



Neuroscience, Theology, and Unintended Consequences

David F. Siemens, Jr.

Most contemporary neuroscientists hold that soul or mind is no more than what emerges from complexly organized matter, that is, is strictly a function of brain. While not necessary, this view has been adopted by some evangelicals who seek current relevance. They, of course, have to posit a nonmaterial deity, something clearly not part of science. Their claims have been disputed on grounds of incompatibility with the resurrection, with spiritual beings, with free will, and with eternal life. None of these criticisms has noted an even more fundamental problem: nonreductive physicalism apparently makes the Incarnation impossible.¹

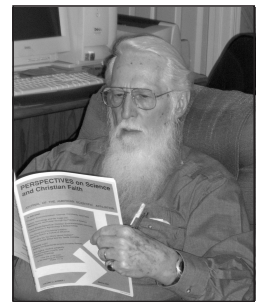
*Flies will easily fly into honey – their problem is how to get out.
– Persian proverb.²*

Theologians have long argued about soul and spirit as parts of human existence. They have been sure that these elements are immaterial, but they have been divided over whether they are distinct, that is, whether human beings are composed of two substances, body and soul, or of three, body, soul, and spirit. Philosophers since Descartes have generally applied only one term, mind, to whatever these immaterial entities may be. Contemporary neuroscientists commonly believe that soul is no more than a set of functions of complexly organized matter, that is, the brain and its associated organs, affected by the social environment.

We may consider this complex as analogous to a computer. A little chunk of silicon with various trace elements, a small amount of copper and other metals, some small sheets of fiberglass: these do nothing in simple or undifferentiated lumps. But when the copper is laid out in precise patterns on the fiberglass sheets, and the silicon is precisely and minutely patterned and connected properly to the motherboard and other parts, we have a computer which will manipulate input according to the precise patterns specified by programs and then output results much

faster than human beings can do such tasks. Neurons, of course, are more complicated and more complexly interconnected, but have been called wetware, the counterpart to the computer's hardware and software.

My first computer, back in the late 70s, was a Sanyo MBC1000. It had a Z80 CPU until I upgraded to a V20. The processor had a couple myriads of transistors, ran at about 4MHz using CP/M as its operating system. With only 64K RAM, it handled tasks in part by shifting bytes to and from 360K 5¼-inch floppies, the only storage medium. I often had to switch floppies to complete a task. In contrast, current CPU chips have tens of millions of transistors operating at gigahertz frequencies; that is, three and six orders of magnitude greater, respectively. The amount of RAM is three or more orders of magni-



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David Siemens, the son of missionaries, earned a doctorate in philosophy from Claremont, having studied with an outstanding logician, the late E. John Lemmon. In that process, Dr. Siemens learned to examine presentations and viewpoints for underlying assumptions and logical consequences, for consistency and completeness. Believing that the integrity of a Christian world view motivates one to honestly face science, revelation, and human experience in all their ramifications, Dr. Siemens presents this reflective article. After teaching philosophy for years, David was welcomed to new activities at Canyon Institute for Advanced Studies in Phoenix. An ASA Fellow, he lives in Mesa, AZ, with his love, Esther, his wife for 59 years. He can be contacted at dfsiemensjr@juno.com.



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tude greater, not to mention hard disks with amazing capacities. Whereas I was blessed to have a full line appear on the monochrome monitor (some had room for only forty characters), now monitors can handle millions of colors and letters of many sizes. Yet with all the increase of speed and complexity, in 2001 Hawking noted that the latest computers are not yet up to earthworm level.³ Since I have not yet heard of trained annelids, I believe that AI investigators have a very long way to go.

If the brain is viewed as wetware, and perception, memory, thought, emotions, and so forth are held to be no more than functions of this wetware, the result is a form of monism or physicalism. It is not necessary to hold this view: Nobel laureate Sir John C. Eccles and others are still dualists.⁴ Nevertheless, dualists are in the scientific minority. Hence it is reasonable to expect those Christian philosophers, psychologists, neuroscientists, and the like, who aspire to scientific credibility, to accept physicalism, specifically nonreductive physicalism, which may be described as materialism with a deity. It is probably best expressed in *Whatever Happened to the Soul?*⁵ Its best-known representative is probably Nancey Murphy, professor of Christian philosophy at Fuller Seminary. However, Donald M. MacKay, the Scot investigator, earlier espoused it,⁶ as do many other neuroscientists and some theologians.

