

- Leib und Seele, eine Prüfung des psycho-physischen Grundproblems.* Leipzig, 1916; rev. ed., 1920; 3rd ed., 1923.
Translated as *Mind and Body*. New York: Dial Press, 1927.
- Wirklichkeitslehre, ein metaphysischer Versuch.* Leipzig, 1917; rev. ed., 1922.
- Das Problem der Freiheit.* Berlin, 1917; rev. ed., Darmstadt, 1920.
- Das Ganze und die Summe.* Leipzig, 1921. Inaugural address at the University of Leipzig.
- “Mein System und sein Werdegang.” In *Die Philosophie der Gegenwart in Selbstdarstellung*, Vol. I, edited by R. Schmidt. Leipzig, 1923. One of the more than 100 articles that Driesch published.
- Metaphysik.* Breslau, 1924.
- The Possibility of Metaphysics.* London, 1924.
- Relativitätstheorie und Philosophie.* Karlsruhe, 1924.
- The Crisis in Psychology.* Princeton, NJ: Princeton University Press, 1925.
- Grundprobleme der Psychologie.* Leipzig, 1926.
- Metaphysik der Natur.* Munich, 1926.
- Die sittliche Tat.* Leipzig, 1927.
- Biologische Probleme höherer Ordnung.* Leipzig, 1927; rev. ed., 1944.
- Der Mensch und die Welt.* Leipzig, 1928. Translated as *Man and the Universe*. London, 1929.
- Ethical Principles in Theory and Practice.* London, 1930.
- Philosophische Forschungswege.* Leipzig, 1930.
- Parapsychologie.* Leipzig, 1932; 2nd ed., 1943.
- Philosophische Gegenwartsfragen.* Leipzig, 1933.
- Alltagsrätsel des Seelenlebens.* Leipzig, 1938; 2nd ed., 1939.
- Selbstbesinnung und Selbsterkenntnis.* Leipzig, 1940.
- Lebenserinnerungen; Auszeichnungen eines Forschers und Denkers in entscheidender Zeit.* Edited by Ingeborg Tetaz-Driesch. Basel, 1951. Posthumous.
- WORKS ON DRIESCH**
- Child, C. M. “Driesch’s Harmonic Equipotential Systems in Form-regulations.” *Biologisches Zentralblatt* 28 (1908).
- Fischel, A. Review of Driesch’s Gifford Lectures, *The Science and Philosophy of the Organism*, Vol. I. *Archiv für Entwicklungs-Mechanik* 26 (1908).
- Griffith, O. W. Review of *The Problem of Individuality and The History and Theory of Vitalism*. *Hibbert Journal* 13.
- Haake, W. “Die Formphilosophie von Hans Driesch und das Wesen des Organismus.” *Biologisches Zentralblatt* 14 (1894).
- Heinichen, O. *Driesch’s Philosophie*. Leipzig, 1924.
- Jenkinson, J. W. “Vitalism.” *Hibbert Journal* (April 1911).
- Jourdain, E. B. P. Review of *Ordnungslehre*. *Mind* 23 (1914).
- Morgan, T. H. Review of *The Science and Philosophy of the Organism*, Vol. I. *Journal of Philosophy* 6 (1909).
- Oakeley, H. D. “On Professor Driesch’s Attempt to Combine a Philosophy of Life and a Philosophy of Knowledge.” *PAS*, n.s., 21 (1920–1921).
- Oakeley, H. D. Review of *Wirklichkeitslehre*. *Mind* 30 (1921).
- Russell, L. J. Review of *Die Logik als Aufgabe*. *Mind* 23 (1914).
- Schaxel, J. “Namen und Wesen des harmonisch-equipotentiellen Systems.” *Biologisches Zentralblatt* 36 (1916).
- Schaxel, J. “Mechanismus, Vitalismus und kritische Biologie.” *Biologisches Zentralblatt* 37 (1917).

- Schneider, K. C. “Vitalismus.” *Biologisches Zentralblatt* 25 (1905).
- Secerov, Slavko. “Zur Kritik der Entelechielehre von H. Driesch.” *Biologisches Zentralblatt* 31 (1911).
- Spaulding, E. G. “Driesch’s Theory of Vitalism.” *Philosophical Review* 15 (1906).
- Spaulding, E. G. Review of *The Science and Philosophy of the Organism*, Vols. I and II. *Philosophical Review* 18 (1909).
- Vollenhoven, D. H. T. “Einiges über die Logik in dem Vitalismus von Driesch.” *Biologisches Zentralblatt* 41 (1921).
- Wagner, A. “Neo-Vitalismus,” I, II. *Zeitschrift für Philosophie und philosophische Kritik*, Ergänzungsband, 136 (1909).

William H. Werkmeister (1967)

DUALISM IN THE PHILOSOPHY OF MIND

Mind-body dualism is the doctrine that human persons are not made out of ordinary matter, at least not entirely. Every person has—or, on many versions of the view, simply is identical to—a soul. A soul is said to have little in common with human bodies and other material objects but is in one way or another responsible for a person’s mental life.

Mind-body dualism is sometimes called “substance dualism,” to distinguish the view from “property dualism”—the thesis that mental properties (such as being in pain, thinking of Vienna) are in some way significantly different from or independent of physical properties (such as having neurons firing in one’s brain in a certain pattern). Property dualism is meant to allow for what is often called “dual-aspect theory”: persons are material objects with a nonphysical, mental “aspect” but no non-physical *parts*—that is, no immaterial soul.

