

Paper Title: Spinoza Meets Descartes: Ensoulment Revised in Response to Genetics, Neuroscience, and Out-of-Body Experiences

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Paper Abstract:

For Francis Crick, a genetic determinist, the ultimate prize of the scientific endeavour would be to explain consciousness in terms of neuronal circuits and neurotransmitter molecules. Tourette's Syndrome seems to confirm Crick's "Astonishing Hypothesis" and falls firmly in the developing field of behavioural genetics. Studies of Turner's Syndrome, too, have found a genetic locus for social recognition, critical for the formation of relationships.

The gift of the Image of God might be expressed as God's adoption of the unique Human Genome of a future person, or in terms of God's call into existence teleologically from the future. We are initiated in embryonic life by God's gift of the Image, and are thereby called into authentic existence. The response to that call is a life journey towards God I call ensoulment, understood as an emergent process, from Image to Likeness.

For Descartes, the mind does not require neuroanatomy, neurophysiology or neurochemistry – it is pure detached reason. Antonio Damasio, advocate of a psychosomatic unity, attacks this position by researching the neural pathways of rationality, and demonstrates that these pathways are also employed in the processing of emotions. Further, clinical experience with Prozac strongly affirms our psychosomatic unity as human beings. The dominance of mind over body and brain was likewise attacked by Spinoza. Antonio Damasio has expanded on Spinoza's insights by drawing attention to clinical syndromes in which the assembly of body images in the mind is interrupted.

If the ensoulment process is understood in a psychosomatic unity perspective, then biological neurogenesis and psychogenesis are part of the process as we emerge from unconsciousness to self-identifying beings in community with others and before God.

I suggest that there are three types of relationship relevant to the nurturing of souls: first, ensoulment in a specific cultural context, offering opportunities and constraints; second, ensoulment in a web of personal relationships; and third, ensoulment in a conscious or unconscious relationship to God, with whose Image we began. Thus ensoulment could be represented as a relational vector of three components (culture, other persons, God) while Christ is our ultimate pattern of relational being. However, in a psychosomatic unity perspective, ensoulment can mean nothing beyond physical death.

Alternatively, Eccles developed his radical Dualist - Interactionist Theory. Whereas Psychosomatic Unity states that Body, Brain, and Mind are all contained in the same World, the Dualist - Interactionist theory states that the Body and Brain are in one World, and the Self-conscious Mind is in another World, with liaison between the two.

Many Near Death Experiences (NDE's) are explained in terms of the physiology of the dying brain. However, some NDE subjects report obtaining knowledge which they could not have obtained by any other means. In order to make sense of my own NDE, I seek a meeting between Spinoza and Descartes. Our natural embodied state is that of Psychosomatic Unity, as we continue to emerge as persons in the ensoulment process - such that Mind is an epiphenomenon of Brain. This is consistent with Spinoza. However, at some undetermined point in the individual's development, the mind gains the capacity to operate independently of brain, at least in certain extreme circumstances, such that it achieves the possibility of extrasensory perception of the real world, an extracorporeal awareness of embodiment, and an extracorporeal ability to move within this world, and into a world beyond it. This is consistent with Descartes.

Author Biography:

The Very Rev'd Professor Gordon McPhate is a member of the Society of Ordained Scientists. He trained consecutively as a physician and a priest, combining both vocations in joint pastoral and clinical academic posts at the Universities of London and St Andrews.

Initially trained as a physiologist, Professor McPhate researched the role of prostaglandins and synthetic steroids in bronchodilation, while teaching physiology to medical students at Guy's Hospital, London. Subsequent to a research doctorate on the hormonal regulation of gluconeogenesis, Professor McPhate trained as an endocrinologist and chemical pathologist, becoming a hospital consultant in these fields of practice, while also teaching pathology to medical students at St Andrews. His research field shifted to the search for protein markers of diabetic nephropathy.

Holding a master's degree in medical ethics, Professor McPhate has written on the theological implications of the Human Genome Project. He teaches medical ethics at the University of Liverpool Medical School, where he runs modules on Medicine in Nazi Germany and on Roman Catholic Ethics.

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Paper Text:

Introduction

Francis Crick, doyen of molecular biology, had a remarkable career. It began with the discovery of the structure of DNA, in collaboration with James Watson. It ended with studies on the neuroscience of the human visual processing system, in collaboration with Christof Koch. From genes to brains - from DNA to neurons: such wide-ranging scientific work was motivated by Crick's concern to find out what makes us uniquely human. Out of that concern came his Astonishing Hypothesis:

“The Astonishing Hypothesis is that ‘You’, your joys and your sorrows, your memories and your ambitions, your sense of personal identity and free will, are in fact no more than the behaviour of a vast assembly of nerve cells and their associated molecules.”¹

From this statement, it is clearly evident that Crick argues for a reductionist materialist understanding of human nature. For Crick, the ultimate prize of scientific endeavour would be to explain consciousness in terms of neuronal circuits and neurotransmitter molecules. He asserts that free will has been located functionally in or near the anterior cingulate sulcus, next to Brodmann's area 24 of the cerebral cortex, implying that free will is an illusion.