Various aspects of nonreductive physicalism have been criticized. For most orthodox Christians, the dismissal of Scripture passages that conflict with monism are perhaps most important. Hasker notes this problem, as have a number of individuals who have heard Murphy speak.⁷ He notes that she, without any explanation, denies that there is any problem, on her view, with a person surviving death. He has argued at length that physicalist accounts of the resurrection are logically incoherent.⁸ Another critic noted that there is a problem with angels.⁹ Equally problematic are the scriptural references to Satan and demons, for the only spirit specifically accounted for in nonreductionistic physicalism has been God. Larmer presents a more extensive survey of the justification of physicalism and the problems from a Christian viewpoint.¹⁰ He notes that proponents of monism claim

that dualism runs counter to Hebrew thought and was imported from Greek secular sources, and that it runs counter to contemporary views which claim to encompass all relevant knowledge. He explicitly denies the first of these claims and goes on to insist that it "has implications that contradict central tenets of the Christian faith."¹¹ He argues that the monistic view may describe the various human activities but cannot explain them, especially since teleology is involved.¹² Further, this scientific view is incompatible with human freedom¹³ and with the Christian doctrine of eternal life.¹⁴ Toward the end of the essay he notes:

The search for material causes scarcely implies that all events have physical causes. Neither is it the case that the action of an immaterial mind upon a material body would violate or suspend any law of nature.¹⁵

The sum of the discussion is that, on any rational view, a living human being is a psycho-physical whole in a social environment. Mental activity affects the body, and physical conditions produce mental consequences. Both the mental and the physical are influenced by the external environment. A person is a unified entity. However, none of the matters noted above are sufficiently serious to be termed patently heretical.

There is a problem that cuts deeper than disagreements over how a person can retain identity through death and resurrection. I have not encountered a mention of it in any of the studies except my own.¹⁶ While it is easy to say that the soul survives and will be united to a new body, we have not interacted with disembodied souls. So, as far as empirical evidence goes, there may be none. To be sure, some folks report interaction with unembodied forces, and Scripture reports encounters with angels and demons, but I know of no scientific observation of such experiences.

The deeper difficulty connects to a matter implicit in the earliest creeds and explicit in the original version of the Nicene Creed.

We believe ... in One Lord Jesus Christ, the Son of God, begotten of the Father, only-begotten, that is, from the substance of the Father, God of God, Light of Light, Very God of Very God, begotten, not made, being of one substance

with the Father, by whom all things were made, things in heaven and things on earth: Who for us men and for our salvation came down and was incarnate.¹⁷

This is no more than a theological statement of what we find in various passages of Scripture, for example, John 1:1-3, Col. 1:15-17 and Heb. 1:1-6. These are very clear statements of the deity of Jesus Christ. On the other hand, the nativity narratives of Matthew and Luke, along with the multiple records of his crucifixion and death, show his humanity. Philippians 2:5-11 puts both deity and humanity together explicitly:

Keep on fostering the same disposition that Christ Jesus had. Though he was existing in the nature of God, he did not think his being on an equality with God a thing to be selfishly grasped, but he laid it aside as he took on the nature of a slave and became like other men. Because he was recognized as a man, in reality as well as in outward form, he finally humiliated himself in obedience so as to die, even to die on a cross. This is why God has highly exalted him, and given him a name that is above every other name, so that in the name of Jesus everyone should kneel, in heaven, on earth, and in the underworld, and everyone should confess that Jesus Christ is Lord, to the praise of God the Father.¹⁸

