Has a Frog Human a Soul? – Huxley, Tertullian, Physicalism and the Soul, Some Historical Antecedents

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Abstract

Much theology presupposes a metaphysical spirit or soul, the existence of which has been questioned in contemporary neurobiological research. Green, Murphy and others argue for alternatives to metaphysical description. If the neuroscience is correct and the soul, if it exists, is not metaphysical then many theological descriptions will need serious revision or possibly even abandonment. One such theological description, directly affected and long considered to be an essential part of Christianity, is God's personal self-communication to humans. This has traditionally been understood to occur through the metaphysical human soul or spirit. The question explored in this article is whether the existence of a metaphysical soul is an all or nothing matter for Christian theology.

A rational and strong challenge to the existence of metaphysical soul is demonstrably not new. Nonetheless, from the beginnings of modernity it has been generally assumed, utilising Augustinian anthropology, that the soul was a metaphysical element of human anatomy. Huxley's work on sensation, including 'Has the Frog a Soul', determines the anatomical location of the soul by its supposed function. Huxley questions early modernity's assumptions regarding the nature of sensation and the presumed role of the metaphysical soul within the sensorium. Huxley deduces limits and conditions on the existence of the soul and arrives at a description which has similarities to Tertullian's corporeal description of the soul. Huxley, however, does not engage with Tertullian, whose relatively orthodox description of the soul answers a number of issues that Huxley raises. Tertullian's careful revision of the Aristotelian category of corporeality is not exactly the same as Huxley's nineteenth-century materialism or contemporary physicalism. Tertullian's description of the soul is remarkably similar to Augustine's, differing mainly on the issue of corporeality and metaphysicality. Tertullian's description ironically draws on and shares the same functions as Greek philosophy and medicine. This description of the soul seems to be based more on these sources than scripture, unusually for Tertullian. Some form of reappropriation of Tertullian's non-metaphysical soul may be useful in the contemporary debate, noting the limitations of his understandings of biology and physics. It seems possible to take note, in some form, of changed and better contemporary worldviews, in order to better describe theological anthropology and in particular that element related to the soul.

Keywords: Huxley, metaphysics, physicalism, soul, Tertullian.

The existence of the human soul as a metaphysical spiritual element of the human being has been an apparent mainstay of the Christian faith. Answers to many theological questions presuppose the existence of a metaphysical spirit or soul. However, the nature of the soul, or even its existence, are matters of ongoing debate in the light of recent discoveries in biochemistry and neurobiology. Green, Murphy and others argue that there are alternatives to a metaphysical soul. Murphy argues that Christians should understand the soul in physicalist and non-reductionist terms. While such suggestions may seem radical, this article proposes to show that the types of challenges to the traditional metaphysical understanding of the soul that Murphy and others seek to address are not new. Also it seeks to demonstrate that a physicalist or corporeal understanding of the soul is not a new idea in Christian theology. Nonetheless, if the neuroscience is correct and the soul is not metaphysical then many theological descriptions will need serious revision or possibly even abandonment.

One such theological description, directly affected and long considered to be an essential part of Christianity, is God's personal self-communication to humans. This has traditionally been understood to occur through the metaphysical human soul or spirit. Worryingly for this premise, neurobiological studies have located many attributes previously considered