By contrast, a biblical anthropology offers a distinctive and alternative understanding, centred on the notion of Soul. Traditionally, the term Soul has been applied to consideration of human uniqueness; specifically in relation to life-force, consciousness, free will and reason. The notion of Soul in its Hebrew roots is a complex amalgam of the meanings of *nepesh* (soul), *ruach* (spirit) and *leb* (heart). The notion of Soul in its Greek roots is no less a confused admixture of *psyche* (mind) and *pneuma* (spirit), with Synoptic, Pauline, and Petrine interpretations which differ considerably. Certainly, the notion of Soul contains within it elements of other attempts to define human uniqueness: mind, spirit, essence, immortal being, personhood, identity, selfhood. An associated notion is that of Image of God, which after only one mention in the Book of Genesis, echoed in the Letter to the Colossians, and no definition, has had a profound influence on thinking about Christian Anthropology. The meaning of Image of God is wide ranging - including creativity, moral agency, capacity for altruistic love, possession of wisdom and reason, and capacity for language and sophisticated communication.

It is the purpose of this chapter to re-examine the territory of Christian claims about human uniqueness in the light of the accumulating scientific evidence from biology and medicine and individual experience about who we are.

Tourette's, Turner's and Psychosomatic Unity

Let me start with a relatively common disorder which in many ways seems to confirm Crick's Astonishing Hypothesis: Tourette's Syndrome. This Syndrome falls firmly in the developing field of behavioural genetics. It is primarily a genetic disorder which produces a highly disturbing energetic and uncontrolled clinical presentation, including bizarre movements, noises, rituals, curses, mannerisms and often inappropriate playfulness. Importantly, administration of the neurotransmitter dopamine can also simulate Tourette's Syndrome, indicating that the genetic disorder is linked to a neurochemical imbalance which

¹ Francis Crick, *The Astonishing Hypothesis - the Scientific Search for the Soul* (London: Simon & Schuster, 1994) p.3.

is the reverse of that seen in Encephalitis Lethargica, and Parkinson's Disease.

Tourette's Syndrome, then, has a genetics, a neurochemistry, and a behavioural pattern. It also has a psychology which is best expressed in the words of a 'sufferer' responding to his treatment with haldol:

"Having Tourette's is wild, like being drunk all the while. Being on haldol is dull, makes one square and sober, and neither state is really free. You 'normals' who have the right neurotransmitters in the right places at the right times in your brains, have all feelings, all styles, available all the time - gravity, levity, whatever is appropriate. We Touretters don't: we are forced into levity by our Tourette's and forced into gravity when we take haldol. You are free, you have a natural balance: we must make the best of an artificial balance."²

Autonomy is the issue here. As the patient said, neither the Tourette's state nor the treated state is really free. The patient observes and analyses the situation, and firmly identifies with the Tourette's state as being natural to him, and also the source of his vivacity. Given the choice, which is denied him, he would choose to be what he actually is - a Touretter. Other patients speak of their constant struggle to remain socially respectable against the obsessive compulsion to use rude and obscene language. This inhibition represents the exertion of a kind of autonomy in a disorder which in other respects implies a reduction or even loss of autonomy. Indeed there is a schizoid quality in being a Touretter.³

Tourette's Syndrome has become much better known through the recently discovered likelihood that Mozart suffered from it.⁴ Of course, we shall never be sure of the diagnosis *post mortem*. However, musicologists have already begun to link the condition with the person, and his finest music. What is emerging is the probability that Tourette's Syndrome gave Mozart a competitive advantage in creativity. As Karl Barth has perceived, Mozart was able to celebrate both the positive and the negative *schattenseite* aspects of creation. In doing so, Mozart reckoned with the finitude and the limitations of the creation itself, including human beings.^{5,6}

In terms of living a life and being creative, there is a bond between the 'I' of the person and the 'it' of Tourette's Syndrome. In terms of autonomy, on the other hand, there is a gulf between the 'I' of the person and the 'it' of Tourette's.

In Tourette's Syndrome, we can delineate a complete chain from genes to neurotransmitters

² Oliver Sacks, *The Man Who Mistook His Wife for a Hat* (London: Gerald Duckworth & Co Ltd, 1985), p.3.

³ Oliver Sacks, *An Anthropologist on Mars* (New York: Arnold A Knopf Inc., 1995), p.80 & p.97.

⁴ Benjamin Simkin, *Medical and Musical Byways of Mozartiana* (Fithian Press, 2004). This thesis is the subject of the whole book

⁵ Karl Barth, *Church Dogmatics Vol III/3* (London: Centenary Press, 1960), p.298f.

