

# *The Extended Mind and Religious Thought*

with Leslie Marsh, "Mindscales and Landscapes: Exploring the Extended Mind"; Mark Rowlands, "The Extended Mind"; Lynne Rudder Baker, "Persons and the Extended-Mind Thesis"; Teed Rockwell, "Minds, Intrinsic Properties, and Madhyamaka Buddhism"; Joel W. Krueger, "Empathy and the Extended Mind"; Leonard Angel, "Quintuple Extension: Mind, Body, Humanism, Religion, Secularism"; and Matthew Day, "Constructing Religion without The Social: Durkheim, Latour, and Extended Cognition"

## QUINTUPLE EXTENSION: MIND, BODY, HUMANISM, RELIGION, SECULARISM

by Leonard Angel

*Abstract.* Extension of the system that includes the key substrates for sensation, perception, emotion, volition, and cognition, and all representational sources for cognition, supports the view that there is an extended mind and an extended body. These intellectual views can be made practical in a humanist system based on extensions and in religious systems based on extensions. Independently, there is also an institutional extension of secularism. Hence, I maintain, there are five principal forms of extension.

*Keywords:* body; extended body; extended mind; extension; humanism; mind; religion; secular wisdom institute; secularism

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### EXTENDED MIND

In the 1970s a philosophical movement called semantic externalism started, maintaining that semantic content is sometimes delineated by distinctions outside the body. Some critics maintained that there is no constituency relationship between such delineations and what is in the mind (see Rowlands 2003, chap. 7). In 1998, Andy Clark and David Chalmers in "The Extended Mind" defended an active externalism in which it is held that the base or substrate of what constitutes the mind is extended beyond

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the ordinary body boundary. Their examples include computer aids and notebooks. Because they examine not only processing systems but also beliefs, they conclude that there is extended mind—that the physical base of the mind goes beyond the ordinary physical body boundary.

Because beliefs are not only mental states but also cognitive states, one way to construe this argument for active externalism is to say that the following is a hidden contention within active externalism:

*A*: Because the key substrates of sensation, perception, emotion, and volition are body-internal, the determination of whether the mind is wholly internal or both internal and external is given by the determination of the location of cognition.

Critics of active externalism argue that the physical base of cognition is not extended. (*Extended* alone, here, and after, means extended beyond the ordinary body boundary.) A fine recent criticism of active externalism is Frederick Adams and Kenneth Aizawa's *The Bounds of Cognition* (2008). Adams and Aizawa maintain that cognition occurs only in the substrate of nonderived representation and in the substrate with a certain sort of mechanism. That mechanism, they maintain, could be outside the brain but is not, at the moment, outside the brain (2008, 9). After careful applications of these criteria they conclude that, given what exists, the physical base of cognition is internal to the brain.

One way to take this argument against active externalism is to take it that Adams and Aizawa agree with *A*. Looked at this way, their view states that because cognition is not extended, and because *A*, the mind is not extended. However, there are other ways to interpret their remarks. We might focus on the modality: what could be but is not currently the case, in Adams and Aizawa's view. This tack—which is closely related to Andy Clark and David Chalmers's portability arguments (1998, sec. 3), one interpretation of which also rejects *A*—I do not follow here, but I do sketch another tack that also undoes *A*. I show that there is no inconsistency in accepting Adams and Aizawa's view that the extent of the base of cognition is only in the brain and rejecting *A*.

Some writers, such as Peter Hacker and Max Bennett (2003), hold or imply that the base of the personal (human) mind is the whole intuitively picked out body (p. 3, and throughout). If Hacker and Bennett accept *A*, they reject what Adams and Aizawa say is psychological orthodoxy, the view that cognition is internal to the brain. Yet Hacker and Bennett's approach demonstrates the consistency of the views that there is a technical psychological notion to be called cognition, that cognition is internal to the brain, and that the whole organism is the base of the mind. Orthodox psychologists, too, can hold that something called cognition is internal to the brain and can reject *A*. That allows for something broader than Hacker and Bennett's view of the mind.

Given the modality, and given the many views in psychology, including philosophical psychology, what shall we make of the central claim of the active-mind externalists, that the human mind is extended?

Adams and Aizawa (2008, *x*, 106–7, 146), and all members of the philosophical community who are interested in the topic, agree that what I here call *the fognitive system* is extended beyond the ordinary body. A system is a fognitive system if and only if it includes the key substrates for sensation, perception, emotion, volition, and cognition, and all representational sources for cognition, where a representational source for cognition is a representation used as a representation by the cognitive system. In regard to whether something is used as a representation by a cognitive system, there may be borderline cases. But, for instance, telephone numbers in a notebook would not be borderline cases; they would be used as representations by the cognitive system. All agree that the fognitive system includes things in the brain and in the environment of the ordinary human body. The notion of fognition allows all, both exponents and critics of the view that cognition is extended, to hold that *A* is false but that the personal mind is extended. Whether those who hold that the base of cognition is only in the brain agree that the mind is extended depends on the degree to which they agree with the putative identity expressed in *B*:

*B*: The base of fognition is the base of the mind.

*B* seems to be at least as credible as *A*. Many of the operations in the mind are subconscious or nonconscious. But then whether or not an element is a part of the generating system of consciousness seems to be irrelevant. The focus should be on dispositional mental states.

