): Anything is necessarily material if possibly material, (and hence necessarily immaterial if possibly immaterial).

If essential materialism is correct, (P) is true of persons; essential materialism is equivalent to the conjunction of (P) and a proposition to the effect that human beings are in fact (and hence possibly) material. It cannot be denied that the doctrine of substance essentialism has a certain plausibility. A piece of wood, e.g., just is a particular collection of cellulose and other molecules. What something consists of just *is* the thing, and is not something which can cease to exist while the composed entity persists. Substance essentialism is taken so much for granted by essential materialists (and essential immaterialists, such as Alvin Plantinga)[4] that it is rarely explicitly argued for. An exception to this is Bernard Williams, who advances several arguments for substance essentialism, which we shall discuss in this paper. Despite Williams' defense, it is our contention that substance essentialism is false. Even if, as we agree, human beings are in fact, and thus possibly, wholly material, that they might have been or might become immaterial cannot be ruled out a priori.

Substance essentialism is a complex view which can, using possible world terminology, be resolved into two sub-principles:

(P1) If x is material (immaterial) in any world *w*, then x is material (immaterial) for the entirety of its existence in *w*.

In other words, P1 is the thesis that it is impossible for a thing to be material at one time and then to change to become immaterial, or to be immaterial and then to become material. Once material, always material.

P1, however, is consistent with there being an object which is material in fact but which is immaterial in another possible world. P1 just rules out *change* of substance type. *Contingency* of substance type is ruled out by another sub-principle P2:

(P2) If x is material (immaterial) at the first moment it exists in any world *w*, then x is material (immaterial) at the first moment it exists in all possible worlds in which it exists.

That is, if a thing is "born" material (or immaterial), it is necessarily "born" material (immaterial). P2 expresses what might be called "*genetic* substance essentialism". P1 and P2 conjoined are equivalent to substance essentialism *simpliciter*, P.

Our critique of substance essentialism will focus on P1, the thesis, as applied to persons, that it is impossible that a person should be material at one time of his existence and then undergo some sort of transformation and become immaterial. We believe that such a transformation is a conceptual possibility, and a very interesting one, and in this paper we will defend this claim by providing a consistent description of just such a metamorphosis, and then, in section III, by critically examining Williams' arguments for P1.

II

In this section we wish then to give a scenario of a transformation of a human being from the state of being material at some time to being immaterial at some later time. We are certainly not arguing that human beings can in fact become immaterial, but the failure is ontological, not conceptual (we strongly suspect that in the actual world there is no immaterial substance). "Transubstantiation", in this sense, is a *conceptual*, if not a *real*, possibility. That there is in fact no immaterial substance, and hence no such transubstantiation, is a reasonable hypothesis, but not more: it is not provable a priori.

In describing the transformation we will make some assumptions in supposing both poles of the transformation coherent. First, materialism. We assume that it is possible for some material objects to think, be conscious, etc. Some material objects could have mental states. We share this assumption with Williams and other materialists.

It seems reasonable to hold that if human beings are material, it is in virtue of properties of the central nervous system that they can think. And it is reasonable to hold that the properties relevant to thinking, having ideas, sensations and feelings, etc., are causal properties governing transitions between states of the central nervous system. Other properties of the nervous system, such as the color of neurons, the energy consumed and reactions involved in neural discharge, and the chemical composition of synaptic transmitters, etc., are non-essential as far as mental processes are concerned—other substances with the same functional properties would do as well. Of course, it isn't yet known just what those properties are, and it is surely a marvelous thing that "mere" neural activity has the character which it has subjectively, when "seen from the inside", as it were.

Our second assumption is that the notion of immaterial substance makes sense. This assumption is not at issue in the arguments for essential materialism which we will consider (if there could be no substance other than material substance, essential materialism would be trivially true).