⁶ Jeremy S Begbie, *Theology, Music and Time* (Cambridge University Press, 2000), pp.93-97.

to neural pathways to behaviour to psychology. In many ways, the condition is a paradigm for a whole range of genetically determined behavioural traits and conditions, all of which represents some form of restriction on what it means to be fully human. Yet, unexpectedly, even in this condition, both autonomy and creativity are preserved, perhaps even paradoxically enhanced. Thus, the complexity of being human is not fully explicable by a reductionist interpretation ; rather, the integration of all levels of biological organization supports an interpretation of psychosomatic unity.

Another common example of genetic modulation of psychology is becoming evident in studies of patients with Turner's Syndrome, who have one X chromosome deleted. These studies have indicated that there is a genetic locus for social recognition, critical for the formation of relationships, including the development of language skills and social cognition. It seems that the important distinction for such patients is whether their only X chromosome is maternally or paternally derived.

The neurocognitive profile of Turner's Syndrome is characteristic: normal verbal ability, normal intelligence, deficits in visio-spatial ability, visio-perceptual ability, mathematical ability, nonverbal memory, and attention span.^{7,8,9}

Admittedly, single gene defects are less likely to be the subject matter of behavioural genetics, than more complex gene clusters which act in concert to determine some aspects of behaviour. Nevertheless, the work of behavioural geneticists has begun and will undoubtedly continue to provide more and more evidence that human beings are a psychosomatic unity. Such work is congruent with the conclusions of the pioneer analytical psychologist Carl Jung who anticipated the link between genes and psychology in these words:¹⁰

“It is in my view a great mistake to suppose that the psyche of a new-born child is a tabula rasa in the sense that there is absolutely nothing in it. In so far as the child is born with a differentiated brain that is predetermined by heredity and therefore individualized, it meets sensory stimuli from the outside not with ANY aptitudes, but with specific ones. These aptitudes can be shown to be inherited instincts and preformed patterns.”

Jung goes even further in his notion of the collective unconscious, which proposes that we all share a common impersonal record of our emergent evolutionary history, consisting of

⁷ Ross J E et al, *The Effect of genetic differences and ovarian failure: Intact cognitive function in adult women with premature ovarian failure versus Turner Syndrome* Journal of Clinical Endocrinology and Metabolism (2004) 89 (4), pp.1817-22.

⁸ Skuse D, Elgar K, Morris E, *Quality of life in Turner Syndrome is related to chromosomal constitution: implications for genetic counselling and management* Acta Paediatrica Supplement (1999) 88 (4280), pp. 110-3.

⁹ Skuse DH et al, *Evidence from Turner's Syndrome of an X-linked locus affecting cognitive function.* Nature (1997) 387 (6634): pp. 705-8.

¹⁰ Carl Gustav Jung , *The Archetypes and the Collective Unconscious* Collected Works Vol 9 (London: Routledge & Kegan Paul, 1959), para. 136.

primordial images¹¹: “The unconscious is the unwritten history of mankind from time unrecorded.”

If true (and many psychologists now reject Jung’s experimental methodology), the implications of these links between our evolutionary history, our family history, our unique genetic code, and our behaviour and psychology are radical. Arguably, we are less free and less unique than we thought we were, and we share much more with one another than we thought we did. In this view, much of what we are is already given, already preconditioned, before our personal narrative begins to write itself - and it writes our story within the framework of constraints already laid down.¹²

Original Sin and a Flawed Human Genome in Evolutionary Perspective

It is particularly impactful that the DNA molecule might encode a psychology, as well as the proteins which determine the structure of body and brain. Also, the code is not perfect - it is flawed in one way or another in each one of us. Every version of the human genome carries predisposition to disease, encoding a potential or actual pathology. A good example would be the presence of proto-oncogenes, which when activated can initiate tumour development. Another example would be a coding error in a tumour suppressor gene, again triggering cancer from a single transformed cell.¹³ For some, inherited pathology implies original sin. For others, it denies the love of God in creation. Here we encounter a clash with traditional biblical theology.

The Augustinian edifice built upon the notion of original sin cannot fare well in an evolutionary perspective, in which creation is still in process and the world is still becoming rather than being. The disobedience of our “first parents”, and the descent of humankind from Paradise, will no longer do. In creation-through-evolution sin, evil, suffering, and death become inevitable yet tragic consequences of the process. The notion of original sin could only be rehabilitated if reinterpreted in the light of the evolutionary ascent of humankind, and the Jesuit geologist Teilhard de Chardin attempts that re-interpretation in these words:¹⁴

“Original sin, taken in its widest sense, is not a malady specific to the earth, nor is it bound up with human generation. It simply symbolizes the inevitable chance of evil which accompanies the existence of all participated being. Original sin is the essential reaction of the finite to the creative act.”

