

Descartes' Baby and Natural Dualism

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Abstract

The clash between science and the doctrine of the soul is not dead, as Yale psychologist Paul Bloom demonstrates in his fascinating study, *Descartes' Baby: How the Science of Child Development Explains What Makes Us Human*. New research on babies' "looking time" suggests that they view the world in terms of two kinds of things—"bodies and souls". They are "natural dualists", not because of religion or philosophy, but because of babies' disposition to observe differences in the way objects and people behave. Nevertheless, Bloom observes that natural dualism is out of step with modern science. Does this mean that babies start life with a skewed view of reality? Not necessarily, I argue. While babies see people as souls, there is no evidence whatever that they see them as souls *separate from their bodies*. In my paper, I discuss and critique the highlights of Bloom's position, point out some of the pitfalls in philosophical arguments for natural dualism, and propose a defense of the soul as a secular, not just a religious, concept. As Bloom suggests, naturalists do not need to feel embarrassed to refer to the human soul.

Keywords

Bodies and Souls, Natural Dualism, Naturalism, Religion, Personal Identity, Death, Possibility, Speciesism

1. Introduction

It is surprising to hear a scientist, not a preacher, report that "We have two distinct ways of seeing the world: as containing bodies and as containing souls (Bloom, 2004: p. 12)." The scientist in question is Paul Bloom, a developmental psychologist at Yale University, and he does so in a work, *Descartes' Baby: How the Science of Child Development Explains What Makes Us Human*. Prof. Bloom tells us that research on babies' "looking time" suggests that babies less than a year old tend to see the world as containing two kinds of things—bodies and souls. They are "natural dualists", not because of religion or philosophy, but be-

cause of their propensity to observe different patterns in the way physical objects and people behave. Nevertheless, Bloom takes pains to point out that natural dualism is out of step with modern science. Does this mean that babies start life with a skewed view of reality? Not necessarily, I argue. While babies see people as souls, there is no evidence whatever that they see them as souls *separate from their bodies*. This leads me to defend the soul as a secular, not just a religious, concept.

Bloom opens his account with the story of Descartes' baby. According to this story, which of course may be apocryphal, the French philosopher and scientist Descartes is reputed to have carried around in his travels a chest containing a life-sized doll. It was said to resemble his little daughter, lost at the age of five. As one version of the story goes, Descartes was travelling on a ship and the captain, seeing the philosopher outside his cabin, stole into the cabin and opened the chest. To his horror, he found only a child-like doll and hastily threw it overboard. Presumably, he couldn't bear the thought of something that looked human but had no soul. Even today many people find the idea of a soulless human what could be called a soul zombie repulsive. But in Bloom's view, that is what modern science says of us: we are fleshy creatures who often find ourselves appalled by the idea that we might be nothing but flesh. As Bloom puts it succinctly, "We are Descartes' babies (Ibid., p. xiii)."

We face here a clash between two views of man: a naturalistic one, which accords with that of modern science, and a dualistic one, which conceives of him as an embodied *soul*, different from and superior to a mere animal. The dualist pictures the body as physical, tangible, and perishable, whereas none of these things is true of the soul. This picture is an essential part of the great monotheistic religions, and counterparts of it can be found in classical and modern philosophy. Plato (*Republic* (Plato, 1963)) offers a version of it, surprisingly similar to that of Buddhism, in the myth of the warrior Er. He pictures the soul as migrating from body to body, as needed for it to pay for its earthly transgressions. For (*Meditations Descartes* (1955)), the so-called father of modern philosophy, it is the distinction between body and mind, the essence of body being spatial extension and the essence of mind consciousness. As he famously put it, "I think, therefore I am." There is more than one way, then, of expressing the dichotomy in question, but the underlying assumption is the same: the physical part of man is contrasted with his nonphysical part, regarded as more essential and variously called "soul", "mind", "spirit", "self", or "consciousness". While these terms are by no means synonymous, each of them has been used by one thinker or another to refer to the supposed non-physical part of man. What is important is the distinction, not the names. For ease of reference, I will continue to use "soul" to refer to this nonphysical part, but readers may wish to substitute the term they prefer.

The novelty of Bloom's conception of *natural* dualism is twofold. First, he regards it as a product, not of religion or philosophy, but of the way we naturally

view ourselves from early childhood on. We think of ourselves as embodied souls with powers and capacities beyond those of animals, endowing us with a special, innate dignity. Even people who deplore animal abuse feel that it is far worse to abuse or kill a human being. Second, for Bloom natural dualism is an empirical hypothesis about the human psyche: beginning with infancy, humans are inclined to view themselves, not just as bodies, but as separate souls. As Bloom says, “We do not feel as if we are bodies; we feel as if we *occupy* them (p. 191).”

Bloom brings natural dualism to our attention in order to contrast it with the scientific understanding of *Homo sapiens*. While science takes for granted human bodies and their psychological properties, it gives us no reason to think that human souls are part of the furniture of the universe. In this respect, belief in the separate existence of the soul may be regarded as on a par with belief in the geocentric theory (the sun revolves around the earth). Neither belief is true, but we can understand why people, for a time and for their own reasons, could accept them as true. For this reason, it is easy to dismiss the concept of the soul from further consideration, but I hope to show later there is another alternative: we can, and already do, think of the soul in secular terms. In what follows I propose to do three things: 1) To give a brief summary of the psychological evidence for the natural dualism hypothesis; 2) To consider Bloom’s three other reasons for the hypothesis, and then to argue that they are more seductive than probative; and finally; 3) To suggest an alternative to the dualist conception of the separate soul, which is more in harmony with that of modern science. The topic is important because it invites us, not to abandon a long-standing religious concept, but to reframe it in a way that has both human and scientific interests. We can believe in the soul without embarking on a theological or metaphysical quest.