¹ R. J. Russell, N. Murphy, T. C. Meyering and M. A. Arbib (eds), Neuroscience and the Person: Scientific Perspectives on Divine Action (Berkeley, CA, and Vatican City: Vatican Observatory and the Center for Theology and the Natural Sciences, 1999); Roger D. Masters and Paul M. Churchland, 'Neuroscience and Human Nature, the Engine of Reason, the Seat of the Soul: A Philosophical Journey into the Brain', Quarterly Review of Biology 72/4 (1997); Michael L. Spezio, 'Interiority and Purpose: Emerging Points of Contact for Theology and the Neurosciences', Theology and Science 7/2 (2009); J. LeDoux, 'Emotions: How I've Looked for Them in the Brain', in Russell et al. (eds), Neuroscience and the Person, pp. 41-4; F. Watts, Science and Theology (Aldershot: Ashgate, 2002); Justin L. Barrett, 'Is the Spell Really Broken? Bio-Psychological Explanations of Religion and Theistic Belief', Theology and Science 5/1 (2007); Michael J. Dodds, 'Hylomorphism and Human Wholeness: Perspectives on the Mind-Brain Problem', Theology and Science 7/2 (2009); Derek Jeffreys, 'The Soul is Alive and Well: Nonreductive Physicalism and Emergent Mental Properties', Theology and Science 2/2 (2004); Derek Jeffreys, 'A Counter-Response to Nancey Murphy on Non-Reductive Physicalism', Theology and Science 3/1 (2005); Nancey Murphy, 'Response to Derek Jeffreys', Theology and Science 2/2 (2004).

spiritual, and hence metaphysical, within the biochemistry of the brain. It could be asked whether there may be a way to describe the soul which answers the challenge of neurobiology and anatomy. Rather than pose a 'soul-of-the-gaps', could divine self-communication to humans be described in a manner which operates independently of a metaphysical soul? In this particular case what is at stake is whether divine communication to humans can actually occur as intimately and personally as Christian theology has contended. If such communication is predicated on God's contact with a metaphysical soul, and there proves to be no such entity, then God can only be known by indirect means. Consequently, traditional Christian faith would stand or fall with the health of that premise.

A rational and strong challenge to the existence of metaphysical soul is demonstrably not new. 2 Nonetheless, from the beginnings of modernity it has been generally assumed, utilising Augustinian anthropology, that the soul was a metaphysical element of human anatomy. Newton went as far as to suggest that the universe was used by the mind of God as a sensorium, in a manner similar to the Augustinian understanding of the way the human soul utilised the sensorium of the body - its five senses, as well as the abilities to use memory and imagination and to command movement.³ Newton received criticism from Leibniz for impropriety of the parallel, but not explicitly for describing the soul with Augustinian metaphysical attributes.4 This understanding of the soul remained relatively unchanged throughout following centuries. Thomas Huxley, presenting evidence he contended argued against the metaphysicality of the soul, in the nineteenth century observed, 'In truth, the theory of sensation, except in one point, is, at the present moment, very much where Hartley, led by a hint of Sir Isaac Newton's, left it.' Hartley proposed a Newtonian physiological theory for the functioning of nerves in which it was thought that the motive ability of the soul in the sensorium of the body flowed spiritually/metaphysically through the nerves. Hartley's theory became 'enormously influential in France'. 6 It

² T. H. Huxley, 'On the Present State of Knowledge as the Structure and Functions of Nerve', in Scientific Memoirs, vol. 1 (Worcester, MA: Clark University, 1854); T. H. Huxley, 'Has a Frog a Soul?', in Metaphysical Society (8 November 1870) (Worcester, MA: Clark University, 1870); T. H. Huxley, 'On Sensation and the Unity of Structure of Sensiferous Organs', in Collected Essays (Worcester, MA: Clark University, 1879).

³ I. Newton, The Principia (New York: Prometheus, 1995), vol. 3.

⁴ C. Alexander, The Leibniz-Clarke Correspondence (Manchester: Manchester University Press, 1956), p. 6.

⁵ T. H. Huxley, 'On Sensation and the Unity of Structure of Sensiferous Organs', pp. 292–3.

⁶ P. Fara, The Making of Genius (London: MacMillan, 2002), pp. 87–9.

should be noted that bioelectricity was yet to be discovered. That discovery has filled in a gap which was previous understood to be somehow enacted in the body by the spiritual action of the soul. Huxley's analysis of the place of the soul in sensation, and the consequent possibility of personal divine communication, preceded this discovery. It is also a similar type of challenge to that of the contemporary neurobiological brain research in that it proposed to limit the place of the soul.