Thus Teilhard universalises original sin, and in so doing requires that Christ’s redemption of the fallen universe is also universal. According to Teilhard, we must acknowledge that the Fall is not a single local event, but rather the Fall is spread throughout the whole of universal

¹¹ Carl Gustav Jung, *Psychological Approach to the Dogma of the Trinity* Collected Works Vol 11 (London: Routledge & Kegan Paul, 1958), para. 280.

¹² Michael Palmer, *Freud and Jung on Religion* (London and New York: Routledge, 1997), pp.95-101.

¹³ F Macdonald, and C H J Ford , *Oncogenes and Tumour Suppressor Genes* (Oxford: Bias Scientific Publishers, 1991), pp.6-15 & 26-29.

¹⁴ Pierre Teilhard de Chardin, *Christianity and Evolution* (New York: Harcourt Brace and Co., 1968), p.40.

history.¹⁵ Of course, this controversial view necessarily implies a considerable lessening of human responsibility for sin, although the evil of Auschwitz and its equivalents could never be explained or excused by the evolutionary process.¹⁶

God's Gift of Image: Potter and Clay; Adoption and Call?

The reductionist materialist would say that the Human Genome itself is sufficient to explain human uniqueness, the variations in genetic code being able to differentiate between individuals. The Christian view is that God authenticates the existence of each and every new human being from the 'beginning' - although there is much debate about when exactly that 'beginning' is. I suggest that the donation of the Image of God is a creative act of God which authenticates a new human being from his/her inception. In an evolutionary context, such a creative act would be understood best by employing a 'potter-and-clay' model of creation. Here, the imperfect flawed Human Genome is the clay, and the donation of Image is the gift of a potential. This gift might be understood in two ways.

First, the gift of the Image of God might be expressed as God's 'adoption' of the unique Human Genome of a future person. Second, the gift of the Image might be expressed as God's 'call' into existence. The metaphors of 'adoption' and 'call' are consistent with New Testament and Old Testament approaches respectively, but both represent God's selection or election of the individual as a new and unique creation. Such selection cannot be based upon the merits or demerits of the genomic 'clay', but rather on God's free elective choice, and would apply equally to those who will be disabled in some way, and even to those who are cloned copies of others, as well as those who are the products of the whole range of reproductive technologies.

God's Image represents a potential for the future, into which future God 'calls' the individual by 'adopting' their unique Genome. The call, then, is from the future, and is teleological in character. God's call to the individual is only one strand in a universal call to completion, fulfillment, and unity to which the whole evolutionary process in its broadest sense is subject. As Teilhard de Chardin has said:¹⁷ "Only a God who is functionally and totally Omega can satisfy us." In short, God in this view draws each of us and the whole World into the future, and the great consummation will occur at the Omega Point where God is all in all.

We cannot define the 'beginning' at which God's call to existence is issued. The choice and selection is God's, and we cannot second-guess the relevant criteria for the staging of such a selection. However, I do not mean to imply Calvinist predestination in God's election ; rather that the future viability of the individual is known only in the Mind of God.

As an analogy, compare a first year medical student, a third year medical student, a final year medical student, and a qualified doctor. Throughout training, a medical student becomes progressively more like a doctor, and less like a member of the general public. Selection for entry to Medical School is based on predicted potential for becoming a doctor, but once

¹⁵ John F Haught, *Deeper than Darwin* (Westview Press, 2003), p.167.

¹⁶ Ian Barbour, *Nature, Human Nature, and God*(London: SPCK, 2002), pp.51-53.

¹⁷ Pierre Teilhard de Chardin, *Christianity and Evolution* (New York: Harcourt Brace and Co., 1968), p.240.

chosen, the individual has a new status in the community at every stage between selection and graduation. This fits with an Adoption model of ensoulment in which the individual is brought into a (new) relationship with God. Accordingly, I argue that we should give each and every embryo the benefit of the doubt from the very earliest stage, without being able to define exactly when the earliest stage is. In the words of Thomas Torrance:¹⁸ “Every child in the womb has been brothered by the Lord Jesus. In becoming a human being for us, he also became an embryo for the sake of all embryos, and for our Christian understanding of the being, nature and status in God’s eyes of the unborn child.”

Image of God as Mutual Beholding

The notion of the Image of God merits further consideration as God’s creative gift when adopting or calling into existence. A new building in Euston Road, London, has a unique work of art at its entrance. On the outside of the building a brown humanoid statue stands facing into the glass panelled entrance hall. On the other side of the glass, and directly opposite the first statue, stands another brown humanoid statue within the entrance hall itself. Two statues locked in mutual observation, the one of the other, separated only by a pane of glass. This artwork speaks to me of relationship and not resemblance. The gift of the *Imago Dei* brings us face to face with God, as it were, and into relationship with God. Of course, this mutual beholding of human being and God, is best and supremely realised in the relationship between Jesus Christ and God the Father. As Origen describes it:¹⁹