The entry begins with a brief discussion of property dualism, only to set it to one side in order to examine substance dualism in detail: its varieties, the traditional objections to the view, and the most popular arguments in its favor.

PROPERTY DUALISM

Before considering ways in which mental and physical properties might be distinct or independent, one needs to know what is meant by the terms *mental* and *physical*. (The expressions *property* and *state* shall be used interchangeably; being in pain is a mental property or mental state, weighing 150 pounds is a physical property or physical state. Many different things can be in pain or have the same weight; so properties and states are, in some sense, universals.)

Phenomenal states, such as experiencing a reddish afterimage or feeling a sharp pain, are surely mental states, as are “intentional attitudes” such as believing, doubting, loving, and hating. There may be puzzles about how to classify the unconscious desires and fears probed by psychoanalysts; but otherwise, the boundaries of the mental seem fairly clear. The range of things one might mean by *physical property* is, however, broader and more problematic. A narrow reading of *physical* might include only properties that come in for explicit mention in current fundamental physics—or in an imagined “final, true physics.” A more generous approach would include any property expressible given just the resources of physics, mathematics, and logic. Sufficient generosity along these lines would allow for physical properties corresponding even to infinite disjunctions of arbitrarily chosen, maximally precise microphysical descriptions (that is, “consisting of such-and-such fundamental particles arranged in precisely this way, or that way, or ...”).

If property dualism were simply the thesis that mental properties are not identical to physical properties, narrowly construed, the doctrine would be of little interest. Synthesizing bile is a state of the liver; reaching gale force is a state of the winds in a hurricane; and neither “synthesizing bile” nor “reaching gale force” is a term likely to appear in any fundamental physics, contemporary or idealized. If “pain” fails to show up in physics for similar reasons, the mental state it names may be no less physical than the synthesis of bile or the force of a hurricane.

Given the more generous understanding of “physical,” synthesizing bile or reaching gale force might well be identical to, or at least necessarily coextensive with, a physical property—a property equivalent to all the possible ways to synthesize bile or reach gale force, described in extreme microphysical detail. Imagine a god surveying all the possible worlds it could create, with their many varieties of particles and fields and laws. Such a being could disjoin all the microphysical descriptions of livers synthesizing bile or hurricanes achieving gale-force winds and thereby define physical properties necessarily coextensive with the target biological and meteorological properties. The existence of such definitions would show that the functioning of a liver or the strength of a hurricane could not possibly come apart from the behavior of the matter constituting the liver or the air and water through which the hurricane moves. If the god could do the same for mental states, that would show that they, too, are firmly grounded in microphysical facts.

To arrive at a truly interesting version of property dualism, one might suppose that even godlike powers to

exhaustively describe every possible microphysical system would fail to produce a physical property necessarily coextensive with each mental property. Many who use the term follow David Chalmers (1996) in identifying it with the following sort of thesis: For at least some mental states, it is not possible to define, in terms of microphysical properties alone, a physical property common to all individuals in that mental state, and only to them—even given the resources of arbitrarily complex definitions and infinite disjunction, and even when restricting the search to a property that is merely coextensive in worlds with the same fundamental physical properties.

Property dualism, so understood, is equivalent to the failure of a variety of supervenience—a notion first used in philosophy of mind by Donald Davidson (1970) and brought into focus by Jaegwon Kim (1990). In the technical sense of *supervene* that is relevant here, the mental properties of a thing supervene upon its microphysical properties if and only if, among all the possible individuals in all the possible worlds, there is no pair with all the same microphysical properties but different mental properties. Kim showed that if supervenience held, one could define a physical property coextensive with any mental property simply by disjoining all the sufficiently precise microphysical descriptions of possible individuals having that property.

Defining property dualism as a failure of the mental to supervene upon the microphysical seems to presuppose that the fundamental properties of anything worthy of the name “physics” will not include mental states. But, as Robert Adams (1987) and Richard Swinburne (1997) point out, if mental states really are fundamental, one might expect that experiencing particular kinds of pains or smells will have to figure in some of the most basic laws. Still, so long as the nonmental physical properties of matter could be the same while the envisaged brutally mental ones could have been different (had there been different natural laws relating the two kinds of property), there would be a failure of supervenience: The mental properties would fail to supervene upon the purely physical properties.

Unlike substance dualism, property dualism remains a respectable position within philosophy of mind, defended by Chalmers (1996) and others. It seems easy to imagine physically indiscernible zombies (animate human bodies with no consciousness) or people whose spectrum of color experiences is the reverse of one’s own. If genuinely possible, these scenarios show that the mental does not supervene upon the physical.

Substance dualism is also inconsistent with supervenience. If souls lack the properties mentioned in physics, they cannot very well differ physically; but, because different people are obviously thinking different things, the dualist's souls must differ mentally.

Until the latter half of the twentieth century, a dualism of mental and physical properties was largely taken for granted, even among philosophers who called themselves materialists. The term "dualism" almost always meant a dualism of distinct substances—a practice to be followed in the remainder of this entry.