Our conception of immaterial substance may be slightly different from some traditional accounts. Immaterial objects are understood to have no physical properties such as extension (size, shape, dimensionality), mass, density or location. But they have not been regarded as being without all properties, for, on the Cartesian account, they think. For Descartes, the essential and defining property of immaterial substance is thought. All and only immaterial substances think. Thus Descartes simply equated the mental and the immaterial.

In countenancing thinking matter, materialists reject this equivalence. And we believe that there could be thinking things which are material, and further that there could be immaterial things which do not think. We suppose that immaterial substance could be a kind of stuff which might or might not have mental properties, but which could causally affect bodies and other immaterial substance. When immaterial substance is properly functionally structured, thought or consciousness is the result, but immaterial substance need not always exist in such a state. This sketch of the nature of immaterial substance, suggested by Hume in his essay "On the Immortality of the Soul", can be fleshed out in a number of ways. The most obvious parallels our account of material substance. Material thinking subjects of experience are complex objects composed of discrete parts: neurons and the like. When these parts interact in certain ways, the whole is conscious. Similarly, immaterial substance might exist in discrete units which might interact in such ways that the resultant totality was a mind. It would be as improper to attribute a mental predicate to any individual immaterial part of such an immaterial system as it would be to attribute such a predicate to a single neuron (or transistor) in a material thinking system.[5]

In holding that immaterial substance *need not* think, we do not thereby render it propertyless and hence unintelligible. We postulate that immaterial substance has the functional properties which render it capable, when appropriately organized, of supporting thought; but at the same time we suppose that this substance is not matter, for it is not in space, and the traditional sciences of matter are not applicable to it. But we certainly embrace the possibility that there be a full-fledged natural science of immaterial substance, investigating its nature by empirical means—a cognitive science. Depending upon the extent and nature of the interaction of material and immaterial substance, discussed below, this science might be advanced only by someone who was immaterial himself, or perhaps also by someone who was material, *via* the interactions with matter. In any case, as we have mentioned, the precise nature of immaterial substance (other than that it lacks the physical properties of mass, size, etc.) is not at issue in the arguments against contingent materialism which concern us here. Those arguments grant the possibility of immaterial substance, but conclude essential materialism is correct nevertheless.

Our third and last assumption is that the idea of interaction between material and immaterial substance is coherent. As in the case of the interaction of fundamental particles, there may be no explanation of *how* the interaction occurs. But the lack of understanding of a mechanism does not impugn the consistency of supposing there to be causal interaction. And it seems clear that material/immaterial interaction is straightforwardly amenable to a Humean causal account in terms of constant conjunction of events. And it is also amenable to a stronger account in terms of necessary connection.

The above metaphysical assumptions provide the framework for the following scenario of a material-to-immaterial metamorphosis. Let us suppose that John is a material object, a human being. But a certain portion of John's brain, D, has become diseased and malfunctions so that John, a chemist, forgets what he once knew about chemistry. However, some *immaterial* substance, H, comes to interact causally with John's brain. Events in John's brain cause changes in the states of H, and H events cause changes in the states of John's brain. Let us suppose that H will behave functionally in just the manner that D did *before* it became dysfunctional. H now plays the same role in John's mental activity that D formerly did. The result is that John regains his former knowledge of chemistry. A portion of John's memory is preserved in *immaterial* substance.

If consciousness can be viewed as a macro feature of certain objects resulting from various causal interactions between the object's parts, it does not matter what the parts are made of so long as the relevant causal relations exist. Moreover, the parts need not be homogeneous in their nature. Hybridization is possible. Thus it is conceivable that scientists could construct a memory unit composed of electronic neuron–analogues which duplicates the causal properties of "flesh and blood" neurons, or clumps of them. When the memory unit is implanted in

someone like John, his knowledge of chemistry could be restored. The transubstantiation of John is merely an extension of the cyborgization of John. The difference is merely one of substance and thus is not substantial as far as John's identity is concerned.

