

PART III

AN UPDATED CATHOLIC UNDERSTANDING OF THE SOUL IN LIGHT OF MODERN SCIENCE AND PHILOSOPHY - RETHINKING THE SOUL IN LIGHT OF MODERN SCIENCE

The third part of the thesis revisits the themes of Part I, and aims to propose an updated Catholic understanding of the soul illuminated by the sciences and associated philosophy. There are four chapters in Part III. Chapter 1 faces up to the continuing question of dualism, which any contemporary account of the soul has to answer or at least recognise. This is an apt place to discuss dualistic ideas after the investigations of Part II.

Chapter 2 of the Third Part turns to the alternative philosophy of dualism, namely, Christian Materialism. Contemporary thinkers in Christianity have been considering the body, brain, mind and soul in light of the sciences. Their ideas are essentially nonreductive, but at times it abandons the traditional concept of soul as the spiritual principle in human beings which can survive bodily death, and destined to be reunited with the body.

Next in Chapter 3, Part III, the responses of contemporary Thomism are discussed. This chapter seeks out how thinkers in Tommaso's tradition incorporate a scientific worldview and howhylomorphism might be re-thought.

Finally in Chapter 4, the focus returns to the soul as taught by the Catholic magisterium. The authoritative insights in Part II are a challenge and hence any development of Church's magisterium and renewal of expressions are really only possible through mutual dialogue with the neurosciences and philosophers. The dialogue is underway but there are some difficulties.

CHAPTER 1

CHRISTIAN DUALISM

Dualism is a philosophy of mind which a few scientists actually do hold, even in light of the scientific research investigated in Part II. Even some analytic philosophers, who are usually anti-metaphysical, also defend dualism. Rethinking Catholic philosophy and theology can head in this direction but it is not the mainstream view. This chapter concentrates on some scientific views, natural religious dualism, and then a consideration of philosopher Richard Swinburne's ideas. Following this there is a discussion of some Cartesian ideas, including a dualist interpretation of St. Thomas Aquinas, and other contemporary dualist ideas in Catholic thought.

Some Scientific Dualist Thought

A dualist world might contain immortal minds, which according to neuroscientist D.M. MacKay (1922-1987) could be portrayed as being plugged-in for some time in a mysterious way in "quasi-physical interaction" with a specific brain or part thereof. When that part of the brain is destroyed, it leads to "an ejector-seat operation whereby the mind or soul takes off and presumably waits for a new charge."¹ According to MacKay, this view is not incoherent and people who hold it, like Sir John Eccles (1903-1997) or Richard Swinburne, are not talking meaningless nonsense. But he also cannot see reasons favouring this view.² MacKay thinks that there is nothing guaranteed about immortality in neuroscience, yet he leaves open the question whether all human brain activity can be explained mechanistically, even in the light of an elevated perspective on the significance of human decision-making capabilities.³

Nobel laureate J.C. Eccles,⁴ regarded as one of the leading neuroscientists of the twentieth century,⁵ is habitually quoted as the exception to the dominant materialism

¹ Donald MacCrimmon MacKay, *Behind the Eye*, edited by Valerie MacKay (Oxford and Cambridge, Massachusetts: Basil Blackwell, 1991), p.259.

² MacKay, *Behind the Eye*, p.274

³ MacKay, *Behind the Eye*, p.273. Cf. also Michael J. Rulon, "Donald MacKay's final lectures - the Gifford lectures," *Philosophical Psychology* Vol.10 No.4 (December 1997), pp.517-521

⁴ Don Todman, "John Eccles (1903-97) and the experiment that proved chemical synaptic transmission in the central nervous system," *Journal of Clinical Neuroscience* Vol.15 No.9 (September 2008), pp.972-977.

in science. His philosophical ideas on the self-brain were a form of dualist interactionism.⁶ Neurophysiologist Benjamin Libet (1916-2007), who was also interested in questions of mind, brain, consciousness and free will, acknowledges the contributions from Eccles on how the brain could be involved.⁷ But Libet notes that Eccles' models of mind-brain interaction were presented without experimental evidence or designs for testing. The absence of experimental testability, however, did not trouble Eccles.⁸

Eccles hypothesised that just as the dendron is a neural unit of the neocortex, there was a mental unit called a 'psychon'. The laws of conservation in physics mean that non-material mental events have no effective action on neuronal events in the brain. Eccles proposed that all mental experiences have a unitary composition, where units are unique for psychons or each kind of experience. Every psychon is said to be connected to particular dendron, the basis of mind-brain interaction.⁹

For Eccles, the certainty of the inner core of unique individuality necessitates the 'divine creation'.¹⁰ He finds that no other explanation is tenable, not even genetic uniqueness or environmental differentiations. He also finds that these views which strengthen belief in the human soul and its miraculous origins in the cosmic creator God. He observes that Einstein believed in, "the immanent God to whom we owe our being."¹¹

Eccles is moved to humility before the self, marvelling at "our wonderful brains, which is ours to control and use for our memory and enjoyment and creativity for other human selves."¹² His personal background was with the Catholic Church.¹³

⁵ Todman, *John Eccles*, p.973. This is also the view of Marianne Fillenz, "Memories of John Eccles," *Journal of the History of the Neurosciences* Vol.21 No.2 (2012), pp.214-226 and Douglas G. Stuart and Patricia A. Pierce, "The academic lineage of Sir John Carew Eccles (1903-1997)," *Progress in Neurobiology* Vol.78 Nos. 3-5 (February-April 2006), pp.136-155.

⁶ Eccles follows Descartes in positing an independent brain and mind. John C. Eccles, *How the Self Controls Its Brain* (Berlin and New York: Springer-Verlag, 1994), pp.9-26..

⁷ Benjamin Libet, "Reflections on the interaction of the mind and brain," *Progress in Neurobiology* Vol.78 Nos.3-5 (February-April 2006), pp.322-326.

⁸ Libet, *Reflections on the interaction*, p.323

⁹ Eccles, *How the Self Controls Its Brain*, pp.140-141

¹⁰ Eccles, *How the Self Controls Its Brain*, p.180; see also John C. Eccles, *The Human Mystery*, The Gifford Lectures, University of Edinburgh 1977-1978 (Berlin and New York: Springer International, 1979), pp.10, 325-327

¹¹ Eccles, *How the Self Controls Its Brain*, p.180.