2. Babies Are Natural Dualists

Since babies cannot tell us how they see themselves and the world, psychologists interested in their cognitive development have tried to access it by means of studying their looking-time. The approach has been nicely summarized by Bloom (pp. 9-10):

Babies may have little control over their bodies, but they can willingly move their heads and eyes. And what a baby looks at can tell you something about how it sees the world. This is because babies are like adults in some regards. If they see the same thing over and over again, they get bored and look away. If they see something new or unexpected, they look longer. Thus, analyzing looking time can tell us what babies think of as being “the same thing” and what they see as being “new or unexpected”.

How do babies think of physical objects? Psychologists Philip Kellman and Elizabeth Spelke conducted an experiment to test how three-month-old babies think of physical objects. The study concerned a straight stick inclined at an angle but partially obscured by a barrier, so that only the top and bottom of the

stick could be seen. It was paired with another scene in which the straight stick was substituted by a pair of unconnected sticks. When the babies were exposed to the two scenes, they looked longer at the two disconnected sticks than when they looked at only one. Since looking longer at the two sticks indicates surprise, we can infer that the babies expected to see, as adults would, a single stick. They rely, not just on what they see, but on expectations about parts of objects that are out of sight. When babies see one part of the hidden object moving, they expect the other part they see to move in tandem, and when the barrier is removed they are surprised if they discover that the two parts are not connected.

In another experiment done by psychologist Karen Wynn babies see a hand place a Mickey Mouse doll on an empty stage, followed by a screen hiding the stage from view. Out of sight, the hand places a second Mickey Mouse doll on the stage and the screen is again removed. Five-month-old babies are surprised by the second doll, for they apparently expected only one, showing full well, as Bloom puts it, “that objects persist when they are out of sight.” On the basis of such studies, he concludes that babies have expectations that a physical object is cohesive, continuous, solid, and interacts with other objects on the basis of contact. Not bad for the general concept of a physical object. Few adults could do better on the spur of the moment.

In a section called “THE SOCIAL BABY” Bloom (pp. 14-15) reports that babies do not regard people in the same way as they regard physical objects:

Even very young babies treat people differently from objects. If babies see a moving object become motionless, they lose interest. But if they interact with a person, and then the person’s face becomes still and stays that way, they get upset. (You would too.) Babies expect faces not only to move, but to move in ways that are appropriate responses to their own actions.

A familiar example is that when a baby smiles or sticks her tongue out, she expects the person attending her to follow suit. Only a perverse caretaker would respond to a smiling baby with a frown or look of anger. Babies are also happy to mimic the facial expressions of their caretakers. Many parents have found that the best way to get their baby to smile to stick out her tongue is to do the same thing themselves. To the extent that babies have control over their bodies, they are remarkable mimics. That is one salient feature that distinguishes people from objects. A baby will smile back at you, but a teddy bear or doll will not.

Research on babies’ looking-time also suggests that babies look longer at people than at other kinds of objects and that they find them more interesting. Babies prefer to look at faces and, as noted before, expect them to move in ways that are appropriate responses to their own actions. They even look longer at patterns of light that move in a human-looking fashion or circles of light appearing to chase each other.

The minds of young children are not limited to what they can see. Bloom notes that they give greater weight to hidden internal properties than to observable external features of objects. It is easy for them to think that someone is

happy or sad simply by looking at his or her face. They attribute thoughts and feelings to their pets. Children are also “promiscuous teleologists”: they attribute purpose and intention to many things, regardless of whether they are artifacts or natural kinds. “What’s it for?” and “What’s it supposed to do?” are natural questions, whether asked of a tuning fork or a turtle. Children think there must be a reason for their existence, not having learned to distinguish reason as cause from reason as a motive. Children name their creations after their intentions, rather than after their likeness to the objects represented. A scribble on paper can represent smoke, however, unlike it is to the real stuff. Children live as much in their minds as they do in their bodies.

Though babies are alike in many ways, Bloom seems to agree with psychologist Simon Baron-Cohen on the presence of gender differences. Baron-Cohen goes so far as to suggest that to be male is to have a very minor form of autism. Bloom’s view (pp. 30-31) is less extreme but not far-off. Speaking of babies and young children, he sums up those differences as follows:

- One-day old baby girls look longer at a face than at a moving mechanical mobile; boys show the opposite preference.
- Little girls make more eye contact at age one than little boys do, and the amount of eye contact made by children at this age is predicted by the amount of prenatal testosterone, a male sex hormone: the more testosterone, the less eye contact.
- As soon as children develop enough to show signs of empathy and caring, girls show it more than boys. One-year-old girls are more likely than boys to help others in distress.
- Girls consistently outperform boys on tasks, such as the false-belief task, that involve inferring what other people are thinking and are better at decoding facial expressions and nonverbal gestures.
- Boys are more likely than girls to suffer from disorders involving problems with mindreading and empathy, including autism, conduct disorder, and psychopathy.