Huxley, anatomist, naturalist, often-time critic of traditional Christianity, also known as Darwin's 'Bulldog', explicitly dismantled assumptions and elements of theology related to Augustinian anthropology. This can be traced in at least three parts – first in his critique of sensation as described by Newton and the ancients. He then refuted the reliability of divine inspiration by referring to inspiration as he had observed it in Pacific Islander culture. Third, he adopted the methodology of early German higher critical scholarship to raise questions about traditional methods of interpretation. The first is most relevant to the current discussion and relates directly to the possibility of divine communication with the human soul and its existence. Huxley did not simply dismiss traditional theology as he arrived at a decisively indefinite position on faith matters – logically he was neither able to confirm nor reject faith. He coined the neologism 'agnostic' to describe this position.

Huxley's work on sensation and the soul 'On Sensation and the Unity of Structure of Sensiferous Organs'⁷ is not often cited. In its day, it was a direct challenge to traditional metaphysical understandings of the soul. In this he delves into the structure and purposes of comparative anatomical structures used for sensation, as well as showing a philosophical debt to Hume and Kant. He also made similar comments in his essays on Bishop Berkeley and 'Has the Frog a Soul?'⁸ As noted, Huxley reported that Hartley's theory about sensation, the mind and thought had remained metaphysical along the Newtonian lines. Huxley's concern in the Berkeley essay was to argue for materialism and parochially defend his fellow Englishman from Leibniz's foreign attack.

But the doctrine that all the phenomena of nature are resolvable into mechanism is what people have agreed to call 'materialism;' and when Locke and Collins maintained that matter may possibly be able to think, and Newton himself could compare infinite space to the sensorium of the Deity, it was not wonderful that the English philosophers should be

⁷ T. H. Huxley, 'On Sensation and the Unity of Structure of Sensiferous Organs'.

⁸ T. H. Huxley, 'Bishop Berkeley on the Metaphysics of Sensation', in Collected Essays, vol. 6 (Worcester, MA: Clark University, 1871), Huxley, 'Has a Frog a Soul?'

attacked as they were by Leibniz in the famous letter to the Princess of Wales, which gave rise to his correspondence with Clarke.⁹

While cautious that Leibniz's view might be a 'spiteful caricature of Newton's views', Huxley wondered at the fuss about Leibniz's concern that 'Many will have human souls to be material; others make God Himself a corporeal Being'. ¹⁰

At the commencement of the eighteenth-century, the character of speculative thought in England was essentially sceptical, critical, and materialistic. Why such 'materialism' should be more inconsistent with the existence of a Deity, the freedom of the will, or the immortality of the soul, or with any actual or possible system of theology, than 'idealism,' I must declare myself at a loss to divine. But, in the year 1700, all the world appears to have been agreed, Tertullian notwithstanding, that materialism necessarily leads to very dreadful consequences. ¹¹

The 'very dreadful consequences' of a material soul were thought to be its mortality. 'Mr. Locke and his followers are uncertain, at least, whether the soul be not material and naturally perishable.' While espousing a form of materialism against traditional theology, Huxley notes one exception, 'Tertullian notwithstanding'. Tertullian argued for the corporeality of the soul which will be discussed further. It is doubtful that Tertullian would have accepted Huxley's equating of corporeality with merely being material, hence Huxley was rightly cautious.

Huxley's materialism is related to his examination of sensation. He outlines this in his revision of Berkeley while reaching an indecisive conclusion about the spiritual. Huxley asked, is the material world real in itself or real because it is sensed? 'But the key to all philosophy lies in the clear apprehension of Berkeley's problem – which is neither more nor less than one of the shapes of the greatest of all questions, "What are the limits of our faculties?" '14 Using the sensation of pain as an example, Huxley revises Berkeley's location of sensation in the spiritual. Huxley argues that mechanisms of sensation can be located in material anatomy. Nonetheless, even when pain is located to physical nerves and their structures, Huxley admits that Berkeley's question still arises at some point, but concludes

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<sup>9</sup> Huxley, 'Bishop Berkeley on the Metaphysics of Sensation', p. 247.
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¹⁰ Ibid., pp. 247, 248.

¹¹ Ibid., pp. 248-9.