¹² Eccles, *How the Self Controls Its Brain*, pp.180-181

Substance dualism such as Eccles' ideas has relatively few advocates among scientists compared with materialism.¹⁴ Some Christian thinkers argue for dualism against a Christian type of physicalism.¹⁵ Some argue that neuroscience is not evidence for physicalism and that the plausibility of some types of dualism is not reduced by it.¹⁶

This has implications in other areas of Christian thinking.¹⁷ One position is that Christianity and the other monotheistic faiths are committed to an interactionist substance dualism between two dissimilar ontic orders, God and the universe. Such interactionism is philosophically difficult to maintain yet apologists for it argue that we have as yet no cogent nondualistic substitute; dualism means real causal power is granted to God.¹⁸ Many turn rather to the principle of physical causal closure that looks for a nondualistic, noninterventionistic explanation of divine agency and action.¹⁹

Another dualism is 'integrative dualism,' which transcends dual-aspect theory, a theory which treats mental properties as nonphysical but only physical objects exist with no immaterial selves, souls, minds or persons. Integrative dualism is also the view that persons are not identical with their bodies, God is not identical with the cosmos, but there is a union between persons and bodies, God and the cosmos.²⁰

¹³ It is noted that although Eccles was always a practicing Catholic, he was a theist and a spiritual person, and he believed 'that there is a Divine Providence operating over and above the materialistic happenings of biological evolution'. (Occasionally, if Eccles found himself in strange surroundings on a Sunday, he would go to some pains to find a church where he could attend a Mass.)" Alexander G.Karczmar, "Sir John Eccles, 1903-1997: Part 2. The brain as a machine or as a site of free will?," *Perspectives in Biology and Medicine* Vol.44 No.2 (Spring 2001), pp.250-262 (p.257)

¹⁴ For example, John Turl, "Substance Dualism or Body-Soul Duality?," *Science & Christian Belief* Vol.22 No.1 (April 2010), pp.57-80;

¹⁵ J.P.Moreland, "Locke's Parity Thesis about Thinking Matter: A Response to Williams," *Religious Studies* Vol.34 No.3 (September 1998), pp.253-259

¹⁶ C.Stephen Evans, "Separable Souls: Dualism, Selfhood, and the Possibility of Life after Death," *Christian Scholar's Review* Vol.34 No.3 (Spring 2005), pp.327-340. Evans maintains that Christian non-reductive materialism or physicalism are not to materialist views but actually forms of dualism.

¹⁷ Dennis Bielfeldt, "Can Western Monotheism Avoid Substance Dualism? *Zygon* Vol.36 No.1 (March 2001), pp.153-177

¹⁸ Bielfeldt, *Can Western Monotheism*, p.154

¹⁹ Bielfeldt, *Can Western Monotheism*, p.156

²⁰ Charles Taliaferro, *Consciousness and the Mind of God* (Cambridge: Cambridge University Press, 1994), p.16 & p.31. While materialism presents a major challenge to dualism, Taliaferro says a dualist "theory of person in partnership with theism can, I believe, provide a substantially unified world-view to offset materialist complaints about the notoriously disjointed character of dualism." (p.19).

Dualism, Naturally

If some scientists subscribe to dualism, it may be because doing so is a natural phenomenon. Psychologist P.Bloom claims that dualist ideas come naturally from childhood. He follows S.Pinker, R.Dawkins and O.Flanagan, in thinking that only now “is it possible to be a morally optimistic materialist,”²¹ with the convergence of philosophy, psychology, and evolutionary theory. Religion has not been a subject for developmental psychologists,²² as it appears not to have been interesting enough.²³ However, there is research concerning children's ideas about purpose and the intentional origins of nature. It is speculated that children are intuitive theists in that they are predisposed to develop a perceive nature as an artifact of nonhuman design.²⁴

If, as this research suggests, we are natural Cartesians, humans have two ways of looking at the world: in terms of bodies, and souls. One outcome is the idea that bodies and souls are separate. Intuitive dualism grounds this concept of personal identity.²⁵ Belief in life after death, says Bloom, is a natural consequence of an intuitive dualist view. Young children do not know that they will die. When they learn about the inevitable end of their bodies, the idea of an afterlife appears naturally.²⁶ Based on several studies involving ideas of souls and bodies he thinks that while people learn from cultural beliefs about heaven, reincarnation, and spirit world, the concept that consciousness is separable from the body is not learned at all.²⁷

Bloom refers to psycholinguistics and linguists' observation on 'creolization', where children not exposed to a full-fledged language will create one and add other structures and principles e.g. deaf children not exposed to sign language will create

²¹ Paul Bloom, *Descartes' Baby: How the Science of Child Development Explains What Makes Us Human* (New York: Basic Books, 2004).

²² Paul Bloom, “Religion is natural,” *Developmental Science* Vol.10 No.1 (January 2007), pp.147-151

²³ Bloom, *Religion is natural*, p.147. Cf.also David F.Bjorklund, Carlos Hernández Blasi and Virginia A.Periss, “Lorenz Revisited: The Adaptive Nature of Children’s Supernatural Thinking,” *Human Nature* Vol.21 No.4 (December 2010), pp.371-392

²⁴ Deborah Kelemen, “Are Children ‘Intuitive Theists’?: Reasoning About Purpose and Design in Nature,” *Psychological Science* Vol.15 No.5 (May 2004), pp.295-301 (p.299).