As he says, however, these differences are a matter of averages. There are plenty of men and women who do not fit this gender profile.

3. Are We Bodies and Souls?

While the psychological data seems to support the hypothesis that babies are natural dualists who see physical objects and souls as different kinds of things, it isn’t clear whether babies regard the soul as *separate* from the body or only *different* from the body. Given this distinction, two kinds of natural dualism are possible. According to the first, the separation view, babies are innate dualists from the start and they see the soul as separate from the body. According to the second, the developmental view, babies come to acquire the idea that the soul is different from the body, as a result of their interaction with the world and themselves. While Bloom does not make this distinction, it seems to me that his data

supports only the leaner form of natural dualism. It is a stretch to maintain that babies think of souls as *separate from bodies*. Surely, two things can be different without being separate. Think of “man” in the generic sense—man, woman, or child—and “man” in the specific sense—adult male human being.

Nevertheless, Bloom (p. 191) seems to associate “soul” with some version of the separation view. For he says,

The premise of this book is that we are dualists who have two ways of looking at the world: in terms of bodies and in terms of soul. A direct consequence of this dualism is the idea that bodies and souls are separate. And from this follow certain notions that we hold dear, including the concepts of soul, identity, and life after death.

Possibly, he has slipped into his idea of the soul, as many people do, the theological doctrine of the soul, which can hardly be said to be confirmed by babies’ looking time. In the final paragraph of his book, he states, “The notion that our souls are flesh is profoundly troubling.” But why should it be troubling unless we have bought into the notion of the separate soul, and what evidence is there that babies are troubled by it?

Further, as Bloom (p. 225) is aware, the notion of the separate soul is out of step with modern science, as he insists once again:

This is the bad news. Science tells us that mental life is the product of the mind; it *does* emerge from living matter. All thought is the result of biochemical processes, and damage to the brain leads to mental impairments, destroying capacities as central to our humanity as self-control, the ability to reason, and our capacity for love. There may well be a spiritual soul, but it is not distinct from the forces of matter.

Unless we have bought into the separation doctrine, it is hard to see why this information deserves to be called “bad news”.

4. Philosophical Arguments for Natural Dualism

Apart from the empirical evidence for his hypothesis, Bloom briefly mentions three philosophical arguments for body/mind dualism. But without articulating them fully or attempting to evaluate their merits, he leaves it to the reader to do it for himself or herself. Accordingly, I have taken the liberty of doing that, without of course implying that he would approve of my efforts. I hope to show that, on careful examination, the additional arguments he offers on behalf of natural dualism fail to deliver the goods. In short, they are seductive rather than probative. Finally, I hope to show that, when certain misunderstandings are cleared away, the naturalistic view of *Homo sapiens* remains in the field.

First, Bloom (p. 195) argues that natural dualism is supported by the way we regard our bodies as possessions:

Our bodies are described as our possessions. We talk about “my body”, “my

arm”, “my heart”, and most revealingly, “my brain”. The comedian Emo Phillips nicely captures the intuitive dichotomy between self and brain when he says, “I used to think the brain was the most fascinating part of the human body, but then I thought ‘Look what’s telling me that!’”

A curious feature of English, as of many other languages (compare “Tengo un cuerpo” in Spanish and “Ich habe ein Corpo” in German), that we say “I have a body”, not “I am a body”, as if, like other things we own, we were different from our bodies. Ownership is a social concept, not a physical one, though of course it can be applied to physical things. Personal identity seems to be independent of the particular state of a body at a particular time. John Doe can lose a limb or a sense or a sense organ without losing his personal identity—he is still John Doe in his altered state—so in principle why couldn’t he lose his body without losing his identity as a person? In that case of course we couldn’t access his presence in the same way we do, but change of access needn’t involve change of existence. Many people find it easy to think of John Doe surviving, in his true form, as a soul—the soul that animated his body when he was alive. For convenience, we could call this the *ownership argument*. I have developed it more fully than Bloom does, but I think it is in the spirit (no pun intended) of what he says.

Second, Bloom (p. 195) notes that we speak of our bodies changing while our personal identity remains the same:

Our intuitive dualism grounds our sense of person identity. We recognize that a person’s body will age; it might grow or shrink, lose a limb, undergo plastic surgery—but in an important sense, the person remains the same. We will punish an old man for crimes he committed as a young man and will reward an 18-year-old with a fortune that was left to her as a baby. And we can understand fictional worlds in which a prince turns into a frog and then back into a prince again, or a vampire transforms into a bat.

We could call this the *argument from persistence through change*. As everyone knows, our bodies undergo profound physical changes during the course of a lifetime, from infancy to maturity to old age. But our sense of self or personal identity remains relatively constant throughout that lifetime. We feel that we are the same person now as we were as a child, despite the constant replacement of the cells which make up our bodies. Mutable body, persistent self—how could the two be the same?

It might be objected that incremental changes do occur in the self as fresh experiences are added and old memories are lost. While that is true, it does not ordinarily affect our sense of personal identity. We feel that we are the same person now as before, despite variation in the content of our experience and memory, just as in watching a movie we feel ourselves to be the same viewer throughout the changing scenes. The self or soul persists in the midst of change, so how can it be identical to the body?