To phrase all of this a little differently, the second Person of the Trinity, the Son, eternal God, emptied himself of his glory and majesty and of much of his power and knowledge, in order to be born as a human baby. He did not abandon his holiness or deity, although these were generally hidden. However, flashes showed through. This accounts for Philip's plea, "Show us the Father and we'll be satisfied" (John 14:8). Jesus' reply was simply, "Philip, after all this time together, haven't you recognized me? If you've seen me, you've seen the Father" (John 14:9).¹⁹

All this requires that Jesus of Nazareth be fully divine and fully human, totally united in his person. God, to use a philosophical term, is substance. This does not mean that he is material, our usual sense, for he is spirit (John 4:24), immaterial, but totally real. A human being, according to traditional theology, is body and soul, a joining of material and immaterial substances. They belong together, but may be separated when physical death occurs. Two similar substances can usually be joined together fairly easily. For example, either sugar or salt will mix with water to provide a uniform solution. Granulated sugar and table salt do not quite accomplish this, for the bits do not unite. One can, with the right apparatus, recognize each crystal for what it is, though it would take an inordinate amount of patience to separate the mix into separate piles. We usually think of oil and water as immiscible but, with an emulsifier, we have such combinations as cream and mayonnaise. Additionally, ultrasound may be harnessed to

produce an emulsion. So substances, given proper conditions, can unite.

Thus one may expect that two immaterial substances could be conjoined to produce a spirit-soul or divine-human combination and that this combination could be united to a body to produce a human being. I cannot explain a mechanism whereby divine and human substances can be joined. But then I cannot explain how soul and body are united, but I experience a seamless integration. Toe, touch and taste, heart, humor and humerus, medulla, memory and merriment, are inexorably united in me. It is still *me* though I am no longer a towhead child or an adolescent student. Beyond what I remember, I am told that there is a continual turnover of atoms in every part of my body, yet it is continuously *me*.

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As I noted, we can believe that two immaterial substances may be integrated, even though a miracle is obviously required. However, we cannot imagine how the mere function of complexly organized matter and a purely immaterial substance can amalgamate.²⁰ Substantial objects have functions. If the functions are compatible, two objects may be joined advantageously. I cannot, for example, run the output of a word processor through a mass spectrometer in order to obtain relevant results. The verbal or numerical data which word processors output are not input for spectrometry. But chromatography and mass spectrometry in tandem can identify individual components in complicated mixtures of many compounds. However, chromatography does not present the detailed information of a spectrograph by itself. Functions are joined only when the devices are connected—unless, of course, one invents a new device encompassing broader functionality. Similarly, if the human soul is only a function of the physical body, we cannot join it to the non-physical divine substance. We cannot view the hypostatic union as sequential processing. This means that the Incarnation is evidently impossible given nonreductive physicalism.

Is there a way out? Could God have used the human functions, controlling them without amalgamating his spirit with human function or soul? As a professor before the age of PowerPoint and inkjet printers spitting out overhead transparencies, I depended on chalk. Its function is to make a mark on a blackboard. My function in using chalk



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was to communicate to the students. Chalk cannot take over the function of intelligibility, for it does not in itself possess the functions of mind. Could God have analogously used a human being, controlling it as I controlled the chalk? The simple answer to this is "Yes," for he is omnipotent. However, would God so manipulate a person? While some theologies say "Yes," most insist on free will. God taking over a person in this way is like demon possession, a usurpation of the person, not a loving and righteous action. So such a form of divine possession, God taking over mental functions, cannot provide an explanation for the hypostatic union, the unification of personalities.

The impossibility of accounting for the Incarnation given nonreductive physicalism is something too important to ignore. This apparent dismissal of the ancient universal creeds is surely not the intent of Nancey Murphy and her colleagues at Fuller Seminary, of Malcolm Jeeves, nor earlier of Donald MacKay, all avowedly orthodox. But they need to produce a clearly stated Christology, for it now appears that they are victims of the Principle of Unintended Consequences. One can be reasonably confident that, whenever vital aspects of a view are ignored or dismissed, inadvertently or deliberately, this principle will attack.²¹ ♦

