

## CONCLUSIONS

If the Catholic teachings about the human soul could be sorted into a set of essential characteristics, it would include these: created by God, spiritual, earthly, body-centred, human-natured, living, personal, separable, having a post-mortem identity, destined for resurrection, situated in a time and eternity perspective. It would also be noted that these teachings emerged from a long tradition, have been and continue to be subjected to scrutiny, and have been accused of being dualistic and unscientific.

About Tommaso's account of the soul, sometimes presented as the de facto Catholic account, two aspects should be noted: that it references other systems of thought, notably aspects of Aristotle's hylomorphic theory; and is also part of a systematic Christian synthesis of faith and reason. The essential qualities of the hylomorphic soul include: principle of life and understanding; united to the form of, but not itself being, a body; imperishable; created; in an intermediate state before resurrection; and active in many operations of the human being.

We conclude the thesis with several proposals for a contemporary Catholic understanding of the soul, in light of the discussion in Part II; and some remarks on possible directions the dialogue with other experts could be steered towards. These comments concentrate on the soul and body on earth, since after death, all is speculative except for the hope of resurrection.

### *Openness to Some New Concepts*

One conspicuous feature of discussions between the Catholic thinkers and contemporary scientists is a general retention of hylomorphic concepts, at least on the Catholic side, to explain the soul and its relationships with the body, during life and after death. If this continues, then proposing the use of new terminology and concepts would be regarded as revolutionary, and likely result in the adoption of a conflict or an independence model of theology-science dialogue. What would have greater chance of acceptance by the magisterium is an extension of the general traditional philosophical scheme but with the introduction of few new concepts, consistent with new schools of thought in philosophy, the sciences and theology.

It must be admitted, however, that such a proposal will not result in major revisions or retractions such as those caused by the acceptance of the heliocentric model of the universe and Darwinian evolution. Though it would, we propose, constitute a development in dialogue

### Recognise Neuroscience

A contemporary Catholic concept of soul should include the brain. The neurosciences chiefly cannot be ignored. This should not be too threatening at first, as the traditional Catholic, Thomistic concept of soul is metaphysical and is not formulated in scientific details. So if there are changes in the sciences, the wider philosophical account would appear to be protected.

Current teachings do not reach down to the empirical level, which actually is provisional, according to accepted scientific methodology, until the next breakthrough or revision. Not being directly connected to scientific theories, the hylomorphic soul can be part of a dialogue with other philosophical systems, and other intellectual periods in history, as has been demonstrated over the centuries. But it should be acknowledged that its ability to speak to a scientific world and the culture of the day is limited by its concepts and language from a previous era.

To properly recognise the neuroscientific world, a future Catholic understanding of the soul could refer to some well-established facts such as the existence of the brain and its vital role in living human beings. The official teachings do not need to provide detailed footnotes about the numerous advances in research. This could be supplemented by commentary from official Vatican bodies such as the Pontifical Academy of Sciences and the International Theological Commission, as seen in Part I.

In the text of the *Catholic Catechism*, an augmented though wordy revision could be something like:<sup>1</sup>

The human body [including its brain] shares in the dignity of "the image of God": it is a human body precisely because the body [and its brain] are

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<sup>1</sup> *Catechism of the Catholic Church*, nos.364-365, p.93

animated by a spiritual soul, and it is the whole human person that is intended to become, in the body of Christ, a temple of the Spirit.

The unity of soul and body [with the brain] is so profound that one has to consider the soul to be the "form" of the body: i.e., it is because of its spiritual soul that the body [with its brain both] made of matter becomes a living, human body; spirit and matter, in man, are not two natures united, but rather their union forms a single nature.

This part of the original text does not directly refer to, but only infers and assumes, the idea of the soul as the principle of understanding. As such, the *Catholic Catechism* teachings do not need to elaborate the rational and cognitive activities of the soul. Therefore it need not detail the intricate workings of the brain either.