¹² Ibid., p. 247.

¹³ Tertullian, De anima, 7.

¹⁴ T. H. Huxley, 'Bishop Berkeley on the Metaphysics of Sensation', p. 251.

that what are 'the limits of our faculties' is unable to be resolved. Huxley's conclusion, or rather non-conclusion, represents part of his philosophical basis for what he would later coin to be agnosticism.

For Huxley the question of the soul's immortality, or even if it existed, remained and is, in cold logic, an open question. Rather than accept any attribute of the soul as a given, Huxley focused on what was experimentally verifiable. Huxley argued strongly that the soul, if it exists, must be corporeal, have spatial extension and as a material be divisible. This has points of contact with Tertullian's description. In 'Has the Frog a Soul?' Huxley argues thus:

As the schoolmen supposed the Deity to exist in every ubi, but not in any place, so they imagined the soul of man not to occupy space, but to exist in an indivisible point. Yet whoever considers the structure and appearances of the animal frame, will soon be convinced that the soul is not confined to an indivisible point, but may be present at one and the same time, if not in all parts of the body, when the nerves are formed, yet, at least at their origin, i.e., it must be at least diffused along a great part of the brain and spinal marrow. Nay, while in man the brain is the principal seat of the soul, where it most eminently displays its powers, it seems to exist or act so equally through the whole bodies.¹⁵

Huxley determines the anatomical location of the soul by its supposed function. The notion of the soul he works with is the Augustinian description in Newton's application of it. While the seat of the soul may have been the brain, Huxley addressed a common understanding that the soul extended throughout the body and nervous system. His reference to 'some of the greatest philosophers' obviously includes Newton.

It is not, therefore, altogether without reason, that some of the greatest philosophers of the last and present age supposed the soul to be extended ...

As the Deity is everywhere present, and, in the infinitely distant part of space, actuates at the same time a vast variety of different systems without any inconsistency with his unity or indivisibility; so may not the souls of animals be present everywhere in their bodies, actuating and enlivening at the same time with all their different members? Nay, further, when the

Huxley, 'Has a Frog a Soul?' Huxley's essay was written with the expressed purpose of presenting the results of anatomical research to a debate between two philosophical schools, materialism and idealism.

fibres and threads connecting some of these parts are divided, may not the soul still act in the separated parts, and yet be only one mind?¹⁶

The material nature of the alleged soul requires its extension through the body as demonstrated by the distribution of its functions. Huxley argues with reference to vivisection:

A frog's head is cut off so that the section passes between the medulla oblongata and the rest of the brain. The actions performed by the head and by the trunk will be equally purposive, and equally show that there is a something in each half which possesses the power of adapting means to ends in a manner which is as deserving as the epithet 'rational' in the one case as in the other. The separated head and trunk may be sent a hundred miles in opposite directions, and at the end of the journey each will be as purposive in its actions as before. In this case, two alternatives present themselves, — either the soul exists in both cord and brain, or it exists in only one of them.¹⁷

Because functions normally attributed to the soul are distributed anatomically, he thus argues that if the soul exists it must also be distributed and, having the attributes of matter, cannot therefore be metaphysical. 'I am unable to see in what respect the soul of the frog differs from matter.' Huxley had an advantage over Newton. What Newton described as connections, nerve fibres, were beginning to reveal their function under the microscope and in the biology laboratory. While Huxley recognised that there were limitations on what previous theory could determine, the fact was that:

The sense organ is not a mere passage by which the 'tenuia simulacra rerum,' or the 'intentional species' cast off by objects, or the 'forms of sensible things,' pass straight to the mind; on the contrary, it stands as a firm and impervious barrier, through which no material particle of the world without can make its way to the world within... Interconnection of all these three structures, the epithelium of the sensory organ, the nerve fibres, and the sensorium, are essential conditions of ordinary sensation.¹⁹

Huxley and his contemporaries only described the anatomical structure of nerves. Luigi Galvini's discovery of bioelectricity and related animal

¹⁶ Ibid. Huxley's reference to philosophers here cites More, Newton and Clarke.