Now a good reason for *not* supposing that we *normally* consist partly of immaterial substance is that our material parts have, it seems reasonable to suppose, all the functional characteristics needed to explain both our manifest behavior and subjective experience (not to say that such an explanation exists now, only that it is reasonable to expect it). The functional characteristics of an immaterial adjunct would be a fifth wheel. But such is not the case with poor John. Parts of his brain have lost their functional characteristics (rotted away, let us suppose) and the functional characteristics of the immaterial substance are *needed* to explain John's abilities. And we are not asking that it be supposed that some of John's brain events have *both* a physical and an immaterial cause. It is rather that some of the events in his brain have *only* immaterial causes. We are supposing that the neural matter at one time functionally antecedent to a brain region is completely destroyed, and yet that the intact region continues to behave in the general manner in which it did prior to the destruction of the region which enervated it. The neurons which formerly synapsed on a neuron N are gone, and yet, without apparent *material* cause, N continues to fire appropriately. It is as if one pulled one's phone wire from the wall and yet found that one could continue to call and converse from it.[6] This would be mysterious, but we could understand *what* was happening if not *how*.

At this, the initial, stage in the transformation process, John exists as a material/immaterial hybrid. The remainder of the transubstantiation consists simply in an even greater transference of functions from John's material brain to immaterial stuff. Suppose then that the disease which disrupted John's memory spreads to other parts of his brain destroying neural interconnections. As the disease metastacizes and John's brain fails, we can suppose that H comes to acquire those functional characteristics necessary to assume the former functions of the diseased parts of the brain. Alternatively, one may suppose that additional immaterial substance S distinct from H comes to interact with the brain and H and takes over the former functions of the newly defunct parts. This transference of function proceeds smoothly until finally every mental state of John is a state of an immaterial object.

Once John's mental states no longer depend on material substance, complete disembodiment is possible. The immaterial H and its other immaterial adjuncts, if any, forming the seat of John's thought, may cease to interact with John's body. Perhaps his body dies or is completely destroyed. Then John's acts of will and his emotions will no longer have an effect on his body, nor will events involving his body have an effect on his mental states. As long as the structure and internal functional characteristics of the immaterial seat of thought remain intact, John will exist as a disembodied person, a completely immaterial object. The transubstantiation will be complete.

It might be thought that we have needlessly complicated John's transubstantiation. We can conceive the time base of the process shrinking to zero so that the complete transformation takes place instantaneously. John's cerebrum may suddenly cease to function while simultaneously some immaterial substance assumes the neglected functions, bypassing any hybrid mental stage. John's mind would be material up to a certain time and then in a flash become immaterial.

We believe that the instantaneous metamorphosis would also preserve personal identity, and thus would also constitute a counterexample to substance essentialism. To argue this, however, would require that we also argue for a theory of personal identity which does not require substance overlap in successive stages of a person's life. Intuitions may diverge widely at this point. We have therefore relied on a scenario which involves a less controversial theory of personal identity.

III

The scenario that we have given seems, on the face of it, to be coherent. We are *not* claiming that this transformation has or ever will occur, nor that is it *metaphysically* possible— if there is no immaterial substance, it is simply not possible to become immaterial. But we find the transformation to be *conceptually* possible, in that it is *permitted* by our *concepts* of person and substance. The substance essentialist must argue that despite appearances, the scenario is not a portrayal of a conceptually possible state of affairs. We will examine such an argument now.

A version of (P1) relativized to persons has been defended by Bernard Williams. In a paper entitled "Are Persons Bodies",[7] Williams seeks to show that

> if we admit the possibility of persons previously embodied becoming disembodied, then we are committed to giving a Cartesian or dualistic account of those persons in their embodied state. Anyone who thinks the Cartesian account mistaken will ... have reason to give up the idea of a transition to a disembodied state.... (70)

The possibility of disembodiment entails that one be always a Cartesian immaterial ego with, perhaps only at times, a material body adjunct. Thus Williams argues for (P1) for *persons* (and his arguments may apply more generally to *any* sort of object): once immaterial, always immaterial.