This dispositional structure—a functional structure—seems to be independent of whether or not something is a part of the base yielding consciousness. Given the many subconscious or nonconscious features in the physiochemical, biological, or neurophysiological base of the mind, the only thing that seems to be functionally required for something to be part of the base of the mind is that it be part of the base of fognition. Then the nonconscious aspect of a notebook in one's pocket does not prevent the notebook from being part of the base of the mind.

There is another way to put this point. One could try to limit the base of the mind, taking it to be only the base of consciousness. However, we do want the dispositional states to count in a criterion for the mind; a human in deep sleep should still be regarded as having a vast array of mental structures usably stored in some way. But once we allow these in-the-brain dispositional structures to be included in the base of the mind, we should allow whatever is dispositionally fognitive to be included, too. This yields active-mind externalism. It also sidesteps the key point defended by central critics of active-mind externalism, namely, that cognition occurs, at the moment, entirely in the brain. Then the main thesis of active-mind

externalism is not at all implausible, despite various vigorous criticisms based on the location of cognition.

Let me put this more positively. The central theme of active-mind externalism is plausible. More than that, it is intriguing. But of what further use is this intriguing notion? There are a few hints and modest suggestions at the end of Clark and Chalmers' paper. In what follows, I take a much larger result to follow from the active extended-mind view. I claim that the active extended-mind view is complemented by another intriguing intellectual view: that the underlying human body is extended. I suggest that these two intriguing intellectual views have strong practical applications, one in humanism and one in religion. And then I suggest that whatever view one holds on mind, body, humanism, and religion, one should agree that there is an institutional extension of secularism. It will take a bit of time to expose these points, but the multiple outcome is important.

#### EXTENDED BODY

The early stage of picking out the first personal body is in infancy or toddlerhood. But is what is picked out as the first personal body, the primary body (the ontological body, the underlying body)? By the primary body I mean the philosophically genuine body, if there is such a thing. We refer to items in the terms of our language, and some terms of our language, roughly, pick out bodies; however, the primary body may not correspond to the intuitive idea of what the body is.

There are two types of questions posed by people interested in bodily extent. To illustrate: First, someone looks at a human being, and asks, "How tall is the person embodied over there?" "Her height is five and a half feet," comes one answer. Another answer tries to be more precise: "By last measurement, five feet, six and three-eighths inches." A third response questions whether there is any single height of the body. "Shall I include the top of her hair or not? She is wearing a 1960s style bun, a beehive, and I don't know whether all three inches of bundled hair are included or not." A fourth answer gives an entirely different response, a response that focuses on what supports human functioning and on the nature of ontologically genuine bodies. That person says, "Her body is the whole universe. That sounds absurd, but it isn't." An account of the nonabsurdity is offered later in this section.

The second illustration is adapted from the well-known sense/reference discussion of Gottlob Frege (1953). Someone asks, "What's that?" looking up and pointing to a bright light in the sky. "That's the morning star," comes the answer. Later, someone asks, "What's that?" again looking up and pointing to a bright light in the sky. "That's the evening star," comes the answer. A third person says, "Actually, it's Venus. And the morning star is the evening star; both are Venus, seen at different times." A fourth per-

son says, “And Venus is the whole universe. This sounds self-contradictory, but it is not.” An explanation for the last remark is offered later in this section.

Returning to fognition, put simply, if the physical base of a fognitive being is extended, the primary body of the person seems to be extended. If it cannot be, important questions are raised as to whether there is a person or not. I here assume that there is a person. I also assume that, if there is a person, there is a primary body of the person.

Here is the argument from the universally agreed-about extension of fognition to the conclusion that the primary body of a human person is extended and is the human person’s world:

- 1a. The best account of the primary body of the person is that it is the primary body that subvenes the function of the person. (1a is intuitively appealing; a detailed spelling out of the analytically expressed reasons for 1a is the subject of another essay.)
- 1b. That which is fognitive is included in what subvenes the function of the person. (Reasons for 1b were given or cited earlier.)
- 1c. That which is fognitive for human persons is extended (by consensus among theorists on the topic).
- 1d. Therefore, at the *prima facie* level, the underlying body of the human person is extended.
2. There is no ontologically clear boundary of any spacetime-occupying body that is larger than the ordinary human body and proper to the world. (The focus is on the clarity of the boundary. The gradations in functioning are too continuous to allow for the sought-for clear boundary; consider that a letter sent into outer space can survive for eons at ever greater distances from the earth, but it would degrade very slowly over time.) There is no ontologically clear boundary of any spacetime-occupying body that could be the body-base of a human person but smaller than the intuitive body yet subvenes the personal functioning. (Fognition is included in personal functioning but is extended. Also, one wants to think of the brain, but there is no ontologically clear boundary of the brain. For example, some theorists include retinas in the brain; others don’t [Churchland 2002, 89, 138]. And there are afferent and efferent nerves, and so on.)
3. Conclusion: So, at the *prima facie* level, given that a world is a primary object, one way to pick out the primary body of any human person is to pick out the person’s world.