¹⁷ Ibid. The question of ethics and vivisection was itself a controversial topic contributed to by Darwin and Huxley.

¹⁸ Ibid.

¹⁹ Huxley, 'On Sensation and the Unity of Structure of Sensiferous Organs', pp. 300–1.

movement occurred in 1862 as a serendipitous discovery involving dead frogs. ²⁰ It was Charles Sherrington, ²¹ a generation after Huxley, who described the electrical nature and role of nerves in detail. Nevertheless, that nervous function was somewhat like electricity and magnetism was known to Huxley.

The beautiful methods by which Helmholtz has determined the velocity (not more than about 80 feet in a second in the frog), with which the nervous force is propagated were explained. It was shown that nerve force is not electricity, but two important facts were cited to prove that the nerve force is a correlate of electricity, in the same sense as heat and magnetism are said to be correlates of that force.²²

The connection of senses and the ability of the mind to direct muscular movement became no longer the mystery solely ascribable to the metaphysical interaction of the soul in the sensorium that they were for Newton and Augustine.

On the contrary, the inner ends of the olfactory cells are connected with nerve fibres, and these nerve fibres, passing into the cavity of the skull, at length end in an element of the brain, the olfactory sensorium. It is certain that the integrity of each, and the physical interconnection of all these three structures, the epithelium of the sensory organ, the nerve fibres, and the sensorium, are essential conditions of ordinary sensation.²³

What had been thought to be a metaphysical connection and an essential aspect of the soul, Huxley had indicated was physical. '[S]ensation is a product of the sensiferous apparatus caused by certain modes of motion which are set up in it by impulses from without. The sensiferous apparatuses are, as it were, factories, all of which at the one end receive raw materials of a similar kind.'²⁴ Having deduced a material interconnection of the sense organs with the seat of consciousness, Huxley carefully notes that this does not totally describe all the functioning of the mind or soul.

²⁰ The Wordsworth Dictionary of Biography (Ware, Herts: Helicon, 1994).

²¹ Ibid

T. H. Huxley, 'On the Present State of Knowledge as the Structure and Functions of Nerve', Scientific Memoirs (Worcester, MA: Clark University, 1854). The Huxley File, C. Blinderman and D. Joyce, Clark University. http://aleph0.clarku.edu/huxley (accessed July 2013).

²³ T. H. Huxley, 'On Sensation and the Unity of Structure of Sensiferous Organs', pp. 300–1.

²⁴ Ibid., p. 313.

In ultimate analysis, then, it appears that a sensation is the equivalent in terms of consciousness for a mode of motion of the matter of the sensorium. But, if inquiry is pushed a stage farther, and the question is asked, What then do we know about matter and motion? there is but one reply possible. All that we know about motion is that it is a name for certain changes in the relations of our visual, tactile, and muscular sensations; and all that we know about matter is that it is the hypothetical substance of physical phenomena—the assumption of the existence of which is as pure a piece of metaphysical speculation as is that of the existence of the substance of mind. ²⁵

Huxley is undecided regarding the soul, being unable to ascertain any evidence for its existence which is not materialistic and still assumes that the soul, if it exists, is somehow metaphysical. Despite his rejection of many aspects of the soul in Augustinian anthropology, the spatial bodily extension of the soul is compatible with Tertullian's description of the soul, which does not conclude that it must be non-physical.

Nonetheless, the discovery of the physical function of the nerves seems to have given rise to what seems to be 'soul-of-the-gaps' where the soul's function and place has been assumed to be reduced to somehow being seated in the brain. Where contemporary research seems to progressively reduce the soul's functions to terms of biochemistry, the suggestion is made that the soul does not exist at all. However, even if the material biochemical and neurological descriptions are sound, the implied conclusion, that the 'soul-of-the-gaps' disappears, holds if and only if the soul must be described in metaphysical terms. This need not be the case! Tertullian is a significant theological precedent, who described the soul as corporeal.