Finally, Bloom (p. 203) calls attention to the way we think about death, whether

it is our own prospective death or the actual death of a loved one:

What is unique to people is the assumption that personhood can survive the death of the body. It makes no sense to say that if a fork were destroyed, its “essence” might survive, perhaps showing up in a later existence as a spoon. Forks and spoons do not have essences in that sense and they do not have bodies; they are bodies. But many do believe that when a person dies, the soul leaves the body and goes somewhere: to heaven, to hell, to some unspecified nether world, or into the body of some other creature, human or animal. If I say that I am the reincarnation of the queen of France, you probably won’t believe me, but you can understand what I am saying.

This is a nice summary of our attitude to death. Whatever the reality of *post mortem* survival, we can easily conceive of surviving the death of our body but it is harder, if not impossible, to conceive of the soul or self as no longer existing. For instance, it seems easy to imagine witnessing our own funeral, but in doing so we are still thinking of ourselves as being secretly present. Believers in reincarnation go so far as to imagine prenatal existence or existence in some non-bodily form between lives. On the familiar principle that what is clearly conceivable is possible, life after death is a real possibility, not a mere figment of the imagination. While this conclusion is supported by many religions, its appeal comes from another source, our wish to escape the fate of our bodies. It doesn’t have to rely on religion or on questionable empirical claims about near-death or out-of-body experiences. Coming from our ability to imagine different possible futures, we could call it the *argument from conceivability*.

There is still another way of thinking of the difference between body and soul, but I don’t find it in Bloom’s text. However, we can generalize his argument from persistence through change to a more general form: we speak of our bodies in a different way from the way we speak of ourselves. For instance, your body consists of millions of cells and several pints of blood, but it would be distinctly odd to say that *you* consist of millions of cells and several pints of blood. Again, you may be thinking of your twenty-first birthday bash, or wanting to see reforms in the health care system, or expecting a call from your stockbroker, but it sounds crazy to say that your body, or even your brain, is doing any of these things. For you think of yourself as the agent, not your body or any of its parts. Likewise for your personal states. You are (say) a grandparent and a retired teacher, but that doesn’t mean that your body or any part of it is a grandparent or a retired teacher. Over and over, things seem to be true of you which aren’t true of your body, so how can you be identical with your body? For the two to be identical, whatever is true of one would have to be true of the other, and vice versa, but that is precisely what we don’t find. Ergo, you are not your body. Call this the *argument from disparity*.

5. How Sound Are These Arguments?

I propose that the separation form of natural dualism and the reasons behind it,

as suggested above, are worth exploring. That form of dualism, as I understand it, involves three central ideas which are foreign to modern science: 1) That we humans are essentially embodied souls rather than wholly embodied creatures; 2) That our souls are separate from our physical embodiment and hence capable of surviving the fate of our bodies; 3) That having a soul is both what distinguishes us from animals and endows us with a special form of dignity. While these ideas are commonly attributed to religion, I am inclined to think that their astonishing success in attracting many adherents is due, not to religion itself, but to their affinity with human nature. In the main, people want these ideas to be true and so they are inclined to embrace religion, in the hope of securing its stamp of approval. They forget that religion, like politics, can promise good things without having the power to deliver them.

Let us begin by examining the arguments for that form of natural dualism. By and large, they proceed from plausible points: that we speak of having bodies, that we think of our personal identity as persisting through change, that we can imagine ourselves as existing apart from our bodies, and that things are true of us which aren't true of our bodies. Admittedly, these claims are loosely stated, but allowing for that caveat I have no wish to deny any of them. The problem with them lies elsewhere. One and all, for reasons to be explained below, they leap to a conclusion which is not warranted by the evidence for it. If this is correct, they give us no reason to accept the validity of dualism as an account of the way things really are.

1) It is true, as Bloom points out, that we speak of our bodies as if they were possessions. But it is a mistake to think you have a body in the same sense in which you have a house. For if you own a house, you can transfer ownership of it to another party, by sale, exchange, or gift. But you can't transfer ownership of your body in any of these ways without transferring yourself, as in selling yourself into slavery. In the former case, you remain distinct from the property you transfer; in the latter case, you do not. You go with your body in a way you do not go with your house.

There are two apparent exceptions. One, people sometimes speak of a woman as "selling her body", where they mean, not that she has sold herself into slavery, but that she has "sold" the use of her body for a limited purpose and a limited time. She has not sold her body so much as rented out the use of it. Such talk should be recognized for what it is, a figure of speech, like the expression "the foot of a mountain".

A more challenging case is the way we speak of a corpse. When John Doe dies, we tend to say that we are burying, not him, but his remains. We speak of him as having "passed away" or "departed," as if he still exists but has merely left our presence. It is easy to dismiss such expressions as euphemisms, like asking for the restroom when you want the toilet, but a better explanation is available. If John Doe were buried alive, as he might be in a snow avalanche, it would be appropriate to say that the avalanche buried him, not his remains. John Doe goes

where his living body goes, so when he dies in any of the ordinary ways, he dies when his body and brain die; it is his remains we bury or incinerate.

In any case, it is clear that having a body does not rule out being a body, any more than having a personality rules out being a personality. Why then do we speak of having rather than of being a body? Perhaps because of a tendency to think that, if we are bodies, we must be “mere” bodies, whereas we like to think that we are “more” than bodies. But, as I will show later, the first doesn’t follow and the second can be accommodated without subscribing to dualism. While a human corpse is a mere body, a living human is not, for the latter is an agent—he can act on his own behalf—whereas the former no longer is. In turn, that difference explains how we are more than bodies. We are more, not because our bodies are animated by immaterial souls, but because we are agents who can use our bodies and brains to exercise our will and endeavor to control the world around us.