²⁵ Bloom, *Descartes' Baby*, p.191 & p.195

²⁶ Bloom, *Descartes' Baby*, p.208;

²⁷ Bloom, *Religion is natural*, p.149

their own. He suggests that there might be creolization in religion, and asks, Do children raised by atheist parents spontaneously create their own religious beliefs?²⁸

According to this research, it seems that humans implicitly approve the substance dualism of Plato and Descartes, a natural result from two distinct cognitive systems, one for handling material objects, the other for social entities and “dualism emerges as an evolutionary accident.”²⁹ Moreover, dualism provides possibilities to imagine souls without bodies.³⁰ Bloom proposes that there are particularly early cognitive biases that lead to religious belief, e.g. a hypersensitivity to signs of design and agency and body–soul dualism. Such biases create a natural belief in an afterlife, in Gods and spirits, and divine creation of the universe.³¹

Christian dualists contend that some kind of dualism seems to be the natural response to what humans know about themselves via introspection and other ways.³² That is, the majority of people in history have believed in a substantial, immaterial self/soul.³³ Dualism is supported particularly in Evangelical Christianity.³⁴ One reviewer says that while science and philosophy must be taken seriously, everything is subject to Scripture. There is comfort in believing that “I am more than my molecules, and that when I die, to be absent from the body will be to be present with my Lord. Believing in the soul is defensible, biblically and philosophically, and seems to offer more meaning and hope to the lives of my fellow humans.”³⁵

But critics look to cross-cultural afterlife beliefs to show the hypothesis of Cartesian substance dualism lacks explanatory power.³⁶ If Descartes’ dualism is the intuitive

²⁸ Bloom, *Religion is natural*, p.151

²⁹ Bloom, *Religion is natural*, p.149

³⁰ Bloom, *Religion is natural*, p.149

³¹ Bloom, *Religion is natural*, p.150

³² J.P.Moreland, *The Recalcitrant Imago Dei: Human Persons and the Failure of Naturalism* (London: SCM Press, 2009), pp.104-141

³³ Moreland, *The Recalcitrant Imago Dei*, p.104; see also J.P.Moreland, “Restoring the Substance to the Soul of Psychology,” *Journal of Psychology and Theology* Vol.26 No.1 (Spring 1998), pp.29-43

³⁴ Timothy A Sisemore, “Should we save our souls?,” *Journal of Psychology and Theology* Vol.28 No.4 (Winter 2000), pp.330-332. Sisemore reviews W.S.Brown, N.Murphy & N.H.Malony (eds.), *Whatever happened to the soul? Scientific and theological portraits of human nature* (Minneapolis, MN: Fortress Press, 1998) and J.P.Moreland & S.B.Rae, *Body and soul: Human nature and the crisis in ethics* (Downers Grove, IL: InterVarsity Press, 2000).

³⁵ Sisemore, *Should we save our souls*, p.330

³⁶ K.Mitch Hodge, “Descartes’ Mistake: How Afterlife Beliefs Challenge the Assumption that Humans are Intuitive Cartesian Substance Dualists,” *Journal of Cognition and Culture* Vol.8 Nos.3-4 (2008), pp.387-415

position, then evidence from folk psychology evidence ought to be pervasive through histories and cultures. However, history and culture does not clearly reflect this in many cases where it would reasonably be thought that a mind/body distinction should be evident, e.g. mythologies, and disposing of bodies.³⁷ Further, it is found that casual discussion with those who have lost a loved one does not implicitly or explicitly endorse Cartesian substance dualism: that a loved one is in a particular place like Heaven; or that one can interact with the deceased, e.g., the notion of being watched over.³⁸

Richard Swinburne

Richard Swinburne is a noted philosopher of religion,³⁹ whose philosophy has been described as “a rigorous, tough-minded, basically empirical brand of analytic philosophy...critics who wish to challenge the logical coherence of Christian belief will find a tough opponent in Swinburne. And theologians who are concerned about the coherence of their own formulations can learn a lot from him.”⁴⁰ He argues for substance dualism, and calls his dualism ‘soft dualism’ since as Swinburne says, “there can be no justified general account of the nature of the soul; all we can say is that under normal mundane conditions the functioning of the soul requires the functioning of the body.”⁴¹ This is contrasted to Plato and Descartes’ ‘extreme’ dualism which held that the soul has natural immortality and can continue ‘under its own steam’.⁴²

Mental events and states e.g. pain are distinct from physical events like neurons firings. Swinburne understands ‘pure’ mental properties, for instance, being in pain,

³⁷ Hodge, *Descartes' Mistake*, p.392.

³⁸ Hodge, *Descartes' Mistake*, pp.400-401

³⁹ Peter Forrest, “Why Richard Swinburne Won’t ‘Rot in Hell’: A Defense of Tough-minded Theodicy,” *Sophia* Vol.49 No.1 (April 2010), pp.37-47. Forrest refers to Swinburne’s “attempt to justify God’s non-intervention in the Holocaust as providing opportunities for heroism, in a TV debate, when Peter Atkins ‘splendidly growled’: ‘May you rot in hell!’” Forrest, *Why Richard Swinburne Won’t ‘Rot in Hell’*, p.38; Robert M.Burns, “Richard Swinburne on Simplicity in Natural Science,” *The Heythrop Journal* Vol.XL No.2 (April 1999), pp.184–206. Burns remarks, “Richard Swinburne has, over the last two decades, built up what must count as one of the most fully developed philosophico-theological systems of the twentieth century. Its main unifying structural element is the claim *simplex sigillum veri* (the simple is the sign of the true).” p.184

⁴⁰ William Hasker, “Is Christianity probable? Swinburne's apologetic programme,” *Religious Studies* Vol.38 No.3 (September 2002), pp.253-264 (p.254)

⁴¹ Richard Swinburne, *The Evolution of the Soul* (Oxford: Clarendon Press, 1986), p.10. See also Richard Swinburne, *The Evolution of the Soul*, Revised Edition (Oxford: Clarendon Press, 1997), p.ix. The revised edition has a few minor modifications in the main text but has several new appendices which make remarks on later science and philosophy, which our thesis will also cite.

⁴² Swinburne, *The Evolution of the Soul*, p.323

desiring to eat, as those which cannot be examined by parts, physically. Also, mental properties he understands to be pure mental properties, and mental events are instantiations of pure mental properties.⁴³ Mental events can cause but need not entail physical events, and vice versa, for example igniting a fuse is separate from the resulting explosion. Neural firings are distinct from pains or visual sensations caused by them.⁴⁴ He says we have “no idea and no possible way of discovering to any significant degree of probability exactly which mental events are caused by certain brain events.”⁴⁵

Mental events happen in the soul (or mind), while physical events happen in the body, yet body and soul interact.⁴⁶ The body is a material object, including the brain. These are connected to a soul, the essential part of humans which enjoys mental life.⁴⁷ We are “not merely humans but humans with bodies...human beings could exist without bodies.”⁴⁸

Swinburne explains how souls are immaterial subjects of mental properties, having thoughts, sensations, desires and beliefs and perform intentional actions. Yet the occurrence of the mental life of the soul, although not the details, is dependent on physical processes in the brain, at present.⁴⁹