PURE DUALISM AND COMPOSITE DUALISM

Many dualists, like Plato, teach that persons are entirely immaterial; they are identical with souls and are related to their physical bodies as pilot to ship. Others—perhaps René Descartes (1984), certainly St. Thomas Aquinas (cf. Stump 2003) and Richard Swinburne (1997)—identify a person with a composite of soul and body. Among composite dualists, further differences emerge: most composite dualists ascribe one's mental properties to the soul and one's physical properties to the body. On this version of composite dualism, a person is identical with a psychophysical whole that includes the thinking soul as a part. Eric Olson (2001) has drawn attention to some of the drawbacks of this view. It suggests that the soul is the real thinker, and that a person only has mental states by courtesy. But how could something—the soul—think and not be a person? How could it think for someone else? If the composite dualist insists that the person and the soul are both thinkers and that neither is the subject of mental states in a more fundamental way than the other, then each person includes two thinkers, neither of which can distinguish itself from the other.

St. Thomas Aquinas advocated a very different sort of composite dualism (for exposition, cf. Stump 2003, Leftow 2001). Within Aquinas's Aristotelian metaphysics, "accidental forms" explain a thing's accidental properties, and a "substantial form" explains its being, or essence. Following Aristotle, Aquinas calls the substantial forms of living things "souls"; the soul of a human being is responsible for its entire complex physical and mental nature. But it is not the soul that thinks or acts, it is the whole human being—a composite of matter and the soul or form that gives the matter its distinctively human structure. Aquinas departed from Aristotle in supposing that the human soul is a "subsistent form," something that continues to exist after death while not "informing" any matter. It even manages to think in that truncated state.

The Thomistic doctrine of the soul is a borderline case of mind-body dualism—although, with Eleonore Stump (2003) and Brian Leftow (2001), one may well regard its intermediate status as a promising sign. Although body and soul are united, says Aquinas, the soul has no mental properties; it is not itself a mind. Nor is it responsible for a person's mental powers alone; it includes the physical nature of a human being as well. For present purposes, dualism will be restricted to theories like Plato's pure dualism or Swinburne's composite dualism: theories positing souls with mental states of their own, in this life.

THE SPECTRUM OF DUALISMS

One point of agreement among dualists of all stripes is that there are a great many things in the world that lack mentality of any sort; and that, associated with each human person, there is a thinking thing, a soul, not composed of the same kinds of stuff as these nonmental things. The animist and spiritualist may think of the soul as extended or composite (ghostlike, perhaps composed of "ectoplasm"); but they deny, at any rate, that it is made of stuff that can be found in objects completely devoid of mentality. To be a substance dualist, then, one must at least accept a doctrine one might call *compositional dualism*: There exist things that can think alongside things that cannot think; and the thinking things either have no parts at all, or else parts of a special kind, unique to thinking things.

One could be a compositional dualist but still be a materialist. Roderick Chisholm (1978) took seriously the hypothesis that a person might be a tiny physical particle lodged somewhere in the brain. Suppose someone claimed, in a similar spirit, that the soul is a point-sized thinking substance that has the same mass as a proton and the same charge as an electron; and that every substance with a similar mass and charge is capable of thought. This rather bizarre theory qualifies as compositional dualism—yet it seems also to be a kind of materialism. Since dualism has always been thought of as an alternative to materialism, there must be more to it than compositional dualism. The missing component is clear: The thinking thing cannot simply be a special kind of physical object, such as a new species of fundamental particle; but what is it to be "nonphysical"?

Daniel Dennett sees a fundamental incoherence in the very idea of a nonphysical soul: "A ghost in the machine is of no help in our theories unless it is a ghost that can move things around ... but anything that can move a physical thing is itself a physical thing (although

perhaps a strange and heretofore unstudied kind of physical thing” (Dennett 1991, p. 35). If one were to define *physical* as “able to produce effects in space,” then of course a nonphysical soul could not interact with a body. When dualists have denied that the soul is physical, they have meant many things—but none has been so foolish as to mean that.

Every plausible version of compositional dualism implies that substances capable of thought (and their parts, if any) have some important properties in common with substances utterly incapable of thought. To call a thinking thing “nonphysical” is not to say it has absolutely nothing in common with the matter of nonsentient things; it is rather to deny that they have as much in common as one might have thought. But dualists disagree about which attributes of ordinary matter are not found in thinking substances—that is, they mean different things by “nonphysical.” The result is a spectrum of dualisms.

The maximal difference a dualist might posit between soul and body would be to identify souls with necessarily existing abstract objects, outside of space and time, like numbers or Plato’s Forms. Some have said that persons are to their bodies as programs are to the computers that run the programs. And, if programs are understood in a way that makes them quite independent of the particular computers running them, they become abstract objects, mathematical entities. But it is hard to take this analogy very seriously. Almost all dualists will agree that souls have this much in common with ordinary material things: They are concrete entities, existing in time, and capable of change.

René Descartes allowed at least that much similarity between souls and ordinary matter, but little more. Cartesian souls are not dependent upon the behavior of matter for their continued existence or ability to think. They have no position in space. Descartes also claimed that souls are “simple,” or without parts. Since he believed that everything in space was infinitely divisible, this was another way in which souls were unlike anything made of ordinary matter (Descartes, 1984).

Few dualists are so far out along the spectrum of dualisms as Descartes, however. It has become harder to deny that the ability to think depends upon a properly functioning brain. William Hasker (1999), Charles Taliaferro (1994), and other contemporary dualists go further, denying the existential independence of souls: When an organism has a sufficiently complex nervous system, it then automatically also generates a nonphysical substance to be the subject of that consciousness—an “emer-

gent substance” that remains radically but not completely dependent upon the brain for most of its operations and even for its continued existence. Hasker, W. D. Hart (1988), and—long before them—Samuel Clarke (1738) and Hermann Lotze (1885) have insisted that souls are located in space. Hart argues that mind-body interaction could even involve the transfer of a conserved quantity between soul and body. The “psychic energy” he describes makes souls even more like paradigmatic physical things. Still, Hart’s souls lack charge, mass, spin, and all other interesting intrinsic properties characterizing physical particles. Furthermore, Hart defines measurable degrees of psychic energy in terms of the propensity to sustain beliefs, not in terms of physical effects; so even this quasi-physical quantity seems grounded in the mental nature of Hart’s souls rather than in any features they share with ordinary matter.