“The Son has ever gazed on the abyss of the Father’s Being”

In Jesus Christ we see not only the Image of God, but also the Likeness of God, and the notion of a journey from image to likeness is suggested as the context in which our human life narratives might be understood. We are initiated on our way by God’s gift of the *Imago Dei*, and are thereby called by God into authentic existence. The response to that call is a journey towards God, from image to likeness, a life journey I would like to call ensoulment. Conventionally, ensoulment has been understood as the creative act of transfer of some kind of ‘substance’ from God to human being at some stage of the beginning of life: soul transfer. In other words, ensoulment as a single event. Instead, I suggest that ensoulment might be better understood as an emergent process, from Image to Likeness, with its ‘telos’ in God. In evolutionary terms, such ensoulment would be regarded as a process of true hominization, from potential to realised potential.

The problem with the notion of ‘soul’ is that it is too easily objectified as a ‘substance’ which is ‘added’ or ‘possessed’. The same could be said of the notion of ‘image of God.’ What is creatively ‘given’ by God is a potential for response to God’s call, and a potential for relationship with God, and a potential to achieve the ‘likeness’ of God.²⁰

What are we trying to say when we use Soul language and Image of God language? I think we are trying to say that there is more to a human being than simply a body and a brain. I think we are also trying to say that the something ‘extra’ is central to who we really are, and indeed ‘shapes’ us into who we are. Aristotle’s idea was that the soul is the ‘form’ of the

¹⁸ Thomas F Torrance, *The Being and Nature of the Unborn Child* (Lenoir : Glen Lorian Books, 2000), p.4.

¹⁹ Origen : *De Principiis*.

²⁰ David A Jones, *The Soul of the Embryo* (London & New York: Continuum, 2004).

body, giving shape to a human being both physically and spiritually. Unfortunately, this idea was contaminated by the Platonic idea of an entity which is transferred, added, and possessed.²¹

Damasio's Rejection of Cartesian Dualism

A split between Body and Soul, or between Body and Mind, is inherent in Platonic thinking, and was championed by the philosopher Rene Descartes, whose famous first principle of philosophy was '*cogito ergo sum*', 'I think therefore I am'. Commenting upon this new-found principle he remarked:²²

"From that I knew that I was a substance, the whole essence or nature of which is to think, and that for its existence there is no need of any place, nor does it depend on any material thing; so that this 'me', that is to say, the soul by which I am what I am, is entirely distinct from body... and even if body were not, the soul would not cease to be what it is."

The neurologist, Antonio Damasio, has vilified this Cartesian disembodiment, this split between mind and brain, implicit in the split between mind and body.²³ Rejection of the material world in general, and the human body more particularly, and sexual activity most specifically, have been consequences of this Cartesian Dualism especially within the Christian Church. Concomitant with that rejection has been an embracing of a whole range of spiritualities. The same sort of dualistic split has informed the development of Medicine in the West, such that holistic approaches are rejected, and clinical psychology and psychiatry are practiced separately from the rest of physical Medicine, almost denying the psychological dimension to many diseases.

For Descartes, the mind does not require neuroanatomy, neurophysiology or neurochemistry. It is pure detached reason: Antonio Damasio attacks this position by researching the neural pathways relating to rationality, and demonstrates that these pathways are also employed in the processing of feelings and emotions. Thus there may be a causal link between emotion and reason which would have horrified Descartes.²⁴ In conclusion to this work, Damasio states:

"The truly embodied mind I envision, however, does not relinquish its most refined levels of operation, those constituting its soul and spirit. That soul and spirit, with all their dignity and human scale, are now complex and unique states of an organism. And this is of course the difficult job: to move the spirit from its nowhere pedestal to a somewhere place, while preserving its dignity and importance - to recognise its humble origin and vulnerability, yet still call upon its guidance."²⁵

²¹ Plato: *Phaedo*

²² Rene Descartes, *The Philosophical works of Descartes (1637) Vol 1*. (New York: Cambridge University Press, 1970),p.101.

²³ Antonio Damasio, *Descartes' Error* (Putnam Berkley Group, Inc., 1994), pp.165-201.

²⁴ Antonio Damasio, *Descartes' Error* (Putnam Berkley Group, Inc., 1994), pp.242-249.

²⁵ Antonio Damasio, *Descartes' Error* (Putnam Berkley Group Inc., 1994), p.252.

Damasio is an advocate of psychosomatic unity, and there is much clinical evidence in support of that position. The famous case of Phineas Gage suggests itself immediately. A pleasant well-mannered young man underwent a total personality change after a three foot iron bar weighing thirteen pounds passed through his skull and brain as a consequence of an explosion at work. Frontal lobe cerebral injury meant that '*Gage is no longer Gage*', according to his former workmates. Neuropathology confirms the validity of the total integration of body, brain, and mind - in other words, psychosomatic unity. So also does neuropharmacology.