I acknowledge that this is not the only approach that one can follow. One can stick with the evolutionarily given intuitive discrimination. One can defend the view that the brain is the base of the person. One can allow

that there is a *vague* region around each ordinary human body, different from one person to the next, supporting the functioning of the person. All that is being asserted here is that each of these four views is a plausible view to adopt. I do not dispute in the least that the notion of the ordinary body as the base of the human person functions well. One could ignore the above argument for conclusion 3 and not functionally suffer. The main intention has been only to offer an argument to the intellectual plausibility of conclusion 3. That is also the main intention in offering the following independent and convergent factors to the same intellectual conclusion:

- 1'a. There are ordinary boundary problems in regard to the human body. One such problem is determining exactly when and where cells of dead skin on the surface of the body, or being dropped from the body, are or are not parts of the body. (Some of the ordinary boundary problems are based on small regions, as in the case just mentioned; some are based on much larger regions, such as breathing air.)
- 1'b. There are many conceptual problems as to what is and what is not part of the human body. For example, the human genes in the ordinary living human body must be parts of the human body, but the nonhuman genes in the mitochondria might not be, and the bacteria in and around the human body might not be. The surface skin is dead skin, and the bits of skin floating in the air have human genes; so if “has human genes” is the criterion, what exactly satisfies it is not the ordinary human body. Continuing, what of vitamins and vaccines while they are on the way to the ordinary body? What of food on its way to the ordinary body? The degree to which something is in the body may be governed by probabilities, and the probability that a bit of nutritious food in the hand on its way to the mouth will reach bodily organs is as great or greater than that of less nutritious food already partially processed in the stomach or small intestine. There are weird solutions to the human body boundary problem—for example, exclude what’s in the big tubes through the body, or count only the nervous system including the brain. But they will be beset by many difficulties, too numerous to list, including, for the non–big-tube approach, “What of the kidneys?”
- 1'c. There are deep problems based on perception-generating elements. The natural fingernails are considered to be parts of the intuitive body, but artificial fingernails perform effectively the same vibration-transmission as natural fingernails, and so do rulers or pencils. Further, there is an analogy between rulers that transmit vibrations to the nerves and natural fingernails that transmit vibrations to the nerves. Similarly, there is an analogy between natural fingernails that transmit vibrations to the nerves and light that transmits shapes of distant objects to the retinas. Accordingly, it seems, from the “gener-

ates perception” point of view, light traveling from intuitively distant objects to the retinas could philosophically be considered, to a significant degree at least, as a part of the body. But then the body, even if defined only by degrees, is much larger than the ordinary body.

- 1'd. The agency language we use exhibits the extended body. To say that Damian blew out the birthday candles seems to include the relevant air molecules as parts of the agent. Similarly, the agency concepts are embodied in systems both inside and outside the ordinary body. Consider, for instance, the nervous signals in the brain, the nervous signals going down the arms into the hands for writing a letter, the writing of the letter, and the letter itself.
- 1'e. The intuitive human body is a mass body, but the mass has to be understood through physics as reaching far beyond the ordinary body boundary (even using context-restricted Newtonian approximative formulas). Hence there is no physics basis for the intuitive notions. (This is a short form of a larger argument centered on the idea that in the general relativity notion of bended spacetime, the gravitational bend would only be fogged out by quantum indeterminacies far from the skin.)
- 2'. But there is no clear boundary properly within the world though outside the ordinary intuitive boundary (as shown above). Nor is there an ontological boundary properly within the ordinary body such that what is within it supports the personal functioning (as shown above).
3. Conclusion: So, at the *prima facie* level, given that a world is a primary object, one way to pick out the primary body of any human person is to pick out the person's world.

We now have a superargument for the primary body: the argument from extended cognition to the extended body, as in 1a through to 3, plus the independent argument just given, 1'a through to 3. The superargument leads to the view that the primary body of each person is the person's world. The *prima facie* restriction has played its *pro tanto* role for the independent factors and can now disappear.

What does one do with such a view? As suggested earlier, one could ignore it. From the theoretical stance alone, though, there are problems. In a longer analysis, I would suggest that there is the problem of the many as presented independently by Peter Unger (1980) and Peter Geach (1980, 215–18). Not everyone has studied the problem of the many, but it is a deep problem: There are too many assemblies of microphenomena, each of which could be the physical thing being referred to by an ordinary term like *that cat* or *that human being*. The problem is to figure out whether there is indeed only one such entity. This is a particularly acute problem for human beings because each ordinarily understood human being, in

typical cases, seems to underlie exactly one person. The problem of the many applied to persons, then, is the problem of figuring out if there is, indeed, only one physical base for any given typical person.

There are two main responses to the problem of the many, one by Peter van Inwagen (1990, 221–27) and one in an article by David Lewis (1993). I claim that neither response works, however, because each leaves open the degree of correspondence between the functional body and the ordinarily picked out body. But I leave the details of this matter for another time and move forward.

What we have here is one intellectual result of an analysis. The intellectual position itself—the primary body of what is thought of as the human body is the body of its world—is by no means logically difficult. Just as waves overlap, so, too, according to the view that the person is its world, the genuine body underlying an ordinarily conceived body B1 *is* the genuine body underlying any other ordinarily conceived body B2 in its world. Yet we can still distinguish two ordinarily conceived objects from each other. We can see how this is possible in two ways.