2) The question of persistence through change is complicated by the fact that identity comes in more than one flavor. Qualitative identity is different from numerical or quantitative identity. Two things x and y are qualitatively identical if and only if every property possessed by x is also possessed by y , and vice versa. “As alike as two peas in a pod” is a rough expression of this sense of identity rough because it is based on our limited powers of observation. There may be micro-differences we cannot observe and certainly, there are differences in spatial location, but ignoring those, the two peas appear to be qualitatively identical. Mix them up, and we could not reliably tell one from the other.

Numerical identity is another matter. Our look-alike peas are not one but two, and a body can change over time without ceasing to be the same body. Looking at a picture of himself as a baby, the old man is quite right to say “That was me seventy years ago,” for his elderly body is spatially and temporally continuous with his infant body, in the sense that, if we could follow it moment by moment, we would see it developing by degrees from one stage to the other. Qualitatively different as they are in many respects, the infant and the old man are numerically one and the same.

These different senses of identity allow us to make sense of the phenomenon of persistence through change. Though the body undergoes qualitative change over time, these changes take place in what is numerically the same body. Therefore, there is a perfectly good sense in which, contrary to dualism, the body does not change but “persists”. And there is a perfectly good sense in which, again contrary to dualism, the so-called “soul” both persists and undergoes change. Numerically, we can speak of the same psychological identity; but qualitatively, we can speak of the ever-changing “stream of consciousness”: the same stream but different contents. Persistence and change are features of both body and soul.

3) I turn now to the claim that we can imagine existing apart from our bodies, as in imagining that we are observing our own funeral or, better, our own remains. This claim can be disputed on the ground that we can’t observe some-

thing without using our eyes, and since by hypothesis our eyes no longer exist in the imagined state, it is incoherent, like the notion of traveling backward in time to prevent one's parents from meeting. I won't press this difficulty, but it seems to me there are other hurdles, even if we accept the hypothesis in question.

How do I know in the imaginary scenario that the body in the casket or the remains are mine? Why couldn't it be a simulacrum of me or the remains of someone else? I can stipulate that they are mine, of course, but, as Abraham Lincoln pointed out, stipulating that a tail is a leg doesn't change the fact that a dog has four legs. Unlike fiction, biology and forensics can't be done by fiat.

Is it possible to exist without a body? That depends on what is meant by "possible". Like many philosophical terms, "possible" has more than one meaning. A state of affairs is logically possible if it can be described without inconsistency; physically possible if it is consistent with the laws of nature; and epistemically possible if it is not ruled out by other things we have come to know. Existing without a body, like building a frictionless machine, may be logically possible but it doesn't follow that it is physically or epistemically possible. On the basis of what we know about human brains and bodies, neither bodiless existence nor frictionless machines appear to be physically or epistemically possible. It is small consolation, then, to be told that they are still possible only logically possible. You might as well say it is possible that the sun won't rise tomorrow. Yes, it is logically possible, but don't give away your possessions today. You are likely to need them tomorrow.

4) One problem remains: the discrepancy between what is true about a person and what is true about his body. Descartes would never have considered the personal report "I think, therefore I am" as equivalent to the physical report "My brain thinks, therefore it exists." How then can he, the one who thinks, be identical with his brain, the physical stuff? At face value, it is impossible, for "I think" does not mean "My brain thinks". Nevertheless, it might be the case that when I think, my body, or at least that part of it called my brain, is doing the thinking.

The key to this possibility is the notion of contingent identity. Science shows that something which is known under one description can in fact be identical, numerically identical, to something known under a different description. Astronomers have discovered that the "star" first seen in the evening is one and the same as the "star" last seen in the morning, the planet Venus. So the evening star turns out to be the morning star and both stars turn out to be the same planet. Who would have guessed this from the meaning of the original expressions?

Chemists have discovered that water is a molecule made up of two elements, two atoms of hydrogen and one of oxygen. So water is H_2O , the same thing under different descriptions. "Water" of course doesn't mean " H_2O ", people knew what water is long before the advent of modern chemistry, but that doesn't prevent water from being contingently identical to H_2O . In a similar vein, I suggest, it is possible for "I think" to be contingently identical to "My body thinks" or, to be more exact, "My brain thinks."

It is fair to ask, however, whether this possibility is more than another vacuous logical possibility. Is it possible, in the stronger physical or epistemic sense, that “I think” and “My brain thinks” are contingently identical? In my opinion, it is not only possible but probable. As is well-known, brain imaging studies show that blood flow increases significantly in specific areas of the brain when the patient engages in certain kinds of cognitive activity. The correlation between cognition and blood flow suggests that the two have a physical basis, as the naturalist claims, rather than a nonphysical basis, as the dualist supposes. If cognition were the work of a nonphysical agent, it is hard to see why it would be correlated with changes in the brain. For that matter, why would an immaterial soul be embodied in the first place? The mystery of ensoulment is surely as great as the mystery of consciousness.