It was Augustine's revision of Tertullian's corporeal description of the soul which led to the widespread understanding of the soul as metaphysical. This revision is arguably more based in philosophy than theology. Tertullian in De anima had in turn revised Aristotle, who also had a corporeal understanding of the soul. Tertullian utilises Aristotle throughout De anima, but heavily revises his ideas in the light of medical advances of his day, including Soranus of Ephesus, and by reference to scripture. Indeed, Tertullian's representation of Aristotle's ideas was in keeping with what was then contemporary academic best practice. Nonetheless, by any current standard, Tertullian's

²⁵ Ibid., pp. 318–19.

²⁶ Tertullian, De anima, 6, 8, 25-6.

²⁷ Tertullian, De anima, ed. J. H. Waszink (Amsterdam: North Holland, 1947), 35n. Waszink also identifies that Tertullian quotes extensively from other Latin authors, including Pliny, with particular reference to nature and science. De anima, 8.4, p. 1025,

ideas about the soul are unusual. As discussed, knowledge now commonly understood about human anatomy and physics was unimaginable in the early third century. Mindful of this observation, Tertullian's De anima nevertheless constituted a state-of-the-art contribution to intellectual debate in his own time. While Tertullian's synthesis of these ideas is now scientifically unsatisfying, his description of the soul adequately fits into and expands the system of his day within the limits of theological and medical verification open to him.

Scripture actually says very little about the structure of the human soul, its psychology or anatomy, or the mechanism for its interaction with God. Typically, the narratives leave us with very bare statements such as the 'word of the LORD came to Jeremiah'. Alternatively, the narrative describes the circumstances of God's interaction with people, but usually not the inner workings of their soul or mind. Tertullian seeks theologically to explain the 'how' of this interaction in De anima. Tertullian revises Aristotle based on his assertion that true understanding of humanity is only possible with the revelation of God and the guidance of the Holy Spirit. That Aristotle himself revises earlier ideas of Anaxagoras, Democritus and others who attribute motion, sensation, mind and incorporeality to the soul is not missed by Tertullian. Tertullian concludes that the body has weight, height, colour and texture and that the soul gives motion, has sensation, thought, and emotion and enables nutrition and procreation. Tertullian's integration of

24.5; Lucretius in De anima, 5.6. Waszink, p. 1305; Seneca twice in 20.1 and 42.2; Suetonius in 44 and Sallust in 20. Ibid., p. 46n. Tertullian also appears to follow Latin rhetorical convention in presenting his case. Waszink has identified the use of classical Latin metrical devices in De anima, at a time when these were beginning to be lost across the Mediterranean and in Rome. Ibid., pp. 212-45; Jerome admired and used Tertullian's phraseology from Deanima. J. N. D. Kelly, Jerome (London: Duckworth, 1975), p. 108n. While Tertullian uses Platonic and Stoic terminology, he harbours extreme suspicion about the nature of the source of much of this philosophy. Tertullian here refers to Plato's Athenian academies, Stoic porches and Socrates' prison. In contrast, Tertullian appears to exempt the Lyceum from generalised dismissal in De anima. Tertullian, De anima, 3. His suspicion is overt in the case of Socrates' reference to his demon and he implies it in other schools for their acquiescence to pagan deities. De anima, 1. Nor is Tertullian optimistic about philosophy's ability to either find truth or sustain the spirit. 'Such ... is the enormous preoccupation of the philosophic mind that it is generally unable to see straight before it. Hence (the story of) Thales falling into the well. It very commonly, too, through not understanding even its own opinions, suspects a failure of its own health.' De anima, 6.

²⁸ Jeremiah 1:2.

Tertullian explains in De anima the examples of Adam, Nebuchadnezzar and Daniel. Tertullian, De anima, 11, 45.