First, we can name the world, or descriptively refer to it, differently, just as we name or descriptively refer to one heavenly object as both the morning star and the evening star. Similarly, we can refer to the two images on one coin, one on each side, though there is only one coin. For both the planet and the coin, there are differences based on something like sense versus reference differences enabling us to talk of the morning star and of the evening star, and of the two images on the coin. As far as humans go, shifting back to the main subject, and putting it as simply as it can be put, it would be the central systems of organization that are different even though the whole body *as the whole body* is the same, and it would be those differences in location of central organization that generate more than one name.

Second, there are different focuses that we happen to be interested in on a given occasion, and accordingly we can adopt a convention whereby the one world is called, say, “Tabby\*,” sometimes, which would indicate a special focus in our attention to the world, namely, around the region ordinarily thought of as (the cat) Tabby. And, the one world is called at other times, say, “Rover\*,” which would indicate a special focus in our attention to the world, namely, around the region ordinarily thought of as (the dog) Rover. Verbs would be specially marked, daggered here, so that one understands “Tabby\* purred<sup>†</sup>” to mean “The universe purred<sup>†</sup> through the purring system of what’s ordinarily called “Tabby.”” (These conventions could be used for the first sort of special naming/describing as well.)

The conclusion, so far, is double. Fognitive externalism (agreed about by all thinkers on the topic) yields the plausibility of the external-mind hypothesis; and fognitive externalism, together with other independent considerations, yields the plausibility of an extended primary body for the person. So far, the two positions are merely intellectual positions to adopt.



In exploring the significance of externalist notions, as mentioned above, it will be good to see how externalism can be made practical.

#### THE EXTENDED BODY IS THE BASIS OF A NEW HUMANISM

Humanism as it exists now places human values at the center of an adequate value system and relies on the scientific method for arriving at results about the world. In the humanism based on extensions being sketched here, the primary body underlying each human being is its world. Each person in our world has the same underlying primary body as each other person in our world. In an extended-body humanist view, either we would allow for the ordinary language to be doubly interpreted or we would use a new language for the new meanings and the old language for the old meanings; in the new language we would use special terms, such as, when recorded, the asterisked and daggered terms introduced earlier.

In such an extended-body humanism, although in this world there is only one actual primary macrobody, namely, this world, this world has many properties and many sums of such properties, and some of those sums in some sense express organizational centers of persons. Hence, our attention naturally is occupied by different property-defined, or otherwise-defined, parts of this world.

This is an intellectual framework in which the new humanism would operate. The main question is: Can one come to experience this framework in everyday life? and, if so, how?

The best answer I can give is based on the practical method that I have followed since the late 1960s. There may well be other sorts of paths toward practical experience. The method I have followed is to engage in postural meditation. I followed it first through a popular form of yoga and then through the Zen Buddhist form (Rinzai style). Simultaneously I was learning analytic philosophy, and I became convinced of many theses central in secular humanism and in modern interpretations of religious concepts. The Zen Buddhist style emphasizes direct realization and transmission from Master to student. Accordingly, hypothetically, there is no conflict between the views accepted by secular humanism and by highly modernist interpretations of religion, on the one hand, and the system I was practicing, Zen Buddhism,<sup>1</sup> on the other hand.

I note here some different forms of meditation so that one can see how the postural form can be helpful in experiencing the basis of the extended-body humanism system. The main distinction is between *body-relaxed meditation*, in which the body can sit easy on a comfortable chair or lie down on a bed, allowing the eyes to close, while, say, a mantra is repeated again and again, and *postural sitting meditation*. In postural sitting meditation, the eyes are often kept about a quarter open; this allows for contact with the everyday world, but it is a soft contact because the eyes are not

fully open. Further, not only is the body still, but there are various special features. The spine is upright; the head is pulled back slightly which makes for alignment in breathing; the thighs point downward from the spine, which opens up the waist region for deep relaxation; and the shoulders are kept softly relaxed, while the sternum bone is raised upward.

Now, when the body is still in this manner, breathing can become very deep and sleeplike relaxed, while one is awake and alert. There is a fusion between deep sleeplike relaxation and bright alertness. At the same time, the body is still. Accordingly, it comes to seem more and more to the postural meditator that there is no divider between the intuitive body and its environment. This facilitates the intuitive realization or absorption of the intellectual position just briefly described. Postural meditation encourages or develops the experiential realization of the extended-body view.

In addition, postural meditation may yield ongoing, unusual, contrastless, pleasurable states. Further, all of the moral attitudes of humanism, as expressed in behavior, are naturally preserved. Any sense of wonder and mystery about things is preserved. The commitment to scientific work is preserved. There is a harmony between the current humanistic approach to the world and the extended-body vision of the world.

This sets the stage for the expression of extended-body humanism. In addition to all of the current activities of the secular humanists there would also be the humanist version of any tradition that facilitates realization of the extended-body vision of the world, such as any tradition based on postural meditation.

For several years I have been offering humanism meditations so as to implement this program. In these meditations, the instruction in postural forms are fully secular and myth-and-dogma neutral.