The *Catechism* also includes a quotation from the Second Vatican Council that could be augmented in light of contemporary scientific knowledge:

Man, though made of body and soul, is a unity. Through his very bodily condition [including the brain] he sums up in himself the elements of the material world. Through him they are thus brought to their highest perfection and can raise their voice in praise freely given to the Creator.<sup>2</sup>

The scientific background to this is not in dispute. Rather than appealing to the soul as Aristotle and the medieval scholars did, contemporary church teaching could refer to the workings of the brain and nervous system, as this is now the standard method of explaining human sensory, cognitive, and emotional operations; for instance, vision, language, speech, cognitive development, and neurodegeneration.

In a world which scarcely knew about the brain, these activities were regarded as the activities of the soul. Given what we know, today it would be ignorant not to refer to the brain. Our understanding of the brain is part of our quest for truth. If church teachings did develop along these lines, the church might want to provide guidance on how the modern understanding of the brain does not necessarily undermine belief

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<sup>2</sup> *Catechism of the Catholic Church*, no.364, p.93, quoting *Gaudium et Spes* no.14

in the soul. Similar guidance has been provided on Darwinian evolution and belief in divine creation.<sup>3</sup>

One area in Tommaso's account of the soul, not fully resolved in the sciences and where questions are not usually asked, concerns the soul as intellectual principle and understanding. This may be an opening for dialogue. Apart from his synthesis of faith and reason, Tommaso was also in dialogue with other philosophies and cultures in the quest for truth. But his notion of the hylomorphic soul is united to, the form of, but not itself, a body is today a limiting and antiquated notion.

In this day and age we cannot discuss human understanding without referring to the brain. For us, there really is no other human way to sense, perceive, understand, decide and act. Cognitive neuroscience and closely-related fields such as cognitive psychology and cognitive neuropsychology all pertain to the centrality of the brain in sensation, perception, cognition, emotion and volition. For example, one concept of the brain is as an information processor e.g. "the brain of a chronic pain patient is not simply a healthy brain processing pain information."<sup>4</sup> All the same, it needs to be constantly highlighted that the brain is that of a person. Hence, the brain receives and transmits signals from pain receptors, but the brain is not in pain; rather, the *person* experiences pain.

As noted throughout the thesis, however, traditional Catholic teaching reminds us that the brain is a *necessary* but not a *sufficient* condition for human understanding. There is a real sense in which it is the person, not the brain, that understands. This is the religious belief that the soul, as a spiritual principle, is constitutive of the human being

To deny the possibility of such a spiritual principle, as some scientists and philosophers do, is not to be neutral but amounts to adopting an anti-metaphysical

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<sup>3</sup> For instance, how the physical brain interfaces with the soul and mental phenomena, which are recognised as non-physical. This is not new and has been the subject of similar and ongoing discussion in the philosophy of mind. Michael Tye, *Ten Problems of Consciousness: A Representational Theory of the Phenomenal Mind* (Cambridge, Massachusetts and London: The MIT Press, 1995), pp.56-62. The ten problems Tye discusses are "perhaps the hardest nut to crack in all of philosophy." (p.35)

<sup>4</sup> Marwan N.Baliki et.al., "Beyond Feeling: Chronic Pain Hurts the Brain, Disrupting the Default-Mode Network Dynamics," *The Journal of Neuroscience* Vol.28 No.6 (6 February 2008), pp.1398-1403 ( p.1402)

position and restricting human beings to the material world of space and time. Those holding this view are often unwilling to enter into dialogue with religious people. This position is reminiscent of the way religions have at times been accused of being closed to science or in conflict with it.

### *The Brain and Experiences of the Soul*

The scientific study of spiritual phenomena, particularly investigations into the neurology of religious experiences, shows that spirituality is truly grounded in the body and mind. As such it involves the brain, and consequently is analysable, even if it is as noted earlier, “measuring the immeasurable.”<sup>5</sup> Since the experiences are also spiritual ones, e.g. prayer, and the dark night, they involve the soul. Moreover as seen in Part II, religious experiences can be apparently induced or at least be mimicked through psychoactive substances and neurological conditions like epilepsy. At the very least the bodily centre of human religious, spiritual and soul experiences revealed by these studies highlights the need for careful discernment.