6. What Kind of Being Are You?

It may be objected, however, that you are more than the physical body you see reflected in the mirror in the morning. True, you are more than that but it doesn't follow that you aren't your body. What you see in that reflection is the present stage of a body that is itself the outcome of past stages of that body, together with its capacities and dispositions, and also the platform of its dimly foreseen future stages. Like the proverbial iceberg, the portion you see is only a fraction of what is there. That is why there is more to you than what you see reflected in the mirror. Like a melody, in effect, you are being extended in time and not just in space. To use another analogy, just as books can look much alike and yet vary enormously in content, so human bodies can look much alike and yet house remarkably diverse biographies. The biography of a body can be called a “soul” but that doesn't make it a soul in the sense of being an independent entity.

Despite the many critiques of dualism, some form of it is pervasive in everyday life and speech. To cite some examples, many people think of humans as embodied souls; as a rule, only humans are called persons; and food places cater to customers but post signs like “No animals allowed”. A human who commits an atrocity is condemned as “only an animal”, as if we were anything but animals, and we dignify our species by calling our best behavior “humane”, as if it were typical of us. Virtually every society regards humans as superior to animals, and hundreds of millions of religious people believe that humans, unlike animals, have a special relationship with the divine. Our language reflects the incipient dualism of the great majority of our species, but that doesn't mean that it reflects the reality of our situation. Just as we continue to speak of “sunrise” and “sunset” without taking these terms literally, we may learn to speak of “humans and animals” without supposing that we are talking about two different kinds of entities. As Mary Midgley (*Beast and Man* (Midgley, 1978)) says, “We are not just rather like animals; we are animals”. Similar views have been expressed by Desmond Morris, Jared Diamond, and David P. Barash (Barash & Barash, 2000;

Diamond, 1991; Morris, 1967).

While people pay lip-service to the idea that humans are animals, this idea is very unclear, for the term “animals” is multiply ambiguous. The *Concise Canadian Oxford Dictionary* points out that an animal can be any of these things:

- A living organism which feeds on organic matter, usually one with specialized sense-organs and a nervous system, and is able to respond quickly to stimuli.
- Such an organism other than a man.
- A brutish or uncivilized man.
- Informal: a person or thing of any kind (“no such animal as Superman”).

Clearly, only the first of these senses apply to humans in general, and that applies only to living humans (obviously, a human corpse isn’t “a living organism”).

Even when the proposition “Humans are animals” (call this *H*) is clarified, however, many people resist its implications. In discussing it with others, I have found that *H* is often confused with other claims and sometimes rejected for the wrong reason. In particular, *H* doesn’t mean that humans are 1) the same as animals, 2) nothing but (mere) animals, or 3) no better than animals. None of these things is so.

Certainly, *H* does not say that humans are the same as animals. What it says is that the class of humans is a proper subset of the class of animals, no less than the class of elephants and every other class (species) of animals. To say that one class is included in another as a proper subset is to rule out the possibility that the two classes are “the same”.

Does *H* say that no humans are not animals? Not exactly. It does say that, but it doesn’t say that humans are “just” animals. It allows that members of the species *Homo sapiens* are like other animals in some respects but different from them in other respects. In short, it allows for species-typical differences as well as genus-wide similarities. To use an analogy, consider the statement “Bats are mammals”. Clearly, it implies that no bats are not mammals, but it doesn’t imply that bats are no different from other mammals. On the contrary, bats are unique in being mammals that can fly and echolocate. By the same token, humans can be like animals in certain ways—e.g., feeding on organic matter—and still be quite unlike them in other ways—e.g., typically capable of speech, reason, and morality. *H* is quite compatible with that complex fact.

As for evaluative comparisons, it makes no sense to say that humans are, or are not, superior to other animals. The truth is that we can’t compare the value of two things without comparing them in a certain respect. It makes no sense to say that a pen is, or is not, better than a pencil, for it all depends on what your purpose is. If you need to sign a check, the pen is better, but if you are working on a crossword puzzle, the pencil is better, for the rubber on its tip allows for easy erasure.

If humans are superior to animals, therefore, it looks as if they must be superior in some respect, but what can that be? Religion provides one obvious can-

didate: humans are superior because they alone are made in the image of God. Granted certain beliefs about God, that claim may well be true but what if there is no God or if there are multiple gods none of whom is worthy of moral approbation? The claim “If God exists, we are superior to animals” seems to share the logic of “If I win the grand lottery, I’ll be a millionaire”. The conditional is true regardless of the truth of its antecedent or consequent, provided only that the antecedent is not true and the consequent false. In the two examples considered, the likelihood of both the antecedent and consequent being true may be very low indeed. Buying a lottery ticket gives you a chance at becoming a millionaire, but nothing more. In a lottery where tens of thousands of lottery tickets are sold, someone else is almost certain to be the winner.

Dualistic theories provide a fertile ground for speciesism, the belief that humans are superior to animals and hence that their interests take precedence over the interests of animals. If every human has some valuable attribute that no animal has, it is natural to think that humans are better than animals. The problem is to find something of great worth that belongs to all and only humans. Many candidates have been proposed but none seems to stand up to scrutiny. To be sure, there are common human attributes being conceived by human parents and carrying a human genetic code, for instance, but it is hard to see what makes them especially valuable without begging the question. And there are valuable traits that may be exhibited only by humans, compassion, a sense of justice, and intellectual curiosity, to mention a few, but obviously not by every human. In the face of this difficulty, dualists often resort to speculative entities: Plato’s philosopher-king, the Cartesian cogito, Kant’s noumenal self. Can the naturalist be blamed for suspecting that such intellectual artifacts have a self-serving role?