#### THE EXTENDED BODY IS THE BASIS FOR MANY NEW RELIGIOUS SYSTEMS

The view that the body supporting the human person is the world of the person is a central feature in many religions. Here are some examples: "I am the all this [world]" is found in the Upanishads (*Chandogya* 7:25:1 [Radhakrishnan 1953, 488]). The Buddhist "no-self" view is the flip side of the coin (see Rahula 1974, chap. 6, in contrast with Shibayama 1974, 26). "I am all" is something Jesus is supposed to have said in the Gospel of Thomas (#77) (Barnstone and Meyer 2003, 63). Although that Gospel is not in the orthodox Christian canon, it may be held that this passage clarifies some remarks attributed to Jesus in the orthodox canon (Matthew 26:26, Mark 14:22, and Luke 22:19). The notion is to a large extent captured in al Hallaj's "I am the Real" (Armstrong 2000, 75), which is often glossed as "I am the Truth" (Peters 1994, 341). Chuang Tzu's view apparently was that "all things and I are one" (Bk. 2, Hochsmann and Guorong

2007, 93). The Book of Genesis supports the continuity of being a human being, being a divine messenger, and being the ultimate Divinity. A central story in Genesis from which the evidence for such continuity can be drawn is in chapters 18 and 19, in which Messengers visit Abraham and Sarah. The narrative suggests that YHWH is the third Messenger and that there is continuity between the humans, the Messengers, and God. The Chasidic view that all is God and there is nothing else (R. Shneur Zalman, *Tanya*, 144, 219, 320; R. Aaron Ha-Levi, *Sha'arey ha'Avodah* III:7, cited by Elior 1989, 161–63) can also be taken to support the continuity thesis.

Of course, just about all current exponents of religion want religious views to be consistent with solid science. One of the current, and unfortunately underdiscussed, positions arising from science has often been called (since Papineau 1993, 13) the completeness of physics. Earlier it was more typically called the closure of physics (perhaps following Davidson 1970). If I were to choose between the two, I would choose the completeness of physics. Several definitions can be offered for this expression. Here is one: The world is physically complete if and only if all changes of objects occupying spacetime do not overturn or alter the outcomes of the accessible or inaccessible rules, laws, forces, or processes of physics.

Perhaps a good way to view the developments that led to nearly universal acceptance of physical completeness among theorists in mind-body philosophy and among nonconstructivist philosophers of science since around 1970 is to think of the philosophical integration of three fundamental developments, one for each of the three main natural sciences—physics, chemistry, and biology. The following brief review is selective, and giving the review here may be thought to be a bit of a digression; but the physical-completeness result has enormous implications for a current examination of spirituality, and reviews of the evidence that the world is physically complete, some would say, have not been given with sufficient frequency or accessibility. Accordingly, I offer this brief review.

The first of the three points that need to be mentioned, prior to any philosophical integration of them, is the removal of final causes or purposes or teleology from physical-causation notions. This began in a vigorous way in the seventeenth century; an illustration is found in Galileo's work. The view that final causes or purposes can be removed received a big boost forward in Isaac Newton's *Principia* in 1687. It developed in the main conservation notions of the eighteenth and nineteenth centuries and reached its fruition in Emmy Noether's Theorem, published in 1918, according to which conservation laws, including the conservation of momentum and the conservation of energy, are derivable from a priori symmetry mathematics plus relatively trivial assumptions about spacetime (Penrose 2004, 20.6, 489–90). That conservation laws reached by physicists from the seventeenth through the nineteenth centuries via detailed empirical-theoretical work could also be derived from pure mathematics

plus relatively trivial assumptions about spacetime was an astonishingly strong result. Hence, I refer to this first process as the mathematization of physics. In short, this is the process in which, of Aristotle's four types of analyses (or causes)—material, formal, efficient, and purposive/final—only the first three remain; what removes the purposive/final causes is the highly mathematical (formal) nature of the interactive relations based fundamentally on symmetry notions. The presentation of Noether's theorem is the point at which the process achieved a high plateau level, from which it has not dropped in the slightest.

The second of the three is the physicalization of chemistry process. This process received a strong impetus from John Dalton's atomic chemistry theory at the turn of the nineteenth century. It was strengthened with valence theory in the middle of that century, somewhat solidified with Dmitri Mendeleev's weights-based periodic table a bit later, and transformed by the substitution of the atomic number periodic table for the weights-based table, which began in the 1910s. It reached its plateau level in the 1930s with the view that molecular changes are changes in electromagnetic relations of subatomic particles and their assemblies. Molecular changes were regarded as changes in subatomic particle—or subatomic particle assembly—bonding relations. There are mainly five bonding processes in chemistry: ionic, covalent, metallic, hydrogen, and van der Waals bonding. There also are hybrids of these.

Third, there is the chemicalization of biology (or, more accurately, the physiochemicalization of biology) process. This received a big push forward in the 1820s with the synthesis of urea from laboratory chemicals. In the same decade there was also the postulation of the cell theory for all living things, which supported the chemicalization of biology by the subsequent development of chemical explanations of cell changes as occurred in the nineteenth century and throughout the period since. Darwinian evolution was postulated in detail in 1859. This did not establish the chemicalization of biology, although some would say that it suggested it. If it did, it was merely a suggestion. Questions persisted about how reproduction occurs and how living things are built. That enabled the British Emergentists to conjecturally, but unproductively, postulate special fundamental biological forces, and it enabled others, the vitalists, to continue, unproductively, to entertain the notion that there are fundamental biological (although presumably not in any simple sense physical) forces. Yet neither British Emergentism nor vitalism was logically rejected by the natural-selection evolutionary theory. Even late nineteenth-century results confirming conservation of energy for large organisms such as dogs did not go against speculations about British Emergentist or vitalist forces that would not hinder and might enable such conservation of energy at the large scale but break it individually (in a region larger than what turned out to be the Planck scale region, in which there are no spacetime uniformities). It was

the discovery of DNA structure in 1953, the confirmation of the method for reproductive work of DNA in 1958, and the DNA-RNA-protein work of the 1960s or so that produced the fulfillment of the physiochemicalization of biology process. Nor has epigenetic theory undone that result.