³⁰ Tertullian, De anima, 1.

functions of the soul (its sensorium) is similar to Aristotle's. Sensation is only possible when soul and body are together. He argues his position against other theories. 'Again, whence arises sensation if not from the soul? For if the soul had no body, it would have no sensation. Accordingly, sensation comes from the soul, and opinion from sensation; and the whole (process) is the soul.'³¹ Some care is needed in comparing Tertullian's usage of terms with Aristotle and Soranus. Temkin notes, in relation to medical terminology, that definitions in Greek appear to have been in debate and flux during the first and second centuries, thereby making identification of translations difficult at times. Nevertheless, it is possible to describe Tertullian's Latin and Aristotle's Greek with similar vocabulary in English.³²

Tertullian's description of the soul in De anima, 9 and 10, includes what is for him an important case study:

We have now amongst us a sister whose lot it has been to be favoured with sundry gifts of revelation, which she experiences [by ekstasis in spirit] amidst the sacred rites of the Lord's day in the Church: she converses with angels, and sometimes even with the Lord; she both sees and hears mysterious communications; some men's hearts she understands, and to them who are in need she distributes remedies.³³

Tertullian puts particular emphasis on one discussion held with this sister. 'We discussed thoroughly what I did not know about the soul, while our sister was in the Spirit.'³⁴ Tertullian expresses the care with which his group examined this discussion to justify that this case provided evidence that the soul or spirit had corporeal attributes of colour, texture and spatial extension.

'Amongst other things,' says she, 'there has been shown to me a soul in bodily shape, and a spirit has been in the habit of appearing to me; not, however, a void and empty illusion, but such as would offer itself to be even grasped by the hand, soft and transparent and of an ethereal colour, and in form resembling that of a human being in every respect.' This was her vision, and for her witness there was God.³⁵

³¹ Ibid., 17.

³² Temkin in Soranus, Gynaccology, ed. O. Temkin (Baltimore, MD: Johns Hopkins Press, 1956), pp. xxiv—xlix.

De anima, 9.4: 'By Ecstatic vision' is an interpretation. 'By ekstasis in spirit' would better translate the original per ecstasin in spiritu. Tertullian, De anima, ed. Waszink, 9.4.

³⁴ Latin: Forte nescio quid de Anima disserueramus, cum ea soror in spiritu esset, De anima, ed. Waszink, 9.4.

³⁵ De anima, 9.4.

Tertullian uses these attributes in building his case that the soul is to be described in revised Aristotelian terms as a spiritual but corporeal element of human anatomy. Irrespective of what credence may be attributable to these visions, other explanations are possible. The attribute of spatial extension, for example, meets the precondition of the soul's existence as deduced by Huxley and cited earlier. Tertullian asserts a more extensive corporeality of the soul than Huxley's demonstration of the physical nature of the connection of the soul to the sense organs.

While Tertullian was by no means an experimentalist as was Huxley, he did make use of contemporary scientia to develop his description of the soul. Tertullian shows significant understanding of the technical medical detail of Soranus' *Gynaccology* by summarising a significant section of the treatment for breach births, concluding that the soul is formed at the same time as the body in the process of conception.³⁷ Tertullian also utilises the philosopher Cleanthes to confirm this notion.³⁸ Tertullian then makes use of biblical example. The unborn John the Baptist's response to Mary's pregnancy shows the ability of the foetus to experience ekstasis, thus proving the soul is present before birth.³⁹ Strangely, at this point for Tertullian, he uses biblical examples to support conclusions gained from medicine, rather than vice versa. Tertullian's critical synthesis of Christian revelation and scientia, ⁴⁰ in his description of the soul, was persuasive within the confines of scholarly verification of his day.

While rejecting the corporeality of the soul in favour of a metaphysical understanding Augustine continued to use much of Tertullian's description of the soul and its functions. This description of the soul continued to have intellectual currency throughout most of subsequent intellectual history up until the nineteenth century. It was only with the discovery of electric current and modern dissection that it became possible to find a role for nerves, other than growing nails at their ends, and for the brain, other than as hair fertiliser. 'As for the nails, since they are the commencement of the nerves, they may well seem to be prolonged, . . . The hair, again, is nourished from the brain.'

³⁶ Huxley, 'Has a Frog a Soul?'