Let us consider the drug Prozac, and its use as an antidepressant. Experience with this drug for fifteen years has demonstrated its remarkable capacity for transforming the personality of the patients who take it. Melancholy and anxiety have been supplanted by optimism and confidence to such an extent, in many patients, that moral sensitivity has been dramatically numbed and disinhibited behaviour is evident. The issue here is that maybe reducing mental suffering can dull the conscience! A psychiatrist who works with Prozac describes the loss of self as experienced by a patient:²⁶

“He was a good responder. On Prozac, Philip felt better than well, and he hated it. He had been prematurely robbed of his disdain, his hatred, his alienation. His acute episode of depression had been frightening... but the six months of feeling well were hell for Philip. He felt phony - he did not trust himself.”

In the construction of the personality, brain and body matter as much as, or even more than, the mind itself. Experience with Prozac affirms our psychosomatic unity as human beings.

Damasio Revisits Spinoza

The dominance of mind over matter, of mind over body and brain, was likewise attacked by the philosopher Spinoza. For him, the mind of the individual cannot be immortal, for it is inextricably and functionally tied to the mortal body. The two are mutually correlated so that the body informs the contents of the mind, and the mind influences the body.²⁷

The neurologist Antonio Damasio has expanded on Spinoza's insights about psychosomatic unity, drawing our attention to clinical syndromes in which the assembly of body images in the mind is interrupted. These sensory input images derive either from 'the flesh', as he puts it, or from special sensory probes, and signal the state of activity of specific body parts. From these inputs the brain constructs neural maps of body events, and from these mental images are generated, and out of these images we construct an inner representation of reality in our minds. In other words, the body literally 'informs' the mind.²⁸

Damasio reports that in deafferentation syndromes, such as asomatagnosia, the mind is in disarray if the syndrome is partial, whereas the mind or self is suspended if the syndrome is

²⁶ Peter D Kramer, *Listening to Prozac* (Penguin Books USA Inc., 1994), p.291.

²⁷ Spinoza, *The Ethics Part II* (New York: Dover Press, 1955).

²⁸ Antonio Damasio, *Looking for Spinoza: Joy, Sorrow and the Feeling Brain* (London: William Heineman, 2003), pp.187-217 & pp.147-150.

total. In contrast, amputation of a limb produces the phantom limb phenomenon in which an absent limb is ‘perceived’ to be present by the mind because the afferent nerve pathways are still intact. Once again, psychosomatic unity is affirmed as the best explanation of the nature of what it means to be human.

What, then, of the spiritual dimension ‘beyond’ the operation of mind? Damasio understands spiritual experiences to be in the domain of the neurobiology of feelings and emotions - which, of course, is also the domain in which he locates part of the processing pathway for reasoning. For Damasio, reason, emotion, and spirit are closely linked to one another through shared neuronal circuitry.^{29, 30}

Let me recap. Descartes locates the Self in rational, conscious thought processes, whereas Damasio (building on Spinoza) locates our Self identity in unconscious feelings and emotions.

Perhaps no disease process points up the division between Dualism and Psychosomatic Unity more than Alzheimer’s Dementia. For the Dualist, the ‘person’ is going or has gone, and the situation is an inexplicable outrage, or yet another example of natural evil which begs the theodicy question.

For the advocate of Psychosomatic Unity, on the other hand, Alzheimer’s Dementia is natural, part of the way the world is. In the words of Glenn Weaver:³¹

“If we are not eternal persons by nature and simply return at death to the material elements from which we were created, then the progressive dissolution of our experiences of self-identity in dementia may be quite natural in God’s created order. In this case spiritual suffering may most clearly originate in my struggle to accept the finite character of my identity and surrender my autonomous pride.”

Ensoulment as Process

As will be evident, I have hesitated to use the term Soul as such, and have identified ‘ensoulment’ as a process rather than as an event; but one that is initiated by the elective creative donation of the image of God, by the God who calls us each into existence by adopting our human genome. If the ensoulment process is understood in the perspective of psychosomatic unity, then biological neurogenesis and psychogenesis are part of the process as we emerge from unconsciousness to self-identifying beings in community with others and before God. In this understanding, our minds are epiphenomena of our brains and bodies, and as argued earlier, a fundamental aspect of the construction of our minds is a constant awareness of embodiment. In the perspective of psychosomatic unity there is emphasis on the vertical axis between genes and persons, passing through various levels of biological organisation. This is Nature - but we must also consider Nurture, and a wider range of

²⁹ Antonio Damasio, *Looking for Spinoza: Joy, Sorrow and the Feeling Brain* (London: William Heineman, 2003), pp.147-150.

³⁰ Antonio Damasio, *Descartes’ Error* (Putnam Berkley Group, Inc., 1994), pp.180-184.