Hart’s view should surely qualify as a kind of dualism—his souls are immaterial enough—and the Chisholm-inspired particle materialism should not. If, as seems likely, there is no sharp line on the spectrum of compositional dualisms between the two, then the term “dualism” is vague. As with most vague yet useful terms, the region of indeterminacy is largely unoccupied.

The less extreme dualisms are of greater philosophical interest than Cartesianism. They make souls a part of the natural order, generated by any brain sufficiently complex to subserve conscious experience. One of the worst problems of interaction (the “pairing problem,” discussed in the next section) is easily solved if souls are in space. Furthermore, few, if any, of the principal arguments for dualism (including the ones surveyed below) require Cartesian souls. Less radical dualisms are safer, positing no more differences between souls and material objects than are implied by the reasons for rejecting materialism.

PROBLEMS OF INTERACTION

Most objections to dualism fall under one of three heads: problems of interaction, epistemological worries, and application of Ockham’s Razor. The most commonly cited “knockdown” objection to dualism is the impossibility of causal interaction between things as dissimilar as a physical body and an immaterial soul. The obvious rejoinder is that very dissimilar things do interact. For example, particles are certainly quite unlike the fields that push them around and that are, in turn, altered when particles are introduced into them. Attempts to make the objection more persuasive come in two versions.

The “pairing objection” begins with Ernest Sosa’s observation: “What pairs physical objects as proper mates for causal interaction is in general their places in the all-encompassing spatial framework of physical reality” (1984, p. 275). Consider a series of duplicate guns, each of which hits a different target. Guns and targets are exactly alike; only differences in spatial relations explain why each gun hits a different target—the target at which it is aimed. Compare guns and targets to the bodies and souls of identical twins Joe and Moe. However similar they are, only Joe’s body causes experiences in Joe’s soul; only decisions taken by Joe lead directly to motions of Joe’s body. According to the Cartesian, there can be no differences in the spatial relations between Joe’s soul and the bodies of Joe and Moe; being outside of space, the soul cannot be closer to one body than to the other. But in what other respects could Joe’s soul be “closer” to Joe’s body than to Moe’s body, and Moe’s soul closer to Moe’s body than to Joe’s? Descartes’s souls are all equally cut off from the physical world, so no answer comes readily to mind.

The pairing objection tacitly assumes that causal laws, and the dispositions and powers of objects described by such laws, are always general—an assumption some dualists reject. John Foster (1991) and Peter Unger (2006) think that souls and bodies could have not only dispositions to react to certain types of objects and situations but also dispositions to interact in special ways with particular individuals—individuals that need not differ in any qualitative or relational way.

Dualists like Clarke (1738), Lotze (1885), Hart (1988), and Hasker (1999) are in an even stronger position, since they assume that souls fall within the same spatial coordinate system as bodies. They make the natural assumption that, if souls are to be found in space at all, they must be located within the brains with which they interact. But one still wants to know exactly what sort of region a soul is supposed to occupy. Many dualists believe souls are simple, or partless. Must a simple thing occupy a geometrical point, on pain of being divisible into at least two parts, a left and right half? Some philosophers say no. Clarke (1738) and Lotze (1885) claim that the soul is spatially extended but simple. Lotze locates the soul within the brain wherever interaction takes place—which could be many different places at once, and different places at different times. Leibniz considers a mode of spatial occupancy the Scholastics called “definitive ubeyty”: there is a precise region in which the soul is located, but it is not true of any subregions that it is located precisely there (Leibniz, 1981, p. 221). Although these are difficult notions, they may represent ways (or perhaps two

descriptions of the same way) for a soul to occupy more than a mere point while remaining a partless unity.

A second objection to interaction alleges that the mental states attributed to souls are of the wrong sort to enter into laws governing physical phenomena. If the “qualia” of phenomenal experiences (for example, the felt redishness of a red after-image, the sharp flavor of an acrid smell) could somehow be reduced to physical states of brains or analyzed in terms of functional roles that physical states could play, then they would pose little threat to a materialistic picture within which all causation is underwritten by laws of the sort one finds in physics. If they characterize the states of a nonphysical soul, however, they will have to be taken seriously as extra, fundamental features of the world, requiring causal explanation. Causation requires laws; but in order for the astonishing variety of phenomenal states, falling under several sense modalities, to enter into the kinds of laws familiar from the sciences, they must be susceptible of precise mathematical comparison. However, as Robert Adams points out, “[t]here is no plausible, non-adhoc way of associating phenomenal qualia in general ... with a range of mathematical values....” (Adams 1987, p. 256). Laws linking the phenomenal experiences of a soul to the physical states of a body are bound to be relatively unsystematic and staggeringly complex. Far better to suppose that phenomenal properties are merely complex physical states of the brain; and that, as such, they obey laws that can be derived from those of biology, chemistry, and, ultimately, fundamental physics.