Consciousness cannot be the property of a material entity such as the body but a property of something connected to the body: the soul.⁵⁰ Swinburne finds that at some point in evolution, the bodies of complex animals became connected to souls, “something utterly beyond the power of science to explain. But theism can explain this – for God has the power and reasons to join souls to bodies.”⁵¹ Swinburne asks,

⁴³ Swinburne, *The Evolution of the Soul*, p.7

⁴⁴ Swinburne, *The Evolution of the Soul*, p.45

⁴⁵ Furthermore, “however much we know about a bat’s brain, we can get from it very little understanding of how (if at all) the bat perceives (i.e. has a sensory picture of and beliefs about) its surroundings.” Swinburne, *The Evolution of the Soul* (1997), p.x

⁴⁶ Richard Swinburne, “The argument to God from fine-tuning reassessed,” in Manson (ed.), *God and Design*, pp.105-123

⁴⁷ Swinburne, *The Evolution of the Soul*, p.2

⁴⁸ Swinburne, *The Argument to God*, p.106 & p.107

⁴⁹ Swinburne, *The Evolution of the Soul*, p.2. Swinburne explains that the character or structure of the human soul is formed “in part through the brain to which it is connected, but which acquires some independence of that brain.” (p.2) Swinburne, *The Evolution of the Soul* (1997), p.333

⁵⁰ Richard Swinburne, *Is There a God?* Revised Edition (Oxford & New York: Oxford University Press, 2010), p.63.

⁵¹ Swinburne, *Is There a God?*, p.63

at what point of evolution did animals first start to have souls and therefore a mental life. He does not know. But their behaviour demonstrates that mammals do have a mental life. He thinks that all the vertebrates have a mental life, as they have brains similar to the human brain.⁵²

The soul is the part of the person necessary for continuing existence.⁵³ Swinburne cites the mad surgeon of B. Williams who transplants the left cerebral hemisphere into one body and the right hemisphere into another.⁵⁴ One of the new persons will be tortured; the other is freed and given one million pounds. Knowing what occurs to a person's body and its parts, says Swinburne, is different to knowing what happens to the persons, thus persons are not identical to their bodies. That is, continuity of personal identity is not guaranteed by brain or bodily continuity. The logical possibility that someone survives with only half a brain shows, says Swinburne, that talk about persons cannot be considered as talk about the body and its parts.⁵⁵

To have a conscious life after a brain operation is different from another's having a conscious life connected to the body after that operation. Science needs a word for what is essential to me, which entails my survival. The word 'soul' serves that purpose. Moreover, a complete account of the world should indicate not just what happens to the body and its constituent atoms but also what happened to the soul.⁵⁶

The soul, with beliefs and desires, is likened to soft cushion, and the brain to a hard object with electrochemical networks of brain correlates of beliefs and desires. The soul's contours are adjusted to the hard object. But the soul is not entirely soft, explains Swinburne, but has some structure so that in some places the shape is formed by the other parts, and its shape also affects the brain. The soul's beliefs and desires influence other beliefs and desires. Some changes in the soul can be made by changing the shape of the brain. However, attempts at altering the soul by altering the brain would be resisted by the soul he says because it has its own shape.⁵⁷

⁵² Swinburne, *Is There a God?*, p.71

⁵³ Swinburne, *The Evolution of the Soul*, p.146

⁵⁴ Swinburne, *The Evolution of the Soul*, pp.149-151

⁵⁵ Swinburne, *The Evolution of the Soul*, p.151

⁵⁶ Swinburne, *The Evolution of the Soul* (1997), pp.x-xi.

⁵⁷ Swinburne, *The Evolution of the Soul*, p.291. This is the 'categorical view' which Swinburne favours. On the contrary, the 'dispositional view' holds that the only true states of the soul are

The brain is like an electric light socket and the soul is like a light bulb.⁵⁸ Plugging the bulb into the power means the light will shine. The soul has a mental life and function “if it is plugged into a functioning brain. Destroy the brain or cut off the nutriment supplied by the bloods, and the soul will cease to function, remaining inert.”⁵⁹ Swinburne notes how physics and chemistry could not possibly account for why brain events caused by light leads to sensations of blueness rather than redness.⁶⁰ Mental properties are different to physical properties and are beyond physics and chemistry.

There are scientific correlations between brain-events and sensations, however correlations alone do not fully explain our experience, e.g. if there are no explanations for why all ravens are black, one could reasonably believe that tomorrow a white raven will be found. A list of correlations is likened to a list of sentences of a foreign language which can sometimes be translated into sentences in English, without any grammar or word-dictionary to explain why those sentences are correct translations.⁶¹

Swinburne finds neuroscience’s extremely close correlations between physical and mental as not entirely perfect. For such reasons, recent centuries of scientific progress in the physical world and especially neuroscience are irrelevant to Dualism’s contentions.⁶²

On the best argument against dualism - dualism cannot account for how body and mind (or soul) interact - Swinburne replies there seems to be no good argument countering evidence of a causal connection: “that bodily events cause brain events and that these cause pains, images, and beliefs (where their subjects have privileged

conscious states, and the brain alone has structure, where its shape solely determines the awareness of desire, judgements and other conscious occurrences.

⁵⁸ Swinburne, *The Evolution of the Soul*, pp.310-311. Stuart Brown, “Soul, Body and Natural Immortality,” *The Monist* Vol.81 No.4 (October 1998), pp.573-590.

⁵⁹ Swinburne, *The Evolution of the Soul*, p.310.