Williams has two arguments which are meant to support his essential materialist thesis, and they are meant to establish that thesis no matter which of two ways of regarding disembodiment one might take.

Consider the hypothetical case of a person A who at time t is embodied and at some later time t' exists in a disembodied state. Suppose now that we ask of the disembodied A at t': How tall is A? How much does A weigh? and similar questions. There are, says Williams, two possible replies, which reflect two possible ways of looking at disembodiment: (a) the questions have no answer because the categories of height and weight do not apply to a disembodied person; (b) the categories do apply, and the height and weight of A at t' are both zero. One answer assimilates the questions to asking of justice what color it is, and the second to asking to a piece of clear untinted glass what color it is.

The force of reply (a), Williams says,

> seems to be that a person is a thing which, though it can, does not have to, exemplify determinates under physical determinables. But this has many difficulties. For surely the understanding of a given sort of thing closely involves an understanding of under what determinables a thing of that sort exemplifies determinates ... If we are given a specification of a thing of a certain sort, and are told

that it exemplifies no determinates under determinables associated with things of that sort, we can standardly conclude that it is not the specification of any real thing of that sort, but, e.g., of a fictional thing: part of what it is for Lady Macbeth to be a fictional woman is that there are many questions to which with regard to any real woman, there must be answers (though we may not know what they are), but which have no answers in the case of Lady Macbeth.

Considerations on these admittedly sketchy lines may well give us reason to say that it is impossible for one and the same thing to have a given collection of determinables apply to it at one time and not another. If so, we shall say that the possibility of diembodiment would show, not just that a person was a sort of thing that *did not necessarily* exemplify physical determinables, but that it was a sort of thing that *necessarily did not* exemplify such determinables. Thus even embodied persons would not have physical attributes, but would be nonphysical things associated with a body, i.e., a Cartesian account would apply. (71)

The argument of the passage is this:

(1) "If we are given a specification of a thing of a certain sort which has no determinates under determinables associated with things of that sort, we can standardly conclude that it is not the specification of any real thing of that sort."

This fact "may well give us reason" to conclude that

(2) "it is impossible for one and the same thing to have a given collection of determinables apply to it at one time and not another."

From which it follows that

(3) a person cannot exemplify physical determinates and then cease to exemplify them; once material, always material.

This argument for substance materialism is indeed, as Williams admits, sketchy. And, as the phrase linking (1) and (2)—"may well give us reason"—indicates, Williams himself seems uncertain of the strength of the argument. We believe that the argument will prove unsatisfactory no matter how it is filled in.

In the first place, note that (2), which is in effect the doctrine of substance essentialism, is supported solely by considerations of what people putatively can conclude in so-called "standard" cases when an alleged object fails to have "determinates under determinables associated with objects of that sort". The argument appears to be an inductive one ("we can standardly conclude"); conclusions which Williams thinks are reached from standard cases are applied to all possible cases of persons. But persons are, after all, a rather unique sort of entity, and becoming immaterial would be rather unique process if possible, and so it needs to be shown why, in particular, persons could not become disembodied.

Second, we not that Williams does not make explicit all quantifiers in claiming that a thing which "exemplifies no determinates under determinables associated with things of that sort" is reasonably supposed unreal. If a "thing" has no determinates under *any* determinables, then it is indeed suspect. But what can we conclude if the object in question just fails to have determinates under *some* determinables associated with its kind? The claim that such an object is justifiably concluded to be non-existent would be *much* harder to support. And the view that Williams must refute is that it is, after all, a *person*, which is to be disembodied, and so it is obviously the view that properties important to being a person *are* preserved, and, further, that having height and weight are not amongst these.

The view, and it is a venerable one, is that a disembodied person would have a wide variety of properties associated with persons: memory, thoughts, intellectual capabilities, and, not least, *personality*. So the view is certainly not that a disembodied person would have *no* familiar person properties, only no *physical* properties. So Williams must suppose that it is *physical* properties which are required to be a real person, and that is but to beg the question.