This second interaction objection, however powerful it might be, applies not only to substance dualists but also to anyone who is a property dualist about phenomenal states. Many philosophers who are happy to suppose that persons are identical with physical objects (such as living, human bodies or brains) nevertheless heartily endorse property dualism with respect to the qualia of phenomenal states. Like substance dualists, these property dualists must admit that there are additional laws governing the production of phenomenal qualia—laws that are quite complicated and, to some extent, piecemeal. (David Chalmers, Gregg Rosenberg, and others have floated theories about the form such laws might take [Chalmers, 1996; Rosenberg, 2004.]

Property dualism remains a respectable position within contemporary philosophy of mind, with powerful arguments in its favor. In the circumstances, then, this second problem of interaction can hardly be the final nail in the coffin of substance dualism.

EPISTEMOLOGICAL WORRIES

After interaction objections, the most commonly voiced complaints about substance dualism are epistemological in flavor: Suppose persons are souls that merely happen to be associated with bodies. One cannot keep track of another's soul by keeping an eye on it, or holding it fast. How, then, does one know that souls are not constantly coming and going "behind the scenes"?

Immanuel Kant's analogy illustrates the problem: "An elastic ball which impinges upon another similar ball in a straight line communicates to the latter its whole motion, and therefore its whole state (that is, if we take account only of the positions in space)." A series of mental substances passing on "representations together with the consciousness of them" would end with one that is "conscious of all the states of the previously changed substance, as being its own states, because they would have been transferred to it together with the consciousness of them." But if we identify persons with individual mental substances, "it would not have been one and the same person in all these states" (1965 p. 342). Kant's scenario is often turned into an argument against dualism: If it were reasonable to suppose that each person is identical with a soul, then it would be reasonable to be skeptical about whether we are dealing with the same person from one minute to the next. Since this is not reasonable, neither is the supposition that a person is a soul.

The argument fails if one endorses John Locke's view (in the chapter "Of Identity and Diversity" in his *Enquiry* [1975]) that a person is not identical with a particular soul but is instead constituted by a soul, and possibly by different souls at different times. So long as the succession of souls pass on the right sorts of mental states (Locke emphasizes memories), the person survives, constituted by one soul and then another. To give this reply would require that one say, with Locke, that a person and the person's soul are distinct things, although the soul thinks whenever the person does. In that case, if a person always remains responsible for the things she has done, then one soul could justly be punished for the deeds of another soul. (Locke himself seems to have thought that, although such punishment would not be unjust, it would not be very nice, and so God can be counted on not to allow soul-switching.)

Locke's approach is surely not the only way to dispel the Kant-inspired epistemological worry. Another is simply: *tu quo que*. If our knowledge of the persistence of physical objects—including human bodies—is just as vulnerable to similar skeptical doubts, then materialism has no advantage over dualism. But what sort of evidence

supports the belief that a physical object observed at one time is the same as an object observed at another time—and not, say, an exact duplicate that has swapped places with the original due to random quantum-mechanical fluctuations or the whimsy of a powerful demon? Just as one can imagine one soul being replaced by a near duplicate without anyone's being the wiser, so one can imagine a physical object being replaced by a near duplicate with no readily detectable evidence that a switch was made. Does the ability to imagine such things require that one produce nonquestion-begging arguments against them if one is ever to claim knowledge of identity over time? Surely not. Is there some special problem with souls? If so, it needs more spelling out than it usually receives.

OCKHAM'S RAZOR

Some of the most frequently voiced objections to dualism—the ones based on problems of interaction and epistemological worries—may become less impressive upon examination. At least one formidable objection remains, however: that there is simply no need to believe in souls in addition to bodies; so the soul falls victim to Ockham's razor, the injunction to postulate no more entities than necessary. One has the evidence of one's own senses for a world of physical bodies. But even if property dualists are right and some psychological phenomena cannot be reduced to or exhaustively explained in terms of properties similar to those now ascribed to physical bodies and their parts, nothing would be gained by supposing that these irreducible mental properties belong to some new entity. And adding the extra entities requires many further ad hoc epicycles that undermine any explanatory value their addition might have had. For instance, one must now explain why the exercise of the soul's mental powers depends so heavily upon a properly functioning brain. Perhaps hard evidence of spirit possession, reincarnation, veridical out-of-body experiences, and the like would change the situation. But, in its absence, respect for parsimony in theory construction provides a powerful reason to reject souls.

MODAL ARGUMENTS

The two most famous styles of argument for dualism may be found, unsurprisingly, in Descartes. One is a modal argument (that is, an argument built around what is possible or necessary) from the possibility of disembodiment to the conclusion that every person actually has, or is, a soul. The other is an argument from the "unity of consciousness" to the conclusion that the subject of consciousness is a partless (and so, by Descartes's lights,

nonphysical) substance. Each sort of argument has been subjected to withering criticism, however; and, despite repeated attempts to revive them, the prognosis is not good.

Some of a thing's properties appear clearly to be contingent, while others seem essential. It is possible to lose a contingent property, but not an essential one—it characterizes the thing necessarily. It is possible for me to survive the loss of my leg; so having two legs is one of my contingent properties. If it were possible for me to survive the destruction of my entire body, without acquiring new bodily parts, I would be contingently embodied. If it were not possible, then having a body would be part of my essence.

Descartes develops a modal argument in his sixth meditation: “[T]he fact that I can clearly and distinctly understand one thing apart from another is enough to make me certain that the two things are distinct. ... Thus, simply by knowing that I exist and seeing at the same time that absolutely nothing else belongs to my nature or essence except that I am a thinking thing, I can infer correctly that my essence consists solely in the fact that I am a thinking thing” (1984, p. 54).