⁶⁰ Swinburne, *The Evolution of the Soul*, p.186. Swinburne accepts the orderly and predictable process of animal evolution but the mental life is not scientifically explicable; but “the gradual evolution of the animal soul is a mystery, likely ever to lie beyond the capacity of science to explain.” (p.195)

⁶¹ Swinburne, *The Evolution of the Soul*, p.189

⁶² Swinburne, *The Evolution of the Soul* (1997), p.xi. If that was what dualism could achieve says Swinburne, then some scientific discoveries may be problematic for dualism to explain and easier for other theories.

access to the latter and not the former), is one of the most obvious phenomena of human experience...if we cannot explain how that occurs, we should not try to pretend that it does not occur. We should just acknowledge that human beings are not omniscient, and cannot understand everything.”⁶³

Swinburne refers to C. McGinn’s point that humans most likely do not have the type of intelligence needed to grasp the processes of mind-body interaction.⁶⁴ Swinburne does not call himself a mysterian (McGinn’s term) but admits that if there is a mystery about mind-body interaction, then one ought to be humble and accept that some things cannot be understood and humans cannot understand everything which occurs, nor how and why.⁶⁵

Swinburne leaves as a mystery the question of interactions between soul and body including brain.⁶⁶ The interaction question is not faced by physicalism since soul and mind are workings of a neurocognitive system. But physicalists must account for the emergence of a centre of conscious agency from neurobiology.⁶⁷ However there is a theistic explanation, where an omnipotent God can join bodies to souls, can create souls and select which brain and thus body each soul is to be connected to when the foetal brain events call for a soul to be connected.⁶⁸

An objection is that dualism cannot describe the differences between two souls. Swinburne answers, the fact we cannot say what makes one soul from different to another, is not a good objection. Some things are just different from each other.⁶⁹ For embodied humans, one soul is singularly associated with one body. But for dualism these connections are contingent and do not make the soul the soul it is. Swinburne explains that the difference is ultimate, they just differ *solo numero*.⁷⁰ It seems that individuals have *haecceitas* or thisness, which makes them different, from other

⁶³ Swinburne, *The Evolution of the Soul* (1997), pp.xi-xii.

⁶⁴ Swinburne, *The Evolution of the Soul* (1997), p.xii

⁶⁵ Swinburne, *The Evolution of the Soul* (1997), p.xiii and Swinburne, *Is there a God*, p.72

⁶⁶ This is an objection that some dualists have against Cartesian dualism. For example, Frank B.Dilley, “Taking consciousness seriously: A defense of Cartesian dualism,” *International Journal for Philosophy of Religion* Vol.55 No.3 (June 2004), pp.135-153.

⁶⁷ Brown, *MacKay's view of conscious agents in dialogue*, p.503.

⁶⁸ Swinburne, *Is there a God*, p.79

⁶⁹ Swinburne, *The Evolution of the Soul* (1997), p.xiv and New Appendix D, The Nature of Souls; Their Thisness, pp.333-344

⁷⁰ Swinburne, *The Evolution of the Soul* (1997), p.333; see also Richard Swinburne, “Thisness,” *Australasian Journal of Philosophy* Vol.73 No.3 (September 1995), pp.389-400.

individuals of the same kind.⁷¹ Any human being with all the same general properties as myself would be me. The differences can still exist even if the bodies remain the same because of the vehicle of the thisness: souls.⁷²

Thomas Aquinas, Dualist

Another line of Christian dualist thought is Thomism but in contrast to previous discussion which presented St. Thomas's Aristotelian-hylomorphism in non-dualist terms, a few contemporary Thomists interpret his position as a particular kind of dualism.

Eleonore Stump argues that the soul in Aquinas' thinking is not Cartesian; is essentially immaterial essentially, yet realised in matter.⁷³ In Descartes, the person, says Stump may have a body but it is not identical with it or composed of it. The intellectual processes or 'thinking' happen solely in the nonmaterial part that is the person, not in the body. Intellectual cognitive functions occur in the thinking essence that is separate from the body. They are not exercised by or in the body.⁷⁴

As 'form' the soul configures matter.⁷⁵ Stump quotes the usual medieval example of a bronze statue to illustrate matter and form, but then details an example which is difficult to follow without knowledge of molecular biology. She discusses a protein called CAT/Enhancer-Binding Protein (C/EBP), a molecule which in its active form consists of a dimer and an alpha helix coil. [A dimer is a complex molecule made up of two large molecules. An alpha helix coil is a part of a protein with a coil structure. Proteins are involved in gene expressions, that is, how genes pass on information in biochemical processes.]

Stump describes the 'form' of C/EBP as "the configuration of the dimer, including the alpha helix coil; and the dimer subunits constitute the matter. Of course, each dimer subunit is itself a composite. The form of the subunit is the configuration of its amino acids [which make up the protein], in which, for example, in one region every

⁷¹ Swinburne, *Thisness*, p.389

⁷² Swinburne, *The Evolution of the Soul* (1997), p.342.

⁷³ Eleonore Stump, "Non-Cartesian Substance Dualism and Materialism Without Reductionism," *Faith and Philosophy* Vol.12 No.4 (October 1995), pp.505-531

⁷⁴ Stump, *Non-Cartesian Substance Dualism*, p.505

⁷⁵ Stump, *Non-Cartesian Substance Dualism*, pp.507-508

seventh spot must be occupied by leucine [an amino acid]; and the amino composing the subunit are its matter.”⁷⁶ Stump says it goes all the way down to protons, which make up atoms; and quarks or subatomic particles which make up the protons. The configuration and combination between protons and quarks is the form of protons.

For a human being, the substantial form is the configurational state of the matter, divinely created and constituting the body, which makes the matter not only a human body but *this* living human body.⁷⁷ The soul has spatial location because the soul is the form of the body while alive.⁷⁸ The form of the body can be whole, for example the whole soul is in each part of the body like white is wholly in each part of an entirely white object. But for operations, the whole soul is not in every part of the body because operations of the soul are localised to where the body parts are, for instance, sight in Aquinas is localised in the eyes. Intellect and will are not local to any specific organ in the body but Aquinas accepts medical expertise that ‘particular reason’, a lower-level cognitive faculty, is localised in the brain.⁷⁹

Aquinas is not a universal hylomorphist, says Stump. There is not a sort of “ghostly ectoplasm” that can be configured by the forms of immaterial things like angels and souls. When he claims that the separated soul exists apart from the body, he appears to be advocating the peculiar idea that there can be an essentially configurational state with nothing that is configured.⁸⁰

If Aquinas knew neuroscience, would he think mind is identical to brain? No, answers Stump, given what he says about the separated soul. Even if the mind is natural and embodied before death, it seems “less misleading to say that he would have thought that the mind emerges from the functioning of the brain, since the human form on his account is dynamic rather than static.”⁸¹

While rejecting a kind of Cartesian dualism, Stump places Aquinas somewhere among the dualists because he thinks there is a subsistent, immaterial constituent to

⁷⁶ Stump, *Non-Cartesian Substance Dualism*, p.508

⁷⁷ Stump, *Non-Cartesian Substance Dualism*, p.509

⁷⁸ Stump, *Non-Cartesian Substance Dualism*, p.512

⁷⁹ Aquinas does not ‘follow’ Descartes in holding that higher cognitive functions happen only in the soul. Instead, they are ascribed to the human being as a whole material composite.