When it is properly understood, nothing seems plainer than the fact that humans and animals exhibit both similarities and differences. As we move down the evolutionary ladder, the similarities become fewer but never entirely disappear. We share DNA and other basic biological features with even the lowly amoeba. Hence it is no misnomer to speak of the human animal or of humans and other animals.

To some, this conception of our species will appear base and degrading. That is because their conception of animals in general is base and degrading. If we are animals, whatever we are capable of is what some animals are capable of. If we are capable of altruism, creativity, learning, and spirituality, so are some animals. Equally, if we can be base, violent, cruel, and mindless, so can some animals. Being animals takes nothing away from us that was there before.

The dualist may take exception. He may say that as animals we have lost our immortal souls and hope for a better life to come. But he is wrong. If belief in reincarnation and karma is right, animals too are part of the same cosmic process as ourselves. In fact, we might have been animals ourselves in the past. If on the other hand, this belief is mistaken, no animal can enjoy such blessings, and neither can we. In neither case have we lost something we really had.

Nothing displays our similarities with and differences from animals more

clearly than the consumption of food. Humans and other animals need to eat and generally pursue food avidly, but the foods they eat and their ways of securing and eating them are remarkably diverse. Unlike other animals, humans are variety-seeking omnivores who regularly cook their food, eat with special implements, and often treat eating as a social occasion. Concentrating on these differences, we might think that humans and animals are utterly different, but we have only to consider the role of food in preserving and satisfying both creatures, their neediness, dependency, and vulnerability, to realize how much they also share.

Feeding is only one half of the digestive process; the other half is elimination. Having taken in food and drink, animals have to excrete what their bodies cannot assimilate. I was once in a lab class where the instructor described the animal body as “a tube within a tube”, one end for feeding and the other for waste disposal. The model fits the human body as well. We are nowhere so animal-like as in having to dispose of our waste. Perhaps that is why most of us today prefer to perform that function in private. Needless to say, we are also animals in the way we reproduce and the way our bodies age and die, though once again humans are prone to surround birth and death with elaborate ceremonies that are foreign to other animals.

The strength of naturalism, as opposed to dualism, is that it can do justice to both the more and the less lofty aspects of our nature. If children are natural dualists, as Bloom insists, that may be because they have awakened to our ambivalent state. But it is a fact of embodiment, not of ensoulment. If it is a mystery how the water of brain activity turns into the wine of consciousness, as Colin McGinn puts it, it is no less a mystery how it is done by the nonphysical soul. In the end, the naturalist can say of that soul what Laplace is reputed to have said in response to Napoleon’s complaint about the absence of God in the latest system of astronomy: “Sire, I did not need that hypothesis.”

7. The Secular Soul

There is an alternative to banishing the separate soul—the soul in the traditional dichotomy--and it is already in motion. As ordinary discourse shows, people often use the term “soul” in ways that have nothing to do with that way of thinking. Here are several examples. A historian reports that over fifteen hundred souls were lost in the sinking of the Titanic—meaning of course that number of people. It seems safe to say that for most people today S.O.S. means “Save our lives,” not “Save our immortal souls.” (Why would immortal souls need saving?) Observing an empty street, a journalist reports “No soul was in sight”—nobody was observed in the area. Someone who gives money and time to helping the poor can be called “a kind soul”. A woman tells her friend that she was “the soul of the party”—she stood out for her contribution to making the party a success. Music can be called “soulful” or “full of soul” when it is deeply moving and memorable. Cases abound where “soul” is used lightly or seriously, outside the

framework of organized religion or academic philosophy.

Bloom is right, to a degree, in saying that we think of our bodies and ourselves in different ways. The body is a physical organism, occupying space and existing in time. It has weight, height, and other physical characteristics, best known to specialists who work with it daily. In my opinion, the human body is a wondrous thing, but the most wondrous thing is that it is the home of a being who ordinarily thinks of itself in nonphysical terms. Speaking of our sense of vision, Francis Crick described it as an “astonishing hypothesis.” Rays of light (a physical thing) enter the pupil of the eye, stimulate the retina, and convey electrical impulses to the optical area of the brain (all of them physical things) (Crick, 1995), and the body who receives these sensations may report to another body “Isn’t that a beautiful sunset?” and the other body may reply “I’ve never seen anything more beautiful” (Beauty is an aesthetic, not a physical, concept.) We refer to ourselves as happy or depressed, wanting some things and being averse to others, recalling events in our past or planning the future, expressing ideas and inviting reactions from others, loving some people and fearing others, and so on, in a vast panoply of verbal expressions that communicate our sense of ourselves and others, mostly in terms that have little or nothing to do with physics. We think of ourselves as students, teachers, citizens, visitors, neighbors, children, grandparents, etc., whose meaning would be difficult, if not impossible, to convey in wholly physical terms. In short, we speak of ourselves and the world in soul-like terms. In that sense, there is no need to deny that we are souls as well as bodies.

It is true that some of us think that the soul is more than that. Even today many people think the soul is independent of the body and will survive the death of the body. But we need to separate what is clear—the body has soul-like capabilities—from what at best is controversial, a matter of faith rather than sober scientific evidence. As living bodies, we often act and think of ourselves and others as souls.