Each of these three processes is easy to grasp and is not controversial. Put the outcomes of the three together—philosophically integrate them—and what has been called the completeness of physics results.

There are many other ways of seeing the unavoidability of the physical-completeness result. Here are three of them: (1) It is commonly accepted, for good reason, that there are no observed phenomena whose descriptions overturn or undo the stable rules, laws, or forces of physics found after 1600 so long as the physics' outcomes are regarded as merely approximately true within the original contexts of discovery. It is very difficult to explain this without accepting physical completeness. (2) There is what I call the demarcation problem (Angel 2005, 131–39), and it is impossible to solve this problem without accepting physical completeness. (3) The conservation of momentum was established in physics by Newton's *Principia*. It is not now controversial to say that the conservation of momentum fully applies to human beings. But that the conservation of momentum fully applies to human beings is, I claim, very difficult to accept unless one also accepts physical completeness.

Many would say, and I agree, that today there is no way to avoid the physical-completeness postulate. It is useful to note that psychological states are not involved in the basic evidence for physical completeness because human beings are biological beings. It is not surprising that the objections that can be raised to physical completeness turn out to be mere pseudo-objections. Some would say, and I agree, that exponents of religion should be prepared to accept physical completeness, the view that all changes in spacetime-occupying objects do not overturn the already discovered, post-1600, stable rules, laws, or forces of physics regarded as approximately true taken only in short-term periods in original contexts of research.

A brief digression: This result also in some sense follows for anyone who is a skeptic about the external world. If one is a skeptic about the external world, there will be some form of accommodation to appearances. The Pyrrhonians follow appearances; the Humeans are effectively contextualists, and yet, judging from their works, they follow appearances not only in everyday life contexts but also in philosophical contexts (since they refer to other persons). Perhaps some skeptics account for following appearances through harmony. In any case, once one is accommodating appearances, one will accommodate the measurements of the natural sciences. These measurements fit together in the physical completeness way. But the religious teachings as they stand do not mesh with the way the measurements fit together. Still, following appearances would generate the results of physical completeness at the appearance level.

Back to the main thread of discussion. Acceptance of physical completeness logically requires rejection of each of eight important theses: (1) there is a classically interactive personal God; (2) there is an afterlife; (3) there is a physics-overturning freedom; (4) there are cosmically produced or supracosmically produced rewards and punishments or deprivations; (5) there are genuine nonphysical (or only subtly physical) mind-over-matter paranormal phenomena; (6) there is an ascent of some minds to a “higher” nonphysical or only subtly physical mental or spiritual mystical level; (7) interactive dualism; and (8) emanationism with causal interaction between the emanating objects. In the text *Science and Spirituality* (Angel forthcoming) I present arguments showing that each of these views is logically rejected by physical completeness. (I would be happy to send the arguments to anyone who requests them.) The arguments can be readily devised; they are broadly logical; they mainly require placing side-by-side elements within three things—some everyday science results, the statement of the physical-completeness position, and the elements of any of the eight views just mentioned.

I now illustrate with an argument that uses just a touch more conceptual work. If there is a personal God who is interactive at the human-perceivable level, then there are beings whose changes, by God’s purposes, undo or alter the physics processes. But the last four hundred years of the natural sciences show that physics, chemistry, and biology integrate in a remarkably strong, physically complete, way. It follows, abductively, that any purposes that exist are not basic but are features of the sum entities. Given this result, by logic there cannot be a basically purposive God. But any interactive personal God is a basically purposive God. Hence there cannot be an interactive personal God. And that excludes the still narrower hypothesis in question. If physical completeness obtains, it follows by logic alone that none of the eight theses obtains.

The logical inconsistency of physical completeness (following in part from many abductive analyses) with eight very commonly held religious theses is central for one’s overall position on the nature of religious views. Given what I, with many others, take to be the extremely strong evidence for physical completeness, a major change of attitude toward the various religious systems is required. Physical completeness, if it obtains, challenges moderate religions (which leave open acceptance of any of the eight theses) as much as it challenges literalist religions (which require acceptance of a specified set of teachings including some of the eight theses).

At the same time, as we saw at the beginning of this section, the extended-body view is central in some important religious systems. We should look at how the sixth of the eight theses rejected by physical completeness is related to the extended-body view. This states that there is an ascent of some minds to a “higher” nonphysical or only subtly physical mental or spiritual mystical level. It is this ascent (given the mystic’s memory of the

supposedly higher state) that is rejected by physical completeness. But one can remove the notion that there is an ascent from the physical level to a nonphysical or only subtly physical level. One can take it that the mystic simply undoes the evolutionarily facilitated discrimination between something that is part of the body and something that is not; the mystic gives up the ordinary body boundary.