Third, what are we supposed to make of the fact, crucial to Williams' argument, that determinables are "associated with" things of a certain sort? If Williams is not just to beg the question, he cannot suppose that physical properties are *necessarily* associated with persons. And if they are just contingently, even if "standardly", associated with persons, then the argument fails, because then the determinables in question *need not* be associated with persons. And as to the standardness of the association in question, it is clear that for thousands of years millions of people have thought that there were persons who did not, at all times of their existence, exemplify physical properties. It will not do to say that "nowadays, sophisticated people will not allow that a person is real unless he/she has physical properties", for that seems much too provincial a view to do justice to the concept of person. What is required here is an attempt to show that one who held that there could be a disembodied person who was formerly material is *mistaken*, not just in a minority.

Williams is aware of the weaknesses in his argument. He acknowledges that perhaps there could indeed be cases where an object shed certain customary determinables. For example, "a material body may become totally colorless (at the extreme, by becoming invisible)." But if a table can become invisible, why can't a person become disembodied? Williams' answer is that a person's losing all physical properties would be a much "graver" case than invisible furniture. But what does this gravity come to? Certainly if a table lost all physical properties, it would cease to exist. And thus if a person were sufficiently like a table, losing all of his or her physical properties would be a grave matter indeed. But as we have maintained before, the relation of physical properties to the essence of an object like a table is different than the relation of physical properties to human essence. Sufficiently important features of a person are mental properties, and these properties are functional in that it does not matter what particular substratum supports them. And in the extreme, it need not be *matter* which supports them.

Williams concludes his examination of the (a)–type understanding of disembodiment by again merely appealing to substance essentialism.

The case of a person's losing all his physical attributes would seem in any case graver than [a physical object becoming colorless or, at the extreme, invisible], and more significant for one's understanding of what sort of thing a person was; but in any case it would certainly show that having physical attributes was not essential to being a person. Now this would not lead directly, of course, to what I have called the Cartesian conclusion: for the fact that persons did not essentially have physical attributes would not . . . show in itself that they never had them at all. But this is not all that we have to work from: for it seems true that all the current arguemnts against the Cartesian position (e.g., Strawson's) do involve saying it is essential that persons have, at least some of the time, physical attributes. I am not sure that any coherent account can be given of a sort of thing to which it is essential that it display at some time determinates under a wide range of determinables, but not essential that it do this all the time; yet this is required by line (a). (71–72)

This is the conclusion of Williams' discussion of view (a) that the categories of height and weight apply to embodied but not to disembodied persons.

The argument here is:

(1) Strawson's and other arguments seem to show that persons must at some time have physical properties.

(2) It is not clear that a coherent account can be given of a thing which must display physical attributes at some time, but need not always. (Substance essentialism, P1)

(3) Thus, persons must always have physical properties.

We are not here concerned with the truth of (1). We would however take issue with Williams' (less than whole-hearted) commitment in (2) to substance essentialism; we hope that we have provided an account of a possible transubstantiation which is coherent.

And while our scenario provides a counterexample to the thesis of essential materialism, the thesis of materialism apparently at issue in Williams' arguments is itself vague enough that perhaps a more mundane scenario could serve as well. As Mark Wilson has remarked to us, in the story and motion picture "The Fly" a machine exists which converts matter to energy, transmits it, and reconstitutes the matter at a remote receiver. Is a human being "immaterial" whilst being transmitted? Whether that is clear or not, it does seem that "The Fly", a prima facie coherent story, constitutes a counterexample to Williams' arguments for essential materialism. For while being transmitted a person would lack most of the physical properties (height, appearance, etc.) had before and after transmission.