³¹ Malcolm Jeeves (Ed.), *From Cells to Souls - and Beyond: Changing Portraits of Human Nature* (Grand Rapids Michigan: William B Eerdmans), 2004, p.99.

inputs, in this matter of ensoulment.

I want to suggest that there are three types of relationship relevant to the nurturing of our development as souls. First, we are ensouled in a specific setting in life, a *Sitz im Leben*, which provides a cultural context as well as a range of opportunities and a range of constraints. Second, we are ensouled in a web of personal relationships of different kinds and levels with other human beings. Third, we are ensouled in a conscious or unconscious relationship to the God with whose Image we began (and continue) our journey. The journey of ensoulment is teleological, moving us from simply having the Image of God towards achieving the Likeness of God. I therefore suggest that ensoulment could be represented as a relational vector of three components (culture, other persons, God) each of which is fundamentally important. As John Macmurray has expressed it:³²

“It is our vocation, then, not only to unify ourselves and the World around us, not only to hold together the material and the spiritual, and to express them as an undivided whole, reaching out beyond created limits, we are also to unite ourselves and the World to God, and so divinize creation.”

But what can ensoulment mean beyond physical death within a psychosomatic unity perspective? The simple answer is nothing. Death is the real and absolute end; a discontinuity at least. It is a matter of speculation as to what might be beyond that discontinuity. For example, could we be reconstituted as ensouled beings, possibly embodied in some way, from the memory of God, who called us into existence in the first place? In other words, a recall, a kind of resurrection. Admittedly, it is paradoxical to consider the God who (I have assumed throughout) is outside of time, as having a memory! By contrast, the out-of-favour Dualist perspective presents no problem with the survival of physical death and immortality. Indeed, in this view life after death is natural.

Evidence from Near Death Experiences

I have a personal problem. Intellectually, and on the basis of the available neuroscientific evidence, I am persuaded by the Psychosomatic Unity position. However, I myself was subject to a Near Death Experience in which my mind was temporarily dissociated from my body, such that I observed my own cardiopulmonary resuscitation following cardiac arrest, from above. Thus my experience forces me to give further credence to the Dualist position.

Perhaps no-one has done more to provide support for the Dualist position than the neuroscientist Sir John Eccles, who consolidated the development of Descartes' idea by Sherrington, a neurophysiologist, and Penfield, a neurosurgeon. One problem which fascinated Eccles was the translation of the free will idea to 'do' something into the muscle contractions which caused the planned action to happen. The other problem which intrigued Eccles was why the two cerebral hemispheres were not functionally identical, such that only the dominant hemisphere can talk for both, and seems to be the unique locus of the conscious self, as discovered by the researches of Sperry.^{33, 34, 35}

³² Schwöbel C & Gunton C E (Eds.) *Persons, Divine and Human* (Edinburgh: T & T Clark, 1991), p.135.

³³ Sherrington C S, *Man on his Nature* (Cambridge University Press, 1940).

³⁴ Penfield W, *The Mystery of the Mind* (Princeton University Press, 1975).

In considering these problems, Eccles developed his radical Dualist - Interactionist Theory of Brain and the Self-conscious Mind.^{36, 37} Psychosomatic Unity states that Body, Brain, and Mind are all contained in the same World. The Dualist - Interactionist theory states that the Body and the Brain are in one World, and the Self-conscious Mind is in another World; but that there is a liaison between the two Worlds in regions of the dominant cerebral hemisphere, the so-called Liaison Brain. For Eccles, the unity of conscious experience is a consequence of the operation of the self-conscious mind, rather than due to the neuronal machinery of the cerebral cortex itself.

In summarising the evidence in support of the Dualist position, I cannot do better than refer to an editorial comment in the medical journal, the *Lancet*, which appeared in 1978 and which relates to the whole range of Near Death Experiences (NDEs):³⁸

“Collected accounts volunteered by survivors bear striking similarities. Amongst the experiences many have described are an initial period of distress followed by profound calm and joy; out-of-body experiences with the sense of watching resuscitation events from a distance; the sensation of moving rapidly down a tunnel or along a road, accompanied by a loud buzzing or ringing noise or hearing beautiful music; recognising friends and relatives who have died previously; a rapid review of pleasant incidents from throughout the life as a panoramic playback; a sense of approaching a border or frontier and being sent back; and being annoyed or disappointed at having to return. Some describe frank transcendent experiences and many state that they will never fear death again. Similar stories have been reported from the victims of accidents, falls, drowning, anaphylaxis, and cardiac and respiratory arrest.”

By definition, these are not experiences of death itself, but of dying. As a sometime physiologist myself, I must admit that many of these reports could be explained in terms of the physiology of the dying brain. What cannot be explained is the fact that there have been many reports of NDE subjects obtaining knowledge through their experiences which they could not otherwise have known by any other means. I give one classic example:³⁹

“A middle-aged woman, apparently dead from a heart attack, found herself floating out-of-body near the ceiling of the ward and watched doctors and nurses working frantically to save her. She drifted out of a window and around the back of the hospital, where something odd caught her eye - a tennis shoe on a window ledge. Almost as soon as she had revived, she told hospital staff - and the shoe was

³⁵ Sperry R W, *Neurosciences Third Study Program* (Cambridge, London: MIT Press, 1974).