Furthermore, this kind of research furnishes significant reasons for a contemporary Catholic understanding of the soul to consider being more precise and indeed truthful in acknowledging the brain, while speaking confidently about the unity of soul and body.<sup>6</sup> This would transfer some of the causal spotlight, correctly, away from the soul to the body, or more explicitly, the brain within the body of a person. Thereby exemplifying and making even stronger that unity of soul and body which the church rightly describes as “so profound.”<sup>7</sup>

Conversely, those sceptical of the soul on materialist grounds or because of the advent of neurotheology could be encouraged to recognise how any study though empirical is limited in aim, participants, scope and conclusions. Religious experiences are often ineffable, escaping conceptualisation and linguistic analysis. On methodology, e.g. functional brain imaging, the results are essentially mathematical and at best an accurate, recording-in-time of experiences which really cannot be reduced to gauges and statistically constructed images, even if the religious context was kept foremost in mind. Such experimental results capture what is

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<sup>5</sup> Moberg, *Spirituality Research*, pp.99-114

<sup>6</sup> *Catechism of the Catholic Church*, nos.362-368, pp.92-94

<sup>7</sup> *Catechism of the Catholic Church*, no.365; p.93

quantifiable but cannot apprehend the unquantifiable, namely the numinous experiences beyond words.

Here might be a suitable place to propose an explanatory footnote to the *Catholic Catechism*'s brief reference to the heart as conscience.

The spiritual tradition of the Church also emphasizes the heart, in the biblical sense of the depths of one's being, where the person decides for or against God.<sup>8</sup>

The explanation could highlight how it is a competent person who is capable of bearing responsibilities and making decisions. This involves both emotive and rational components, mediated by the brain of the body united with the soul.

*Standing for Identity when the Brain is Not Guaranteed*

Although the rise of neuroscientific thinking has proper implications for the traditional concept of soul, it also has limitations. The sharpness of brain-centred critiques rely substantially on the premise that persons remain cognitively intact. Hence, the reality of neurological degeneration has ramifications which influence a person's life and soul. This is consistent with the links between brain/mind and mind/body, and the Catholic belief in the unity of body/soul.

As seen in Part II, when neurodegeneration becomes evident and affects a person's loved ones, family and community, there is a natural turn to the soul which is believed to be authentic and within the person whose mind and brain are deteriorating. A contemporary Catholic understanding of the soul might further incorporate and deepen its understanding of this phenomenon with good grace by looking to the spiritual principle as what brings unity to a person's his life in health and sickness.

This could possibly lead to some confusion about the interrelationships between brain-soul, mind-body and soul-body. But these can be addressed by viewing the

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<sup>8</sup> *Catechism of the Catholic Church*, no.368; p.94

brain physically as “body” and within the personal unity of soul-body there is the mind which emerges from and depends on the functioning brain.

On the other hand, if materialists are searching for something else to sustain a person’s identity which is not profoundly dependent on a healthy brain and body, then admitting a spiritual dimension of human beings could be a viable way to proceed. Even if it is not named as the soul, then perhaps it could be a part of the self which can express the sentiments of the idea that “their spirit lives on.”

This is not to imply that the focus on the brain is erroneous or ill-advised; on the contrary. For example, the accepted criterion of death which Catholic teaching follows is brain death, in one of its variant expressions, e.g. whole brain death. The relevant difference is that brain decline typically occurs before brain death, even years before, such as cases of coma and other disorders of consciousness.<sup>9</sup> Here, something like the spiritual principle is proposed to materialists as an anchor point for identity, when most of the times the soul is overshadowed by attention to the normal brain.

#### *Human Origins from Other Animals and Evolution*

A future Catholic understanding of soul could surely be more explicit about humans *vis-à-vis* other evolved animals. The Aristotelian-Thomistic tradition candidly discusses animals although before long it proceeds onto humans as rational animals with an intellectual soul. Tommaso teaches that man as man, is an animal; and the animal is a living thing. Therefore, humans are one, animal and living.<sup>10</sup> Just as a pentagon includes a quadrilateral, the intellective soul contains the sense-soul of animals and nutritive soul of plants.<sup>11</sup> Aristotle and Tommaso’s discussion of human organic relationships with animals and plants are well-documented.