We have already seen the centrality of the one (macro-)body view in quotes from some central religious figures. Here is another way to see how the one (macro-)body view can be taken to be important in religions. Four seemingly contradictory views agree about an underlying thesis. Here are two: the no-self view of Buddhism, and the “I am the world” view of some forms of Hinduism. Both agree that the ordinary “me/not me” boundary, or the “my body/not (part of) my body” boundary, should be both theoretically and experientially abandoned. (The other two are “There is, numerically, exactly one thing,” and “There is nothing.” Both of these also abandon the ordinary “my body/not (part of) my body” boundary.)

In Christianity, Christ alone is allowed to have an extraordinary, in one sense body-externalist, viewpoint. A revised Christianity would allow all human beings to aspire to such a viewpoint and occasionally reach it. Some may comment that such a form of Christianity would be a novel kind of Ebionite Christianity, without legal obligations on ritual matters, or perhaps a variant of Arian Christianity. And, of course, the extraordinary/externalist viewpoint, given physical completeness, would reject the view that there are extraordinary agency powers of the sorts postulated by the paranormalists. Contemporary science allows for acceptance of such a viewpoint. The main monotheist religions would need to develop a new sort of language, because in such religious systems, as usually presented, there is an unbridgeable gap between divine powers and the powers that can be cultivated by a human being. The new religious systems would reject the view that any being has any such extraordinary (paranormal) divine powers. It may be that reforming a religious system in the way described here, rejecting the eight theses while accepting the extended-body view, would enable the religion to develop a new approach to what religious or spiritual transformation is centrally about. In the new approach, there would be a double goal: first, to cultivate the transformed experience of the world, and second, to cultivate ongoing, though perhaps unusual, for instance contrastless, pleasurable states. Both would also be goals for an extended-body humanist system.

Accompanying the new religious systems would be new versions for the (typically narrative, often anonymous) central classical texts. Without such new versions, the old doctrines affirming one or another of the eight religious theses could creep back in. But, some would say, there is no need for such theories to creep back in. On the contrary, an extended mind-body religious system with transformed classical texts would be welcome because

such a system would accommodate strong features of religious understanding with support for what many, myself included, would say is the most important philosophically interpreted result from the natural sciences of the last 2,500 years, namely, physical completeness.

#### THE EXTENSION OF SECULARISM

Active-mind externalism, based on cognitive externalism, is complemented by personal-body externalism, which is also based in part on cognitive externalism. These views are expressed practically in a new sort of humanism, and a new sort of religious system, one for each religion. I have argued that if we are to find a primary body for a human person, such a primary body is well regarded as the world. In such a view, of course, most of the primary body underlying a person does not function in the least in the activities of the person. At any given time only a very minuscule portion of the primary body functions in the production of personal behavior.

Admittedly, this is an unusual position to take, both intellectually and for experiential transformation. If one rejects this position, I suggest that a different form of extension, an extension of secularism, can still take place. The focus in what follows is on the extension of secular institutional offerings, where *extension* is a kind of expansion, so there is a shift toward an examination of institutional characteristics. Nonetheless, the extension of institutional secularism is of singular importance in the development of human history, so it is worthy of exploration.

*Secularism* has several meanings. Here the secularist holds that one way or another there should be a separation of religion and public institutions. Universities and colleges are often public institutions, and even private nonreligious institutions typically adopt the assumptions underlying public institutions in a secular state. One assumption is that no professor will require students to accept one side of a philosophically controversial matter as a prerequisite to engaging in class exercises or completing the educational project. Atheists, theologians, socialists, capitalists, skeptics, and paranormalists are admitted to public courses without requiring that they give up their points of view as a prerequisite to participating in classroom activities or to completing a program or getting a degree. The view the student expresses would hypothetically be immaterial.

Let us look now at two different groups of people. First is the group whose members hold that something is wrong with the extended-body analysis. (Those who reject extended body would likely also reject extended mind.) Still, members of such a group can find a level at which to cultivate fulfillment in a secular environment. It can involve improvements in the way one organizes one's life, or in one's mood or interpersonal relations or worldview. There are two levels of work for improvement. First (assuming, nonskeptically, that there is more than one person in the world), everyone eats, sleeps, and in one way or another attempts to improve her or his



conditions of being. Such a person will have no objection to trying to find improvements, even if they are modest sorts and even if they are offered in a secular manner. Examples would include acquiring a desired habit, developing a sense of equanimity, deepening one's sense of ordinary everyday pleasures, increasing one's sense of awe and curiosity about things, developing deeper friendships with people who hold views very different from one's own, learning something one thinks is important, and developing a finer appreciation of the long line of time.

The second sort of improvement is the sort sought by members of the second group of people. Members of the second group—those who accept the extended-body view (and, likely, the extended-mind view)—strive for experiential realization of the intellectual extended-body view. Such persons can do so in either the humanist way or the religious way. (Acceptance of spirituality without religion and without the extended-body view will be absorbed into either a broadly conceived humanist path or a broadly conceived religious path or will stand at the border between the two.)

One may ask: If the cultivation is in the religious manner, how would it be done within a secular environment? As follows: If exercise instructions, for instance instructions for postural meditation, are given in the humanist manner, they already will be stripped of all religious mythology, costume, and dogma. Instructions can be given in that way in a secular institution. If they are given in that stripped manner, they can then be *privately* “colored” or toned by a particular religious interpretation. Such private coloration could be supplied by the practitioner. The practitioner could mention any coloration privately employed so long as such mentioning did not prejudice the neutrality of the process. The secular activities, including the instructional activities, would emphatically not require or presuppose any such private coloration. The secular inclusiveness rule would be scrupulously followed, and it would be expected that each participant's understanding would develop individually. It also would be expected that many practitioners would engage in no such private coloration. Any form of coloration would be private; the integrity of the community would be preserved.