Williams second argument for substance essentialism concerns a different understanding of disembodiment than the (a)–account. According to the (b) view of disembodiment, a person will always have determinates under physical determinables, but their value when the person is disembodied will be zero. But this view, Williams thinks, has insurmountable problems. Suppose person A, when he is embodied at t, has a body B which weighs a certain amount, m. Suppose also that, after A becomes disembodied, his body B changes in weight (say because of partial decomposition) so that it weighs k at t', where k does not equal m, but is greater than zero. So B has the property of changing its weight from m to k. But this is not a property of the person A, for A weights by hypothesis (b), zero at t'. Therefore, A is not identical with B, the person is not his body. Now, the argument goes, we know how much B weighs at both t and t', and we know how much person A weighs at t' (namely, zero). But how much does the person A weight at t? It cannot be m, for if that were the case then A and B together, the embodied person, will weight $2m$ at t, which is absurd. Williams concludes that the only plausible answer to the question of the person's weight at t is that he weighs zero. A is immaterial, therefore, even when possessed of a body. Possible disembodiment entails essential immateriality.

Now in the course of arguing that the only plausible supposition is that, when embodied, A weighs nothing, Williams considers and rejects a view that, if successful, would avoid both the consequence that a person and his body weigh twice what the dead body alone weighs, and also the consequence that a person always weighs nothing. The view is that a person consists of his body.

> Consider, for instance, a car and the material of which it is made. These are not identical things since the materials, independently identified, can have a different history from that of the car. The concept of weight can be applied to each [the car and the totality of parts]; yet the car and the total of materials of which it consists at a given time do not of course weigh more than the car weighs. So the weight-doubling paradox can be avoided by saying that a person consists of, is made of, his body. (p. 73)

But this option is not available, says Williams, to a person who believes in the possibility of disembodiment, and his rejection is very brief and emphatic: "...for how can a thing which consists at a given time of certain materials come to consist of nothing at all, save by ceasing to exist? If there are any merits to the quasi–Aristotelian model of *consisting of* for the relations of persons and bodies (and I am doubtful of them), it certainly cannot be consistently combined with the possibility of disembodiment" (p. 73). So much for that; if a person were to consist of a body, then he could not become disembodied, for then he would cease to exist at all.

We reject this argument as emphatically as it was advanced. Williams' criticism presupposes, without remark, that to become disembodied is to come "to consist of nothing at all". But surely that is not true! When disembodied a person would consist of no *body*, certainly, and, we suppose, of no *material* thing, but the supposition of the immaterialist is just that that is not all that there could be to consist of. A disembodied person could consist of something that wasn't material, namely immaterial substance. Which is to say that the *consisting of* account will do as well for an account of the disembodied person as it will for an account of an embodied person.

Williams is not alone in rejecting an account of persons and their bodies which holds that the former consist of the latter. He is joined by Saul Kripke in "Naming and Necessity", where the proposal rates a footnote. "A theory that a person is nothing over and above his body in the way that a statue is nothing over and above the matter of which it is composed, would have to hold that (necessarily) a person exists if and only if his body exists and has a certain additional physical organization. Such a thesis would be subject to modal difficulties similar to those besetting the ordinary identity thesis, and the same would apply to suggested analogues replacing the identification of mental states with physical states." (note 73) The point, as we understand it, is much the same as Williams': if a person consists of, or is nothing over and above, his body, then he couldn't exist if his body did not.

But, as we have seen from our scenario of John's transubstantiation, this is not at all obvious. The reason why we believe this sort of change is possible for humans is that so much of the identity of persons is tied to internal, mental, dispositional, subjective, and behavioural properties, and *not* to the particular body or stuff of which they consist.