Swinburne (1997) defends a roughly similar argument. He points out that it is easy to imagine scenarios in which one survives the utter destruction of all the material parts of one's body at once, or the swapping of one body for another. There is nothing straightforwardly inconsistent in such stories, and Swinburne takes this to be strong evidence that the stories represent genuine possibilities. He also assumes, not unreasonably, that no mere material object could survive such adventures. On these assumptions, one should reason as follows: “I could survive the destruction, all at once, of all the matter in my body; my body could not survive this; so I am not identical with my body.”

In the absence of a reduction of possibility to logical consistency, it is unclear where evidence for possibility could come from if not from the seeming coherence of various imagined states of affairs. So it is not unreasonable to grant that, if one can conceive of being unextended or of surviving the destruction of one's body, then this fact provides at least *prima facie* evidence for the possibility of these things. But *prima facie* evidence may be undermined, and in the arguments of Descartes and Swinburne, it is counterbalanced by the conceivability of states of affairs that are inconsistent with the possibility of the separation of person and body. Many find that they are able to imagine themselves as having nothing but extended or material parts just as easily and clearly as they

can imagine persisting without parts or without a body. One can conceive of oneself as a mere organism, a brain, or even a rock. But if such things cannot possibly be unextended, or continue to exist after annihilation of their physical parts—an assumption required by the modal arguments for dualism—then one has *prima facie* evidence for the possibility of being identical with a thing that could not possibly survive in an unextended or disembodied state. But if some envisaged situation is possibly not possible, then it is simply not possible. So it is simply not possible that I be unextended or disembodied.

The plausibility of this widely accepted principle of modal reasoning (that what is possibly not possible is not really possible at all) may be more apparent when stated in the jargon of “possible worlds”: If there is a world that is possible from our perspective (that is, from the point of view of the actual world, this other world represents a way things could have been); and if, from the perspective of that other world, some imagined state of affairs or circumstance is not possible; then that imagined state of affairs is not possible from the point of view of the actual world either—that is, it is simply not possible. Applied to the case in hand, this modal principle becomes: If, according to some possible world, I do not exist without a body in any possible world, then this remains true in the actual world—I do not exist without a body in any possible world.

If I find it just as conceivable to suppose that I am entirely physical as to suppose that I become disembodied, then I have the same sort of evidence for the possibility of each supposition. But they cannot both be possible. So the evidence from conceivability cuts both ways and cancels itself out.

There is more to be said on behalf of modal arguments for dualism, of course. Perhaps the way in which one can conceive of one's disembodiment is qualitatively better—more luminous or complete—than the way in which one can conceive of one's being a mere brain or organism. And perhaps the higher quality of the act of conception brings with it an “epistemic boost” for the possibility of the scenario thus conceived. But making a case for such a difference would require wading far into the murky waters of modal epistemology.

ARGUMENTS FROM THE UNITY OF CONSCIOUSNESS

Many dualists (such as Joseph Butler [1736], Samuel Clarke [1738], Lotze [1894], and Hasker [1999]) would agree with Descartes about the importance of what came to be called “the unity of consciousness”: an argument

based on the unity of consciousness alone is “enough to show me that the mind is completely different from the body, even if I did not already know as much from other considerations” (1984, p. 59).

The unity of consciousness may be illustrated by a person who sees a book fall, hears the sound of its impact, and feels a pain in her right toe where it struck. She can immediately infer that there is something that sees the fall, hears the impact, and feels a pain. The facts of experience do not simply imply the occurrence of three events, a “seeing of a book’s fall,” a “hearing of an impact,” and a “feeling of a pain.” Events of these types could occur to three different thinking things, no one of which is able to compare the sound with the sight and the pain. What must be added to capture the additional information is that the three events all occur to one and the same individual.

Thus the unity of consciousness supports the view that whatever is the bearer of psychological properties must be a single substance capable of exemplifying a plurality of properties. Its unitary nature consists in the impossibility of its having a “division of psychological labor” among parts. If a single thinker can recognize the difference between sounds and colors, this thinker does not enjoy the ability to compare the two simply by having one part that does its seeing and another that does its hearing, even if these parts are tightly bound together. As Franz Brentano remarks, this “would be like saying that, of course, neither a blind man nor a deaf man could compare colors with sounds, but if one sees and the other hears, the two together can recognize the relationship” (1995 p. 159).

Many dualists have claimed that the unity of consciousness requires that whatever is conscious must be a unity having no parts at all. Although Brentano believed the soul to be simple, he did not think the simplicity of the soul follows immediately from the unity of consciousness alone, and he was surely right. As Brentano points out, what is not ruled out as a subject of consciousness is an extended substance that exemplifies all of its psychological properties as a whole (1987). To use Brentano’s metaphor, the psychological properties could be “spread equally” over all of the parts of this extended thinking thing. None of the many arguments that have been given to rule out this possibility has met with widespread acceptance, even among dualists.

ARGUMENTS FROM THE VAGUENESS OF MATERIAL OBJECTS

Arguments for dualism often take the form of objections to any normal sort of materialism. A materialism that identified a person with a single cell or proton would be at least as incredible as dualism (absent some sort of revolution in neurophysiology). What materialists want is a view according to which a human person may be identified with a reasonably normal physical object, one that already has a place in our commonsense conception of the world—an object with natural boundaries, such as those of an organism, a brain, or perhaps even a single hemisphere of a brain. But animals and their organs belong on a spectrum that includes bushes, branches, clouds, mountains, rivers, tidal waves, and all manner of ill-behaved entities. Familiar material objects such as these exhibit vagueness or indeterminacy in their spatial and temporal boundaries. And the strategies typically implemented to resolve puzzles posed by vague objects do not seem so satisfactory when applied to oneself.