⁸⁰ Stump, *Non-Cartesian Substance Dualism*, p.513

⁸¹ Stump, *Non-Cartesian Substance Dualism*, p.520

the subject who exercises cognitive functions. Aquinas might be a property dualist because he holds that forms of material objects do not exist alone, and the soul is not a complete substance. Yet Aquinas thinks the soul can exist without a body, hence his view is stronger than property dualisms. A possible new genus *subsistence dualism* is proposed which includes *substance dualism*, but this new genus may not be necessary, concludes Stump. Aquinas' 'soul' is closer to substance dualism than property dualism, and if 'substance' in 'substance dualism' is not taken too strictly (if it includes subsistent things that are not complete substances), then Aquinas can be counted among the substance dualists, particularly as a non-Cartesian substance dualist.⁸²

Other Catholic Comments on Dualism

It can be noted that property dualism, wherein humans are regarded as single unified substances with physical and psychological properties (a kind of 'nonreductive physicalism'), has attracted some Catholic thinkers.⁸³ Psychological properties are not reducible or identical with physical properties. So one who holds, "in accord with Church teaching, that a human being is a single unified rational organism whose higher intellectual properties are irreducible to physical properties, will find property dualism to be the only game in town."⁸⁴

Interpreted as a benign physicalism, Aristotelians would naturally be interested in this approach. However, property dualism has difficulties with supervenience and the link between physical and psychological properties. Other questions remain. Even if each psychological property is distinct from its correlated physical properties, it follows that any psychological event is distinct from every physical event; and if correlated psychological and physical events are not identical with one another, are they causally related to each other?⁸⁵

⁸² Stump, *Non-Cartesian Substance Dualism*, p.520.

⁸³ Alfred J.Freddoso, "Good News, Your Soul Hasn't Died Quite Yet," *Proceedings of the American Catholic Philosophical Association* Vol.75 (2001), pp.79-96.

⁸⁴ Freddoso, *Good News*, p.92

⁸⁵ Freddoso, *Good News*, p. 93

Others do not see dualism as religiously or morally harmful.⁸⁶ The soul metaphysically makes the body the kind of entity it is, and has interestingly been called a “kind-maker of the whole human body” with a metaphysical function of form: that which makes a human body to be the sort of living substance that it is.⁸⁷ The soul can also be seen as “identity-dependent” on the body. The body and its soul derive their identity mutually. A would-be Catholic dualist needs both these criteria: a dualism of two distinct substances, mental and physical, compatible with Church teaching.

In dualism the soul can exist apart from the matter that embodies it and matter can exist without the soul – the ‘separability thesis’, it also affirms a thesis of ‘real distinction between soul and matter’.⁸⁸ G. Barnes thinks a Catholic dualist would then understand the term ‘human body’ as a whole human being composed of matter and soul. Since the body is identified with the whole human being, the human soul has a metaphysical role of substantial form for the whole human being. Therefore both entities have roles of form and matter in a single human substance. The human soul would be the form of the whole human substance, ‘the human body’, even if the human soul is a substance itself.⁸⁹

Matter in which the human soul is embodied contains microphysical particles that have potentialities beyond their individual microphysical potentialities. The distinct human soul unravels their potential to be part of a living human body thereby facilitating these particles that compose a living human body.⁹⁰ Barnes argues that humans are composed of two proper parts: immaterial soul and something else. If that something else is a substance, then persons are dualists. If it is an accident, then being embodied results in an accidental dimension of the soul. This leaves something that is not a substance or an accident: prime matter.⁹¹

Dualism avoids the confusion of something which is neither accident nor substance. There is the mystery of one thing being composed by two things but this position

⁸⁶ Gordon Barnes, “Is Dualism Religiously and Morally Pernicious?,” *American Catholic Philosophical Quarterly* Vol.78 No.1 (Winter 2004), pp.99-106 (p.100).

⁸⁷ Barnes, *Is Dualism Religiously and Morally Pernicious?*, p.100

⁸⁸ Barnes, *Is Dualism Religiously and Morally Pernicious?*, p.101

⁸⁹ Barnes, *Is Dualism Religiously and Morally Pernicious?*, p.101

⁹⁰ Barnes, *Is Dualism Religiously and Morally Pernicious?*, p.102

⁹¹ Barnes, *Is Dualism Religiously and Morally Pernicious?*, p.106

circumvents the mystery of something that is neither accident nor substance. Barnes qualifies this dualism as ‘hylomorphic, teleological dualism’.⁹²

Critical Comment

Whatever position one takes, the disembodied soul is difficult to conceive, even for Aquinas.⁹³ The subsistent soul after bodily death has freedom and privation. The unified body and soul is the individual of a full human nature, therefore the soul is not the person but the remains of a person, it can be argued. Though the unity of embodied human nature is analysed metaphysically, the separated soul is nearly always examined epistemologically.⁹⁴

Aquinas appears to hint that the soul, while between its natural life and the eternal vision of God, “is alive and if not perfectly well, then certainly conscious beyond the wilder imaginings of most of its pre-mortal possessors.”⁹⁵ Nowhere in Aquinas does he specifically say that the separated soul will know itself, in other words, its nature. The separated soul is one stop on a journey. It may be hoped that whatever the soul learns which God may reveal to the soul as supernatural knowledge, may be retained on re-entering the body.⁹⁶

Others, such as T. Berg, view the soul in Aquinas and Aristotle,⁹⁷ as “that co-principle within the human being which corresponds to actuality. That is all it is...the soul is not a substance.”⁹⁸ Entities are metaphysically composed of potentiality and actuality, and soul only applies to the element of actuality.