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<sup>9</sup> James L. Bernat, “Chronic Consciousness Disorders,” *Annual Review of Medicine* Vol.60 (2009), pp.381-392. Rather than states of consciousness, Bernat discusses ‘disorders’ of consciousness which appear in the media and the public forum but are often misunderstood by both the public and even doctors; for instance, the high-profile American medico-legal cases of three women in an irreversible vegetative state - Karen Ann Quinlan, Nancy Cruzan, and Theresa Schiavo. (p.382)

<sup>10</sup> Aquinas, *SCG*, Book 2, Ch.58, [1-3] p.173

<sup>11</sup> Aquinas, *Sum.Theol. Vol 11*, I. Q.76 Art.3, pp.62-63; cf Aristotle, *On the Soul*, Book II, 3; 414<sup>b</sup>19-32; p.660

The next sensible move after that is for the Catholic account of the soul to now include cosmological-biological time and evolution, for example when there is reference to the human body,<sup>12</sup> the evolutionary descent and animal ancestry could be made plain without leaving it as an implicit presumption. The human body is an earthly, animal body composed of the elements of the universe and continuous with that matter. It is known that four of the chemical elements, hydrogen, oxygen, carbon, and nitrogen, compose more than 99% of the mass of most cells.<sup>13</sup> In the universe, these four elements are also the first, third, fourth, and fifth most abundant.

Moreover, according to astrobiology, life in the universe and astrobiology starts/ed with the synthesis of the elements significant for life: hydrogen, carbon, oxygen, nitrogen, sulphur and phosphorus.<sup>14</sup> Hydrogen is essentially the primordial element formed from the earliest stages of the Big Bang, with the other chemical elements found terrestrial biochemistry formed by nucleosynthesis during evolution of stars.

This is another prompting for the traditional philosophical accounts to be updated, especially since the new feature proposed, the human brain, evolved from primate brains. Associated with brain evolution, there are arguments for the type of mind which accompanies the brain in the Pleistocene epoch, as raised in evolutionary psychology, controversial though that subject might be. At least the animal side of human nature is not too intimidating and would still enable the Catholic teaching to champion the special creation of the human soul as the unique characteristic of human beings.

There will be long-lasting scientific debates about how the brain, mind, and body evolved and our always incomplete account of human nature. Unlike the situation of neurological deterioration which could inspire a search for firmer grounds of identity, the unresolved questions of human evolution await a future resolution on empirical grounds alone. The soul is not to be offered to fill any gaps in knowledge. Rather, those who believe in the soul can still maintain that it is united with body and

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<sup>12</sup> *Catechism of the Catholic Church*, no.364; p.93

<sup>13</sup> Sun Kwok, *Organic Matter in the Universe* (Weinheim: Wiley-VCH, 2012), p.1

<sup>14</sup> P.Ehrenfreund et.al., "Astrophysical and astrochemical insights into the origin of life," *Reports on Progress in Physics* Vol.65 No.10 (2002), pp.1427–1487



brain, even if scientists are unable to say how, when and why the body and brain became human.

Something like the document *Communion and Stewardship* by the International Theological Commission quoted in Part I would provide a more comprehensive treatment of animals and evolution than the summary paragraphs in the *Catholic Catechism*. It was quoted above how in human beings their very bodily condition sums up the elements of the material world and brought to their highest perfection so as to raise their voices in praise to the Creator.<sup>15</sup> Such a material world had a cosmic beginning and an expansive evolutionary history before any life appeared.

*Identity in the Journey of a Whole Life and in Dreams*

The social-cultural dimensions of human beings are not usually expressed as a characteristic of the human spiritual principle. However, just as the discussion in Part II about a whole life and dreams sought to enlarge the outlook of neuroscience, so too a contemporary Catholic account of the soul could refer to these dimensions, particularly if social neuroscience and developmental and lifespan perspectives are included.

This would acknowledge the growth and maturation phases of human lives, with which the soul is intimately associated. Furthermore, this would bring to the forefront an existential time and life aspect to the teachings in the concise official statements about the body/soul.<sup>16</sup> It is most apt to connect the span of human life and its spiritual journey with the spiritual principle.

One of the Catholic teachings only briefly referred to thus far is the spiritual tradition of the Church which stresses the heart, in the biblical sense of the depths of one's being.<sup>17</sup> It would not be too difficult to include with this the spiritual tradition of dreams too, which are a human phenomena occurring usually during sleep and is mediated via the brain.