Human bodies and brains appear surprisingly like clouds upon close inspection—blurry around the edges. Many particles are in the process of being assimilated or cast off; they are neither clearly “in” nor clearly “out.” The temporal boundaries of living things—their coming into existence and passing away—also display a disturbing fuzziness. No one doubts that meteorologists have considerable freedom in deciding where exactly to draw the line between a hurricane and a mere tropical storm. But organisms and brains are not unlike storms in this respect; pressure to find the first and final moments in the life of a human body or brain can only force a decision like the one made by the meteorologists.

Sharper lines will not be found by those who, with Locke, dismiss biological boundaries for persons in favor of psychological ones. Neo-Lockeans must admit that psychological continuity, like biological life, is a matter of more and less; that personalities emerge, and frequently deteriorate, only gradually.

The materialist must, therefore, allow that the spatial and temporal indeterminacies of large-scale material objects infect human persons; and that the standard strategies for coping with fuzzy objects apply to persons as well. But application of these strategies to oneself can produce a disturbing sense of vertigo. The feeling is especially intense in the temporal case.

One group of botanists could establish the convention that no acorn is an oak tree, and another that oak trees are grown-up acorns; one meteorological society

could lay it down that hurricanes only begin when a tropical storm attains wind-speeds exceeding 74 miles per hour, another could choose 73. Similarly, one linguistic community could insist that persons exist at conception (twinning, they might say, is the generation of two “new” persons and the end of the first); while another community might talk as though persons come into existence as soon as twinning is impossible or differentiation of organs begins or rudimentary psychological states are detectable or the first breath is taken. Similar ranges of options lie open at the other end of life. If human persons are as much like trees and hurricanes as human bodies appear to be, such differences in usage would affect the extension of “person” and, with it, the reference of “I” in the mouths of speakers from different communities. The physical facts leave room for more than one perfectly acceptable refinement of the concept “tree” or “hurricane”; if human persons are entirely physical, the same must be true of human person.

If these refinements in the extension of “person” are to be genuine possibilities, there must already exist different physical objects corresponding to the different decisions that could be made about origins and deaths; and each of these preexisting objects must have what it takes, intrinsically, to be a conscious person. Speaking and thinking differently cannot make new physical objects spring into existence, nor can it turn objects with no phenomenal states into objects with the rich phenomenology of a human person. But then there must already be quite a few humanlike creatures located wherever a human person is located, each exactly like a person in every intrinsic respect. Although some philosophers (notably, the friends of temporal parts) have learned to live with this result, it raises dizzying possibilities. If the extension of a term like *person* is determined by present and past usage and the rule for determining the referent of *I* is something like “it refers to the person speaking,” then a shift from one of the acceptable refinements of “human person” to another could render a conscious, self-referring creature no longer able to think for itself. If, instead, *I* is not tied to the actual meaning of “person” but rather refers ambiguously to each of the humanlike creatures associated with a given person, then there are many thinkers with slightly different pasts and futures, and none can tell which one he or she is (a result emphasized in Olson 1997).

The possibility of fission and fusion is a further source of indeterminacy and conventionality in spatiotemporal boundaries, one that Chisholm (1976) and Swinburne (1997) have exploited in arguments for dual-

ism. When half of a bush is destroyed, one is tempted to say it survives; when it is merely split in two, and the halves successfully transplanted, one is tempted to say one of two things: either that there are two new bushes or that the bush survives as a scattered object, part in one place, part in another. If persons are thought to be middle-sized material objects with biological or psychological persistence conditions, similar circumstances of fission and fusion are conceivable and perhaps even physically possible. (Because a great deal of basic psychological continuity is preserved through the loss of either hemisphere, fission is probably a physical possibility on neo-Lockean accounts of personal identity.) If one takes the first approach to bushes, regarding fission as the end of the original plant, one should say the same thing about a purely physical human being.

There has been little need for precision about the fate of a divided bush. But a community of language users that felt the need could surely introduce a term for things exactly like bushes while decreeing that no such thing can survive loss of half its mass at once; another community could choose 49 percent; but neither group need fear making a mistake. Comparable freedom with respect to persons would require one to say things like, “If my linguistic community were to change its mind, either this would alter my persistence conditions—a strange power to change the nature of a physical object by talking differently—or else it would shift the referent of *I* in my mouth, rendering me no longer able to refer to myself in the first person.” Neither alternative is attractive. The analogue to treating the divided bush as a scattered object would be to say that a person could be in two places at once, undergoing radically different experiences, thinking incompatible thoughts, and so on.

TENDER-MINDEDNESS AND ONTIC IGNORANCE

It is hard to apply to oneself the same strategies one would unhesitatingly use to deal with indeterminacy in the identity conditions and borders of ordinary physical objects. Chisholm and Swinburne take this discomfort as evidence that human beings are not ordinary physical objects. Stipulations about whether a person survives a certain borderline adventure are bootless if the person is in fact an immaterial substance whose identity over time is an all-or-nothing affair.