People of all groups thus can participate in a secular fulfillment-cultivating institute. This includes those who reject the extended-mind/body analysis, those who accept it in the humanist way, and those who accept it in a religious way. Other groups can be added to the list. I call such an institute a *secular wisdom institute*.<sup>2</sup> The assumptions behind the secular wisdom institute are that (1) no one side of a controversial doctrine or teaching is required to be accepted by all participating in the institute; (2) exercises are offered that can be interpreted by all, whether they accept or reject the extended-body view of the primary body underlying a person; and (3) all specific religious or antireligious colorations are removed from instructions for exercises being offered.

This, of course, is an extension of the current secularist view. It enables something that was attempted in ancient times to be attempted in our own time. But it is attempted in a very different way from the way it was attempted in the ancient period. Indeed, it constitutes an important new opportunity in our time, for three reasons.

1. The wisdom schools of ancient times promoted one broad intellectual line per school. They were not open to all (controversial) views at the beginning and at the end; one line was always promoted per school. This is no longer the case.

It is important to note that the one-line-per-school feature is preserved in various ways in contemporary religious environments. There are borderline and pluralistic cases, yet the preservation continues. Never does one find an authorized exponent of a religious system denying the eight theses that logically must be denied by one who accepts physical completeness, for instance; yet mind-body theorists, consensus-wise, have accepted physical completeness for decades.

Similarly, the psychological-improvement systems tend to be therapeutic, and so, for those who are already in some sense psychologically healthy, the therapeutic psychological systems seem to be designed for others. There are two main psychological-improvement schools that aim farther than therapy: the school of positive psychology and the school of transpersonal psychology. In each case, there are deep problems if the school is to provide an encompassing mode for secularist work. The positive psychologists are clear that no ethical analysis is included in the positive-psychological delineations. Martin Seligman, a leading positive psychologist, even says that a sadomasochist who savors serial killing leads the pleasant life, that a hit man who kills a lot of people for money leads the good life, and that a terrorist from al-Qaeda who kills by bombings leads the meaningful life (Seligman 2002, n. 249, 303). Immediately afterward he waves his hands, as it were, hoping to reassure the reader. He says that positive psychology is merely a descriptive system or a descriptive science and therefore is neutral on moral matters. My comment is that if one aspires to wisdom or fulfillment, one needs to consider ethics, and if one considers ethics, one needs to be prepared to include amoralists, immoralists, ethical skeptics, non-cognitivists, and ethical error theorists, along with virtue theorists, deontologists, utilitarians, and ethical egoists, within the group of practitioners. Positive psychology does not aspire to do what is required to be done within a secular improvement-promoting environment, which includes, among other things, answering a question like "What about leading, as Martin Seligman puts it, the pleasant life of the sadomasochist, the good life of the hit man, or the meaningful life of the terrorist bomber?"

Transpersonal psychologists promote one side on some highly controversial matters. In effect, they require that one accept one controversial answer (No) to a culturally controversial question (Is physics complete?) if

one aspires to fulfillment (for evidence on this, see Angel 2006). One point that ought to be emphasized here is that a secular wisdom institute would not require that one accept physical completeness. Nor would it require that one reject physical completeness. Although the analysis just given leaves the door open to a major psychological transformation for both those who accept and those who reject physical completeness, it does not require acceptance that such transformations occur. And, because one need not aspire to a major psychological transformation, the secular wisdom institute can work both for those who aspire to modest goals and for those who aspire more ambitiously. Aspirations are sufficiently private as to not upset the secular cart.

2. The secular wisdom institute would be designed for the direct cultivation of improvement in an entirely secular place with all relevant questions considered, and endorsed by the public administrative system. This is a new phenomenon. Philosophy classes allow for improvement—even, potentially, wisdom—as a sort of by-product of philosophical thought, discussion, debate, readings, and paper presentations. But it is still a by-product, and the structural center of philosophy-class activities is elsewhere. Non-philosophy courses follow paths somewhat parallel to those of philosophy courses, though they are incomplete in various ways. However, in a secular wisdom institute, the central goal would be the cultivation of improvement with all relevant questions considered, and some people would think of the improvement as a kind of wisdom. This provides for a new sort of central, publicly endorsed goal in a secular environment.

3. Perhaps most important, the secular wisdom institute would allow for expression of the integrity of the full secular community, a community integrated by both the cultivation of improvement and the expression of friendship between members who have radically different views.

All in all, this extension of the secularist activities constitutes an important new opportunity for the human community. Its essential components are the introduction of various exercises, such as religion-free postural meditation, plus the examination of central philosophical controversies, all for the goal of possible improvement.

Shall we involve ourselves in a humanist wisdom institute, in new religious wisdom institutes, or in a secular wisdom institute? Yes! Why not?

## NOTES

1. Since the late 1980s, I have not been practicing postural meditation in any Buddhist organization. Humanist meditation is one of the three main forms of postural meditation I have been engaged in.

2. There is such an institute at the college in which I teach.

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