If human substances have as potentiality the organised body capable of existing, then such actuality *is* the very life-form of that organised and *living* body. Consequently,

⁹² Barnes, *Is Dualism Religiously and Morally Pernicious?*, p.104

⁹³ Carl N. Still, "Do We Know All after Death? Thomas Aquinas on the Disembodied Soul's Knowledge," *Proceedings of the American Catholic Philosophical Association* Vol.75 (2001), pp.107-119

⁹⁴ Still, *Do We Know All after Death?*, p.108

⁹⁵ Still, *Do We Know All after Death?*, p.109.

⁹⁶ The knowledge revealed by divine light will perhaps be “re-integrated into a more perfect and proper knowledge of oneself and everything else.” Still, *Do We Know All after Death?*, p.114

⁹⁷ Thomas Berg, “Considerations of the ‘Soul’ in Western Thought,” in Teresa Wong Yai-Chow, Wen Hsian Chen and Frank Budenholzer SVD (eds.), *The Cosmos in Becoming: Perspectives of Christianity and Chinese Religions* (Hindmarsh, S.A.: ATF Press, 2008), pp.255-284. Berg is a Catholic priest and ethicist who examines the Aristotelian-Thomistic concept of the soul.

⁹⁸ Berg, *Considerations of the ‘Soul’*, p.273

it is contended that it is not the soul as a substance, but the whole living human being, who is the *subject* of this particular existence in this particular living body. The soul alone is only one aspect of that existence as substantial subject.⁹⁹ According to this view, a human being is not experienced as a *body* and a *soul* but as a unity, the ‘I’ of experience, as “embodied-immateriality” or “corporeal-spirit”. Soul-body comprises one human person via “the dynamism of the soul-informing-body.”¹⁰⁰ This position might be considered a contemporary form of hylomorphism.

Berg proposes that science can dialogue with the concept of the Aristotelian-Thomistic souls if it can accommodate the possibility of non-physical causality as ultimate explanations and the authenticity of formal causes. Furthermore, if science accepts the reality of mental life, the causal influence of non-physical, epistemically subjective mental states, then it can be asked, why could science not simply readmit non-physical, formal causality into what causes ‘the real’?¹⁰¹ If the soul is what Aristotle teaches, that which biochemically actualises the brain to be the necessary yet insufficient condition of mental life and the first degree of actuality of living organisms, then the correlations between brain events and mental events can be discovered.¹⁰² In other words, if mind is not reduced to brain, then mental states are not brain states, and mental states can influence physical states. Such mental states are traditionally non-physical. If these are accepted, then why not extend causality to souls in the Aristotelian-Thomistic understanding?

Critical Analysis

It may be so surprising that some neuroscientists, developmental psychologists, and philosophers including some Thomists, are inclined to forms of dualist thinking. Materialism in fact has been under question and there has been a reappearance of interest in dualism.¹⁰³ A reading of modern philosophy of biology indicates a

⁹⁹ Berg, *Considerations of the ‘Soul’*, pp.273-274. Berg explains that “soul is only part of a whole – a subsistent part to be sure – but only a part, a dimension.” (p.274)

¹⁰⁰ Berg, *Considerations of the ‘Soul’*, p.274

¹⁰¹ Berg, *Considerations of the ‘Soul’*, p.276

¹⁰² Berg, *Considerations of the ‘Soul’*, p.277. Berg highlights the intellectual appeal of the Aristotelian-Thomistic notion for formal causality supports mental realism, anti-reductionism and rejects material monism.

¹⁰³ See for example, Laurence Bonjour, “Against Materialism,” in Robert C.Koons and George Bealer (eds.), *The Waning of Materialism* (Oxford and New York: Oxford University Press, 2010), pp.3-23; Jeffrey A.Barrett, “A Quantum-Mechanical Argument for Mind–Body Dualism,” *Erkenntnis* Vol.65 No.1 (July 2006), pp.97-115

consensus against the reductionist position.¹⁰⁴ Many accept the epistemological difference between the physical and the mental.¹⁰⁵ Empirical method studies physical properties though it does not entail conscious experiences, while introspection brings knowledge of our own conscious experience, it though does not guarantee evidence for anything physical.

Take for example W. G. Lycan, a materialist in philosophy of mind for forty years.¹⁰⁶ He has often cited standard objections to dualism that are viewed as fatal, e.g. the problem of interaction. Lycan concludes that while substance or Cartesian dualism faces several serious objections, overall the objections are not worse than those facing materialism. While there are implausibilities required by the Cartesian view, the mere claim of implausibility says Lycan is not an argument. “Nor have we seen any good argument for materialism. The dialectical upshot is that, on points, and going just by actual arguments as opposed to appeals to decency and what good guys believe, materialism is not significantly better supported than dualism.”¹⁰⁷

Neuroscientists advocating dualism are very much in the minority, but they hold their views seriously. For instance, Eccles ceaselessly searched for mechanisms whereby the mind controls the body; no fewer than 18% of his 568 publications explored this issue.¹⁰⁸ As we have noted, however, just as there are scientists like Greene who venture into metaphysical terrain with a goal to eliminate the soul, there are scientists like Beauregard who advocate dualism of mind and body. Caution needs to be exercised in evaluating both.

But there is surely no doubting the findings of those researchers e.g. Bloom conducting experiments about dualist beliefs in apprehending the world. Yet here too caution is needed: if it is true that there is a natural belief in a spirit world, it does not

¹⁰⁴ Alex Rosenberg, “Can Physicalist Antireductionism Compute the Embryo?,” *Philosophy of Science* Vol.64 Supplement (December 1997), pp.S359-S371

¹⁰⁵ Nick Treanor, “The Cogito and the Metaphysics of Mind,” *Philosophical Studies* Vol.130 No.2 (August 2006), pp.247-271

¹⁰⁶ William G.Lycan, “Giving Dualism its Due,” *Australasian Journal of Philosophy* Vol.87 No.4 (December 2009), pp.551-563

¹⁰⁷ Lycan, *Giving Dualism its Due*, p.562. Lycan’s last words are, “Yet, I am inclined to believe, the charge of implausibility is not irrational or arational either, and I would not want this paper to turn anyone dualist. Have a nice day.” (p.562).