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<sup>15</sup> *Catechism of the Catholic Church*, no.364, p.93, quoting *Gaudium et Spes* no.14

<sup>16</sup> *Catechism of the Catholic Church*, nos.362-368, pp.92-94

<sup>17</sup> *Catechism of the Catholic Church*, no.368; p.94

This may offer another tangible soul-brain link which strengthens the unity between soul and body, so recognising the centrality of the brain in the universal phenomena of human dreaming. For Christians, it also means being attuned to the divine as demonstrated in the biblical narratives. The association of the soul with the biblical notion of heart and the biblical tradition of dreams would also bring a much-needed scriptural component to what has chiefly been philosophical explanations.

#### Answering Questions about Dualism

A contemporary Catholic understanding of the soul and body as psychophysical unity will still appear to be too dualistic to hard materialists and many. One foreseeable means to mediate the differing views is to introduce some explicit references to space-time and eternity. The materialist who is also an atheist can share common ground about matter situated in time. What happens after death need not be of any trouble if the atheist does not believe in some form of existence *post-mortem*. The body will still be what it is; the main difference is that some believe that the body as one human nature is animated by a spiritual principle.

On the other hand, a Catholic perspective is also materialist, and actually sees the deeper unity of body and soul.<sup>18</sup> Here the proposal means overlooking those Thomists who endorse a more dualist interpretation. To be materialist means being immersed in the world of neuroscience which is the proper approach to the neurobiological understanding of brain and therefore partially of mind and personhood. It is only a partial understanding of the latter because the brain is not the mind in a nonreductive account. In other words, mental phenomena and human behaviour cannot be reduced to electrical activity and chemical processes in the brain. Personality, society and culture also influence people, their minds and brains.

A conservative position is to hold to the traditional teachings about the soul, which are not at risk as they are metaphysical beliefs, at a safe distance from future revisions or disproof via scientific explanations. Even with this position, however, a careful exploration of scientific research will uncover some new insights that may be confidently included in the official teachings.

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<sup>18</sup> *Gaudium et Spes* no.14, quoted in *Catechism of the Catholic Church*, no.364, p.93,

What seems a dualistic aspect of traditional Catholic teaching concerns what occurs after the end of life caused by brain death, namely, a separation of the soul from the body which is dead. In addition, personal identity somehow survives bodily death. This is also a difficulty for Tommaso who holds that it is against the nature of souls to be without bodies. It actually happened to Jesus after his death and before his resurrection, as discussed in Part III. His human soul was separated the body laid in the tomb on Good Friday.

However what is contrary to nature, according to Tommaso cannot be perpetual. Therefore the soul will not be body-less, because if it persists perpetually, it must be united to the body once more. For Tommaso and his fellow Christians, this implies that the body will rise again; hence the immortality of souls appears to necessitate a future resurrection of bodies.<sup>19</sup> In this way a Catholic understanding can be faithful to the reality of the finitude of all life on earth and still concede a transitory separation of body and soul. As noted, however, there are theological theories which do not envisage or require an intermediate state.

This ought not trouble those who do not believe in a continuation of personal identity *post-mortem*. In short, the special creation of the soul begins the psychophysical unity of a person in earthly or cosmic space-time; this unity dissolves at death while the spiritual principle continues one's personal identity, awaiting the resurrection of the body and a new body-soul existence at the end of time.

### Contemporary Thomism

Elements of classical Thomism is contained in the official church teachings about the soul, and Part III explored how Thomists acknowledge the scientific and philosophical realities today and then apply and expand Tommaso's thinking. Whether it is convincing, especially to non-Thomists, is another question. It does, however, shows a willingness to find out, on the part of Thomistic thinkers. Yet some observe how there is a temptation to use Thomistic doctrines to oppose

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<sup>19</sup> Aquinas, *Summa Contra Gentiles IV*, Ch.79, para.10, p.299; see also Ch.79, para.11, p.299; *Catechism of the Catholic Church*, no.988, 997; 999-1000; pp.260-261

reductive materialism. Faith and science are searching for truth. It requires a philosophical anthropology that connects faith and science, intelligible to scientists.<sup>20</sup>