³⁶ Eccles J C, *The Human Mystery* (Berlin, Heidelberg, New York: Springer Verlag, 1978), pp. 214-229.

³⁷ Eccles J C, *The Human Psyche* (Berlin, Heidelberg, New York: Springer Verlag, 1980), pp.27-49.

³⁸ Badham P & Badham L, *Immortality or Extinction?* (London: Macmillan, 1982), p.71.

³⁹ Iverson J, *In Search of the Dead: A Scientific Investigation of Evidence for Life after Death.* (London : BBC Books, 1992), p.67.

recovered! The patient was a stranger to the city, seriously ill in bed, wired up to various machines for the whole of her stay in hospital.”

A very much smaller group of NDE subjects report a very different kind of unobtainable knowledge: they experience meeting persons of whose prior death they themselves had been ignorant!

Recent much more objective researches on the NDE/OBE phenomena have produced astounding conclusions. On the one hand, Olaf Blanke at Geneva University Hospital has succeeded in creating an OBE in a patient by stimulating her right cerebral angular gyrus electrically, while attempting to treat epilepsy.⁴⁰ On the other hand, a study of 344 resuscitated patients in the Netherlands, conducted by Pim Van Lommel, found that 18% of the patients reported NDE's which were detailed by the patients in a highly consistent manner, and yet were unrelated to any of the physiological and pharmacological parameters studied.⁴¹

The neuropsychiatrist Peter Fenwick recently completed a survey of 60 resuscitation patients of whom 7 reported NDE's at Southampton General Hospital, each of whom had been temporarily brain-dead. After cardiac arrest their brain rhythms were flat within 11 seconds, and by 18 seconds it would be impossible for their brains to continue to construct a model of the world. Commenting on the results of the study Fenwick concludes:⁴²

“There is now convincing evidence to challenge the current theory that consciousness can only exist inside the brain - and if you can have consciousness without associated brain function, that is enormously important for our understanding of the mind.”

In many of the NDE accounts, embodiment is a significant issue. On the one hand, the perception is of dissociation and of a new freedom to move, free of restrictions. On the other hand, there is the continued awareness of having ‘some kind’ of body, which is clearly different from the physical body which has been left. In his Letters to the Corinthians, St Paul makes important references to embodiment. In the First Letter, in chapter 15, he speaks of exchanging a physical body for a spiritual body, a mortal body for an immortal body. In the Second Letter, in chapter 12, he describes what may have been the first recorded out-of-body experience.

Conclusion

In order to make sense of my own personal experience, I seek to achieve an accommodation between the Psychosomatic Unity of Spinoza and Cartesian Dualism. What I suggest is this. We begin as a DNA code, which somehow contains a collective unconscious memory of our evolutionary and social emergence as humankind. God ‘adopts’ our genome at an undetermined point in time close to our inception as organisms, and we thereby become truly human beings, at the beginning of a process of ensoulment. Our natural embodied state is

⁴⁰ Blanke O, Landis T, Spinelli L, Seeck M *Out-of-body experience and autoscopy of neurological origin* Brain (2004) 127 (2): pp.243-258.

⁴¹ Van Lommel P, Van Wees R, Meyers V, Elfferich I, *Near-death experience in survivors of cardiac arrest: a prospective study in the Netherlands*. Lancet (2001) 358: pp.2039-2045.

⁴² Parnia S, Waller D, Yeates R, Fenwick P, *A qualitative study of the incidence, features and aetiology of near death experiences in cardiac arrest survivors*. Resuscitation (2001): pp. 149-155.

that of Psychosomatic Unity, as we continue to emerge as persons in the ensoulment process - such that Mind is an epiphenomenon of Brain. This is consistent with Spinoza. However (I speculate) at some unspecified point in time, the Mind develops the potential to operate independently of Brain, realized in certain extreme circumstances, when it experiences extrasensory perception of the real world, and an extracorporeal awareness of embodiment. This is consistent with Descartes, and my own experience! Admittedly, the timing of the ensoulment process has implications for the ethical status of fetuses and young children and others, which cannot be further treated in this essay.

Thus I suggest that ensoulment may be a process in which Dualism emerges as the flower from the seed of Psychosomatic Unity. Ensoulment (in my view) is furthermore fundamentally a vector, which is teleologically directed towards the life of God, following the elective call of God into existence. The ensoulment vector is relational with respect to *Sitz im Leben*, our neighbours, and God, as we move from self-consciousness to community - consciousness; destined as we are for a resurrection body and incorporation within the community of the Body of God. From Image of God to Likeness of God.

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