¹⁰⁸ David R.Curtis and Per Andersen, “Sir John Carew Eccles, A.C. 27 January 1903 – 2 May 1997 Elected F.R.S. 1941,” *Biographical Memoirs of Fellows of the Royal Society* Vol.47 (1 November 2001), pp.159-187 (p.175)

automatically follow that a spirit world exists. It requires reasoned debate, and this is the speciality of analytic philosophy. While many analytic philosophers are opposed to metaphysics, there are some like Swinburne who argue for the soul and a dualist world. There are also Thomist philosophers who offer a non-traditional interpretation of hylomorphism which has leanings towards some kind of dualism. What all this suggests, however, is not that Christians should embrace some form of dualism, but rather that materialism has not won the debate, even though it dominates the discourse.

As we saw in Part I, the bible pictures human beings wholistically, referring to both mind and body. The body is intrinsic to human persons, created in the image of God,¹⁰⁹ and is essential to the teaching about the resurrection of the body.¹¹⁰ The Catholic teaching refers to body and soul, and to their unity. Due to the soul, the body becomes a living human body; matter and spirit form a single nature.¹¹¹ This entails the body which is perishable, and the soul which is imperishable and immortal.¹¹² The union of body + soul results in the unified person. But this unity does not endure; the soul separates from the body at death and is destined to be reunited with the body in a final resurrection.¹¹³ While it may be possible to read these teachings in a dualistic way, the overall emphasis seems to be on the unity of the human person.

Even when the Scriptures refer to a trichotomism of spirit, soul and body (1 Thessalonians 5:23).¹¹⁴ The Catechism of the Catholic Church remarks that: “this distinction does not introduce a duality into the soul. ‘Spirit’ signifies that from creation man is ordered to a supernatural end and that his soul can gratuitously be raised beyond all it deserves to communion with God.”¹¹⁵ An alternative interpretation is that Paul’s use of body (*soma*), soul (*psyche*) and spirit (*pneuma*) in 1 Thessalonians 5:23 is that these elements exist altogether in the human person yet

¹⁰⁹ ITC, *Communion and Stewardship*, no.28 and no.29, pp.238-239

¹¹⁰ ITC, *Communion and Stewardship*, no.29, p.239

¹¹¹ *Catechism of the Catholic Church*, no.365; p.93

¹¹² *Catechism of the Catholic Church*, no.366; p.93

¹¹³ *Catechism of the Catholic Church*, no.366; p.93

¹¹⁴ Nancey Murphy, *Bodies and Souls, or Spirited Bodies?* (Cambridge and New York: Cambridge University Press, 2006), p.2

¹¹⁵ *Catechism of the Catholic Church*, no.367; pp.93-94

and cannot be isolated one from another.¹¹⁶ The spirit touches the “body through the mediation of the soul...generally speaking, the Holy Spirit touches an individual by communicating its grace first to a person’s spirit and then through the spirit to the person’s soul and body.”¹¹⁷

Conclusions

There is diversity in Christian dualism, though dualists observe, “it is rare to find a dualist who is not a theist.”¹¹⁸ This may offer good prospects for dialogue in Barbour’s Type III understanding. Christian dualists may identify more quickly an apparent dualism in the Catholic understanding of soul than look for its concurrent insistence on body-soul unity.

There is an argument for parity between materialism and dualism. Thus dualists may argue that dualism is true because Christianity requires people with a capability to think, feel, and make choices. Dualists claim that because only immaterial substances can do these, Christians must be dualists. The parity response is that dualism is in no better position than materialism with respect to Christianity, since matter can be understood to have the same capabilities that dualists think only nonmatter has: that is, the capability to think, feel, and make choices. Nonmatter and matter can be viewed as neutral on such questions.¹¹⁹

Before closing this chapter, it is perhaps worth noting that apart from philosophical discussion, there is also a kind of actual dualism experienced by the sick. It is said, “All dying people are Cartesian dualists.”¹²⁰ Illness makes almost everyone exposed to a mind/body split, where the ill person who is able to think clearly feels that the body has betrayed the person. “The thinking, speaking ego, what I like to call the internal narrator, appears to exist independently of the afflicted body and becomes a floating commentator on the goings-on, while the symptoms of disease wreak havoc on the poor mortal body. Subjective experience often includes a self that observes

¹¹⁶ Dennis J. Billy, “A ‘Spiritual Turn’ for Catholic Moral Theology,” *Review for Religious* Vol.57 No.6 (November-December 1998), pp.595-604

¹¹⁷ Billy, *A ‘Spiritual Turn*, p.598

¹¹⁸ Dilley, *Taking consciousness seriously*, p.146

¹¹⁹ But Clifford Williams in his paper, “Topic neutrality and the mind–body problem,” *Religious Studies* Vol.36 No.2 (June 2000), pp.203-207

¹²⁰ Siri Hustvedt, “Philosophy matters in brain matters,” *Seizure* Vol.22 No.3 (April 2013), pp.169-173 (p.169). The author is a novelist but draws her own experiences as a person with medically unexplained seizures.

illness, even though the very idea of the self remains a philosophical and scientific conundrum.”¹²¹

Likewise, there is a neuroscience professor who was diagnosed with Parkinson’s disease more than two years ago. He writes, “the way my mind and body do battle forces me to reconsider the homunculus, a typically pejorative (among neuroscientists) caricature of a little man pulling levers inside our heads, reading the input and dispatching the output. Virtually all that we know about how the brain is organized belies this image, and yet there is a dualism to my daily experience.”¹²² These musings of course are not about the spiritual soul united to the body but the somewhat different experiences of mind in a failing body and deteriorating brain.

The focus of this thesis is the human soul. All things considered, dualist metaphysics is best avoided. Traditional Catholic teaching presents human beings as embodied souls. Christian dualists do have the virtue of readily accepting the spiritual dimension of human existence. And they highlight variations in how the soul is understood. So despite widespread opposition, Christian dualism deserves a hearing. But dualists ought also to listen to non-dualist Christian thinkers on soul and materialist science, as the next chapter will do.

¹²¹ Hustvedt, *Philosophy matters in brain matters*, p.169

¹²² Anonymous, “My life with Parkinson’s,” *Nature* Vol.503 No.7474 (7 November 2013), pp.29-30 (p.30). On being anonymous he explains, “So why am I writing this piece anonymously? Because I don’t want to be known to the scientific community as ‘Parkinson’s guy’ before I am known as a scientist” (p.30). The article notes that the author is a neuroscience professor at a major university in the USA. He blogs at parklifensci.blogspot.com and tweets at @Parklifensci. e-mail: parklifensci@gmail.com