Resisting materialism because it is hard to accept that human beings are as fuzzy and conventional as ordinary physical objects will no doubt strike many philosophers as mere tender-mindedness. After all, they will insist, it

should be possible for philosophy to reveal something new about persons; and surely it is more certain that human beings are material objects than that they have perfectly adequate self-conceptions. (Derek Parfit [1984] takes this approach, emphasizing the radical morals to be drawn from the vagueness of human persons.)

On the other hand, it would be high-handed to dismiss as tender-minded anyone who allows the argument from vagueness to count against materialism. If the consequences of supposing that persons are vague material objects seem incredible, this might quite properly increase the weight that can be given to other considerations in favor of dualism: arguments from theological premises, for example, or more esoteric philosophical arguments (such as those of Peter Unger, J. R. Smythies, or John Foster) that would carry greater conviction if materialism were not thought to be utterly obvious and unproblematic. All by themselves, however, the foregoing arguments from vagueness ought probably be taken to support nothing stronger than (what George Graham [1999] calls) “ontic ignorance”: “I know not what manner of thing I am.”

See also Mind-Body Problem; Physicalism.

Bibliography

- Adams, Robert Merrihew. *The Virtue of Faith*. New York: Oxford University Press, 1987. See esp. the chapter “Flavors, Colors, and God.”
- Brentano, Franz. *On the Existence of God*. Dordrecht: Martinus Nijhoff, 1987 (first German edition, 1929).
- Brentano, Franz. *Psychology from an Empirical Standpoint*. London and New York: Routledge, 1995. First German publication of this edition, 1924.
- Butler, Joseph. *The Analogy of Religion*. London: James, John, and Paul Knapton, 1736.
- Chalmers, David. *The Conscious Mind*. New York: Oxford University Press, 1996.
- Chisholm, Roderick. “Is There a Mind-Body Problem?” *Philosophical Exchange* 2 (1978): 25–34.
- Chisholm, Roderick. *Person and Object*. La Salle, IL: Open Court, 1976.
- Clarke, Samuel. “Four Defences of a Letter to Mr. Dodwell.” In *The Works of Samuel Clarke*. London: John and Paul Knapton, 1738.
- Corcoran, Kevin, ed. *Soul, Body and Survival*. Ithaca, NY: Cornell University Press, 2001.
- Davidson, Donald. “Mental Events.” In *Experience and Theory*, edited by L. Foster and J. Swanson. Amherst: University of Massachusetts Press, 1970.
- Dennett, Daniel. *Consciousness Explained*. Boston: Little, Brown, 1991.
- Descartes, René. *The Philosophical Writings of Descartes*. Vol. 2. Cambridge, U.K.: Cambridge University Press, 1984.
- Foster, John. *The Immaterial Self*. London and New York: Routledge, 1991.
- Graham, George. “Self-Consciousness, Psychopathology, and Realism about the Self.” *Anthropology and Philosophy* 3 (1999): 533–539.
- Hart, W. D. *The Engines of the Soul*. Cambridge, U.K.: Cambridge University Press, 1988.
- Hasker, William. *The Emergent Self*. Ithaca, NY: Cornell University Press, 1999.
- Kant, Immanuel. *Critique of Pure Reason*. Translated by Norman Kemp Smith. New York: St. Martin’s Press, 1965.
- Kim, Jaegwon. “Supervenience as a Philosophical Concept.” *Metaphilosophy* 21 (1990): 1–27.
- Leftow, Brian. “Souls Dipped in Dust.” In *Soul, Body and Survival*, edited by Kevin Corcoran. Ithaca, NY: Cornell University Press, 2001.
- Leibniz, G. W. *New Essays on Human Understanding*. Cambridge, U.K.: Cambridge University Press, 1981.
- Locke, John. *An Essay concerning Human Understanding*. Oxford: At the Clarendon Press, 1975.
- Lotze, Hermann. *Microcosmus: An Essay concerning Man and his Relation to the World*. Vol. 1. New York: Charles Scribner’s Sons, 1894.
- Lotze, Hermann. *Outlines of Psychology*. Minneapolis: S. M. Williams, 1885.
- Olson, Eric. “A Compound of Two Substances.” In *Soul, Body and Survival*, edited by Kevin Corcoran. Ithaca, NY: Cornell University Press, 2001.
- Olson, Eric. *The Human Animal*. New York: Oxford University Press, 1997.
- Parfit, Derek. *Reasons and Persons*. Oxford: At the Clarendon Press, 1984.
- Popper, Karl, and John C. Eccles. *The Self and Its Brain*. Berlin: Springer-Verlag, 1977.
- Robinson, Howard. “Dualism.” Available online from the Stanford Encyclopedia of Philosophy. <http://plato.stanford.edu/>.
- Rosenberg, Gregg. *A Place for Consciousness*. New York: Oxford University Press, 2004.
- Smythies, John. *The Walls of Plato’s Cave*. Aldershot: Avebury Press, 1994.
- Sosa, Ernest. “Mind-Body Interaction and Supervenient Causation.” *Midwest Studies in Philosophy* 9 (1984): 271–281.
- Stump, Eleonore. *Aquinas*. London and New York: Routledge, 2003.
- Swinburne, Richard. *The Evolution of the Soul*. Rev. ed. Oxford: Clarendon, 1997.
- Taliaferro, Charles. *Consciousness and the Mind of God*. Cambridge, U.K.: Cambridge University Press, 1994.
- Unger, Peter. *All the Power in the World*. New York: Oxford University Press, 2006.

Dean Zimmerman (2005)