To make this idea concrete, compare Jane Doe alive and well with Jane Doe as a cadaver on a gurney in the hospital. Jane Doe alive enjoys family, friends, and social activities. She has some vague religious beliefs but goes to church only to celebrate family weddings or funerals. She works part-time as a receptionist but has time for music, games, and laughter. She has a young son whom she adores and she goes out of her way to do nice things for him. She loves her husband but secretly regards him as somewhat stogy. Unlike him, she enjoys dancing and playing social games like charades. Now consider Jane Doe as a cadaver in the hospital. Her body is there but the neurons in her brain are dead, so there is no response when family and friends call. Her mind is a blank and will never recover. You can say anything you like to her but she will not respond. If you are permitted to, you can kiss her forehead or pinch her skin, but she will neither kiss you back nor shrug off your hand. She used to make decisions for herself, but now others will have to make the decisions for her. That is the difference the soul makes.

The secular soul is mortal, of course, and dies with the death of the brain. In that respect it is very different from the doctrine of the soul postulated by many religions, but not wholly different. For those religions never regarded the soul as an absentee landlord; on the contrary, they viewed it as the tenant himself, living in an estate that required constant attention to the activities and happenings of everyday life. The religious point was that the soul was fully engaged in life, perhaps even more fully so than the secular soul, for the quality of this engagement might shape its future forever.

The secular soul is free from that awesome responsibility but it faces another obstacle. Many people feel that life is absurd or meaningless if they come into existence for only a short time. Why strive for distant goals if they are beyond our reach? As Woody Allen put it, “I want to be immortal, not through my works but by living forever.” While no heaven or hell awaits the secular soul, non-existence can appear no less formidable. We need to recall, as did the Roman poet Lucretius (*De Rerum Natura*) that the period of our non-existence before birth was nothing to fear, so why should the period of our non-existence after death be any worse (Lucretius, 2007)?

The secular soul is also subject to change, no less than our changing bodies, thoughts, and tastes. I recall as a boy listening to my aunt play cowboy songs on the guitar and sing along with them. She did it well and as a result was very popular with friends. I envied her the ability and for a time hoped to imitate her but it was hopeless. Though my mother offered to pay for piano lessons, she told me I couldn’t carry a tune, and she was right. Not much later my tastes in music changed: I could no longer tolerate that kind of music, even sung by its big names. It sounds pretentious to say that this change of taste, lasting to the present day, affected my soul, but it did if we think of the soul in secular terms. I know of no reason to think that other people are different in this respect: during a lifetime, their souls may change no less than their bodies.

Under normal circumstances, however, such changes do not rule out a sense of personal identity. Most of us have no difficulty in recalling some, at least, of the manifold changes we have experienced in moving from childhood to maturity and old age. Robert Frost (*Complete Poems* (Frost, 1949)) gives voice to this feeling of continuity in the midst of vicissitude in a short but complete poem, “The Span of Life”: “The old dog barks backward without getting up/I can remember when he was a pup.”

8. Conclusion

The nature and existence of the soul are the subjects of endless debate. People tend to disagree about whether the soul does or doesn’t exist, or whether it does, what it does or doesn’t do, or even what to call it. Though scientists have catalogued the human body and named its parts and functions, the soul is not in that catalogue. That alone is cause for philosophical reflection.

Paul Bloom, a scientist studying the cognitive development of babies and chil-

dren, has recently shown that scientists do not need to shun the topic of the soul. His own research, as well as that of others in the field, seems to show that babies think of themselves and other human beings in a different way from the way they think about physical objects. As a result, he proposes that psychologists need to take seriously the hypothesis that babies see the world in terms of bodies and souls. In returning the term “soul” to the science of psychology, I think he has made an important contribution. However, it remains unclear from his discussion whether the soul, as he conceives it, has a separate existence from the body or is simply part of the mind’s conception of itself. In short, our thinking of ourselves as souls, or even as immaterial souls, doesn’t guarantee anything about reality. Bloom canvasses some other reasons to support the separate soul hypothesis but in my opinion, they are not successful.

Nevertheless, the term flourishes in everyday speech and gives rise to what might be called the secular idea of the soul. The term seems to refer to living human beings or possibly to their inner lives—their conception of themselves as more than physical bodies. Normally, we would not call a human cadaver or a nonhuman animal a soul, any more than we would call it a person. The term seems to be wedded to human beings, whether in this life or in the presumed life to come. But, like other nontechnical terms, “soul” is open to a variety of meanings and changes in meaning. Perhaps we could enlarge our conception of the soul to include other sentient beings, as animal advocates suggest, or let go of the traditional notion that the soul must have a separate existence from the body. It is enough for it to be the secular soul.

It may also be a good thing to treat people as secular souls, not simply as bodies. For it encourages us to treat people the way they see themselves—individuals despite their physical similarities. People don’t like to be treated as if they were just numbers or faceless bodies. To treat someone as just a body or a physical object is radically insulting and dehumanizing, as feminists have long insisted. While Kant thought it was legitimate to use another person as a means, like paying a barber to cut one’s hair, it was always with the proviso that the other be treated as an end in himself. In other words, one treated him or her as a fellow soul, not as a body to be exploited for one’s personal advantage. Nothing in this paper, then, is designed to encourage people to treat others as mere bodies. We owe people respect for their individuality, and perhaps the best way to do that is to treat them as secular souls.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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