But in connection with the Kripke/Williams argument under consideration, let us consider the relation of a person's *body* to the matter which composes *it*. Now it is clear that the matter which composes our body changes minute by minute, with every breath we take, in fact. And it also seems clear that our body is not "something over and above" the matter composing it; surely it is rather like the relation of the car to its parts mentioned by Williams—for otherwise, one wants to know just what it is over and above its stuff, and perhaps the weight-doubling paradox rears its head. Does one have a different body with every breath? We

don't believe that is a very useful way to describe the situation. Although one's body consists of a slightly different collection of molecules after every breath, it does not follow that it is a different body, although it differs slightly in composition. And even if it turns out that Williams, at just this moment, has a body which consists of just those, and no other, molecules which composed the body of Bertrand Russell at some time in his long career, it does not follow that Williams has Russell's body (even Russell's body of 3:23 p.m. October 6, 1927). Even, it is interesting to note, if Williams has, through the natural processes of growth and so forth, *exactly the same* molecules in *exactly the same* arrangement as Russell's of the aforementioned date, Williams still does not have Russell's body. But all this is not to say that Williams' body is something over and above those molecules in that arrangement. The upshot seems to be that "consisting of" and "being nothing over and above" is *not* the same as being identical with, insofar as some things could consist of certain things at one time, and others at another time. We suspect that a variety of objects which have functional properties important to their identity will display this indifference to constituents; examples may well include universities, countries, lakes, dogs and persons. In fact, we suspect it to be true of most any organic entity. This dog at my feet is the same dog that I acquired three years ago, although I have fed him daily and as a result he consists of different matter. But my dog *is* what he eats. There is no paradox here. We propose that persons are, if anything, less wed to their substratum and embodiment than are dogs, if only there are other embodiments to be had. And if there is in fact immaterial substance, there is no *conceptual* reason why a person now material could not come to consist of immaterial substance.[8]

University of Minnesota
Duluth, Minnesota.

NOTES

[1]See, e.g., J.J.S. Smart, "Sensations and Brain–Processes," *Philosophical Review* LXVII (1959), 160–172; U.T.Place, "Is Consciousness a Brain Process?", *British Hournal of Psychology* XLVII (1956), 44–50; D.M. Armstrong, *A Materialist Theory of Mind* (London: Routledge and Kegan Paul, 1968).

[2]For Williams' argument, see note 6 below. Matson defends essential materialism in *Sentience*, University of California Press, 1976, especially chapter 2.

[3]Notably those of Saul Kripke and Alvin Plantinga. Kripke expounds his ideas in "Naming and Necessity" in *Semantics of Natural Languages* edited by Donald Davidson and Gilbert Harman (Dordrecht: D. Reidel Publishing Co., 1972), pp. 253–355, and in "Identity and Necessity" in *Identity and Individuation* edited by Milton K. Munitz (Albany: State University of New York Press, 1971), pp. 135–164. For Plantinga's contributions, see *The Nature of Necessity* (London: Oxford University Press, 1974).

[4]*Ibid*., p. 68.

[5]Of course, immaterial substance need not exist as parts for there to be immaterial persons–all that is necessary is that an immaterial entity have the succession of *states* appropriate to sentient persons. And Hilary Putname suggests ("Philosophy and Our Mental Life" presented 1973, published in *Collected Papers* Vol II, 1975: page 293) that one can imagine "two possible universes" such that in one people have bodies interacting with immaterial souls, whereas in the other people are (only) complicated material entities. And Putnam agrees with us that the difference of substance is not important as far as being a person is concerned. However, since we are interested here in showing

that a single material person could gradually *become* immaterial, we have chosen to spell out an account of immaterial substance which makes that transubstantiation as clear and understandable as possible, with the causal properties of individual neurons assumed by immaterial substance.

[6]Compare Wittgenstein's remark about the possibility of an empty-skulled but functional human: *On Certainty* section 118, also sections 159, 207 and 251. We claim the empty-head is a conceptual possibility, but not for the same reasons Wittgenstein might have had.

[7]"Are persons Bodies?" in *The Philosophy of The Body* edited by Spicker (Chicago: Quadrant Books, 1970); reprinted in *Problems of the Self* (London: Cambridge University Press,, 1973), the edition to which our page number citations refer.

[8]We wish to thank Mark Wilson, Antony Flew, Zeno Vendler, Christopher Boorse, and Frank Dilley for their many helpful comments on earlier versions of this paper, including one read at the University of California, San Diego.