Acknowledgment

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Notes

- ¹A version of this paper was given at the Joint Annual Conference of the ASA, CSCA and CiS on July 26, 2004.
- ²Gerd de Lay, *International Dictionary of Proverbs* (New York: Hippocrene Books, 1998), 187.
- ³Stephen Hawking, *The Universe in a Nutshell* (New York: Bantam Books, 2002), 165.
- ⁴Warren S. Brown, Nancey Murphy and H. Newton Malony, eds, *Whatever Happened to the Soul? Scientific and Theological Portraits of Human Nature*; and Kevin J. Sharpe, ed., *Theology and the Sciences* (Minneapolis, MN: Fortress Press, 1998), 26, 88, 127, 139, 220.
- ⁵*Ibid.*
- ⁶Robert A. Larmer, "Christian Anthropology: Saving the Soul?" *Philosophia Christi* 2 (2000): 215, note 5.
- ⁷These include William Hasker, "Reply to My Friendly Critics," *Philosophia Christi* 2 (2000): 200,

and a number of individuals who have heard Murphy speak. Some of the problematic passages are noted by Joel B. Green, "Bodies—That Is, Human Lives: A Re-Examination of Human Nature in the Bible," in Brown, et al., *Whatever Happened to the Soul?* 149–73.

Verses held to be notably difficult for a monistic interpretation include 2 Cor. 5:6–9; 12:2–4; Phil. 1:22–26; Rev. 6:9–11. Malcolm Jeeves, at the first presentation of this study, noted that this criticism no longer holds since the publication of Joel B. Green, ed., *What About the Soul?* (Nashville, TN: Abingdon Press, 2004).

⁸William Hasker, *The Emergent Self*, Cornell Studies in the Philosophy of Religion Series (Ithaca, NY: Cornell University Press, 1999). This is summarized in *Philosophia Christi* 2 (2000): 163–6. See also —, "Reply to My Friendly Critics," 200–1.

⁹Robert K. Garcia, "Minds sans Miracles: Colin McGinn's Naturalized Mysticism," *Philosophia Christi* 2 (2000): 239.

¹⁰Larmer, "Christian Anthropology," 211–26.

¹¹*Ibid.*, 214.

¹²*Ibid.*, 218.

¹³*Ibid.*, 218–21, and 218, note 20.

¹⁴*Ibid.*, 221–25.

¹⁵*Ibid.*, 226.

¹⁶David F. Siemens, "Thoughts on Nonreductive Materialism: A New Heresy?" *Philosophia Christi*, 4 (2002): 519–23.

¹⁷This dates to 325. What is commonly called the Nicene Creed is the expansion from the Council of Constantinople, 381. What is known as the Athanasian Creed is equally clear on the relevant point. What is known as the Apostles' Creed cannot be traced back this far.

The Reformation confessions are also clear: Lutheran Augsburg Confession (1530), Art. III; Reformed Gallican Confession (1559), Art. VI and XIV; Anglican Articles of Religion, known as the Thirty-nine Articles (1562), Art. II; Anabaptist Dordrecht Confession (1632), Art. IV. All these creeds and confessions are found in B. A. Gerrish, ed., *The Faith of Christendom: A Source Book of Creeds and Confessions* (Cleveland and New York: Meridian Books, The World Publishing Company, 1963).

¹⁸This passage comes from Charles B. Williams, *The New Testament: A Translation in the Language of the People* (1937; reprint, Chicago: Moody Press, 1952).

¹⁹These two passages are my paraphrase.

²⁰This holds whether one adopts creationism or traducianism as the source for each individual's soul. Creationism holds that God creates a new soul for each infant, granting it at conception, quickening, or birth. Traducianism holds that the soul is produced by the act that produces the zygote. That is, accompanying the physical act is a spiritual act, so that both body and soul originate and develop together. I believe traducianism because a child so obviously expresses the mental and physical traits of the parents and grandparents. Of course, God is fully able to produce such a soul. However, if human beings are fallen, then he must be producing degenerate or defective souls. Since we do not expect the deity to create such warped entities, creationism seems more consonant with Pelagianism (I can save myself with a little help) than with Augustinianism (I depend wholly on grace for salvation).