³⁷ Tertullian, De anima, ed. Waszink, pp. 25–7; Tertullian refers to both Soranus' belief that the soul forms with the infant and to Soranus' reference to 'slaying' the unborn infant as a regrettable necessity in some cases of breach birth. Ibid., p. 25; Soranus, *Gynaecology*, 4.9.61–4.13.70.

Tertullian, De anima, pp. 5, 25, 27; E. Osborne, Tertullian, First Theologian of the West (Cambridge: Cambridge University Press, 1997), p. 167; Soranus, Gynaecology, 1.12.43.

Tertullian, De Anima, 26. Soranus, Gynaecology, 1.7.30.

 $^{^{40}}$ Somewhat equivalent to what would now be called 'science'.

⁴¹ Tertullian, De anima, p. 51.

Of course, it is now known that the seat of the intellect is the brain, which is a part of the substance of the body. Though how and if the soul relates to this remains a mystery.

Whilst Augustine held a negative opinion about Tertullian, Augustine only names him in specifically criticising Tertullian's insistence that the soul is corporeal as 'ravings'.⁴² There is a clash between Augustine and Tertullian of Neoplatonist and Aristotelian terminology regarding corporeality. The following comment highlights that this is a key philosophical problem for Augustine, 'Indeed, he (Tertullian) would not be forced in this position if he could think of anything that exists and is not a body'.⁴³ Augustine's Neoplatonism provided different definitions of reality, including the incorporeal.

Tertullian offers a non-metaphysical understanding of the soul which is largely compatible with traditional trinitarian theology. It does however lack the development and nuancing of later theology. It seems likely that a careful reappropriation of his notion of a corporeal soul, taken with careful re-evaluation of his revision of Aristotelian thinking and Augustine's Neoplatonic criticisms, may offer a useful way forward for theological discussion of the soul in contemporary debate.

Conclusion

Some form of reappropriation of Tertullian's non-metaphysical soul may be useful in the contemporary debate. Care will be needed, however, as Tertullian's careful revision of the Aristotelian category of corporeality is not exactly the same as Huxley's nineteenth-century materialism or contemporary physicalism.

It is clear from this brief historical survey that there is nothing new in the contemporary debate challenging traditional understandings of the soul or in suggesting a non-metaphysical description of the soul. The existence of similar past discourses should encourage careful evaluation and engagement with current research into neurobiology and the biochemistry of the brain.

In debating whether the soul might be metaphysical or non-metaphysical it is useful to remember Barth's comments on theology's interaction with cosmology. That is that the Christian doctrine of creation '[c]annot itself become a world-view', '[c]annot base itself on any world-view', 'cannot guarantee any world-view'.⁴⁴ Theology 'expects no material and direct help

⁴² Augustine, De anima et eius origine, 2.9, 4.18–21; Augustine, De Genesi ad litteram, 7.21.27, 10.26.45.

⁴³ Augustine, De Genesi ad litteram, 10.26.45.

⁴⁴ Church Dogmatics (CD), III/1, pp. 341-2.

from any world-view, ancient, modern or future'.⁴⁵ Barth also wrote: 'It cannot fail to strike us that the faith which grasps the Word of God and expresses it in its witness, although it has constantly allied itself with cosmologies, has never yet engendered its own distinctive world-view, but in this respect has always made more or less critical use of alien views.'⁴⁶ Theology, Barth concludes, must stand aloof, able to give considered opposition even to those aspects of cosmology and anthropology whose language must be borrowed in order to make an intelligible statement of the faith in a particular time and place. To fail to do this is to risk theology ceasing to be about faith. Even where 'we think we detect an absolute union of faith with this or that world-view, we are not really dealing with faith at all, but with a partial deviation from faith such as is always possible in the life of the Church and of individuals'.⁴⁷

Theological anthropology, and in particular that element related to the soul, in whatever form that description might take in the process of making use of the changed (and no doubt better) contemporary worldviews, should be neither bound to nor rely on them entirely.

⁴⁵ Ibid

⁴⁶ CD III/2, p. 7.

⁴⁷ CD III/2, p. 9.