A contemporary Catholic understanding of the soul needs to find new language and expressions. Among other things, this would help to counter misunderstandings by scientists of the claims of the tradition.<sup>21</sup> They might also help address one of Rahner's descriptions of the soul as an "element within the totality of man which can be encountered immediately and in itself, and distinguished empirically and in test-tube from the rest of him."<sup>22</sup> In fact the Catholic teaching is that spirit and matter are not two natures united, "but rather their union forms a single nature."<sup>23</sup>

There is also, as seen earlier, diversity among contemporary Thomists which may seem both expected and yet somewhat paradoxical, given that Tommaso was a thinker who searched for truth, considered opposing views and wrote precisely in Latin clearly setting out his pathways of reasoning. Supposing a Catholic understanding chooses to use hylomorphism, it must continue its engagement with brain questions, at the risk of objections from materialist thinkers.<sup>24</sup> Unquestionably the brain and body are physically knowable, and neuropsychology can elucidate mind-brain relationships. However, a Catholic view would counter any move to completely materialise the spiritual principle and would be particularly wary of any trend which aims to eliminate the soul, along the lines of what eliminative materialism did to the mind.<sup>25</sup>

One typical Thomist characteristic which warrants some further consideration, even in a physicalist scientific climate, is that the soul unifies and integrates an organism

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<sup>20</sup> Roger Scruton, "Connecting Catholic Anthropology to a Secular Culture," *Edification: Journal of The Society for Christian Psychology* Vol.3 No.1 (2009), pp.80-82 (p.80)

<sup>21</sup> For example, as quoted earlier, McKay's notion that when a part of the brain is destroyed, there is "an ejector-seat operation whereby the mind or soul takes off and presumably waits for a new charge." MacKay, *Behind the Eye*, p.259.

<sup>22</sup> Rahner (trans. Dych), *Foundations of Christian Faith*, p.30

<sup>23</sup> *Catechism of the Catholic Church*, no.365; p.93

<sup>24</sup> Clark, *There is no non-materialist neuroscience*, pp.147-149; Farah & Murphy, *Neuroscience and the Soul*, p.1168

<sup>25</sup> P.M.Churchland, "Eliminative materialism and the propositional attitudes," *Journal of Philosophy* Vol.78 (1981), pp.67-90; Geoffrey Hunter, "The Churchlands' Eliminative Materialism: or The Result of Impatience," *Philosophical Investigations* Vol.18 No.1 (January 1995), pp.13-30. Hunter thinks eliminative materialism is important "only for its current influence, not for its truth or likelihood. As A.E.Housman said in another context, 'Works of this sort are little better than interruptions to our studies.'" (p.29)

such as the human body through its changes, maintaining its identity.<sup>26</sup> The human body is in an unceasing state of molecular flux, wherein nearly all of the atoms are replaced every two years. But as the pattern of the molecular interactions continues to be the same, it is thought that here is a basis for “the substantial unity and identity of an individual with a lifespan of eighty or more years”, and for example, “vision is a capacity that emerges from the network of molecular interactions that define the man as a human being. Ultimately, it is rooted in the soul.”<sup>27</sup>

The human animal is understood as a substance comprising informed matter, and one dynamic system of molecules organised into a species-specific configuration, which is ordered towards a certain biological end.<sup>28</sup> Furthermore, the human animal is a substantial being, where the autonomous molecules as such; rather they different parts of one human organism. This three dimensional, species-specific network, situated in time exists in the determinist process of human development. It is described as “a manifestation of the human being’s formal principle, his immaterial soul. It is the soul that makes a man a human animal by organizing the matter, by determining his identity, and by specifying his biological end.”<sup>29</sup>

One anticipated persistent area of tension with secular scientists is the nature of the special creation of the soul and alternative accounts via non-interventionist divine action. It may take some time before any consensus on Thomist tenets such as: that God creates, that the appearance of human beings in evolution is an ontological leap, and that each person as a soul/body unity is unique, and that persons have continuing identity after death and await resurrection.

### Continuing a Dialogue

Future dialogue can benefit from a multidisciplinary collaboration. Faithful to the spirit of dialogue, those contributing to the exchange of ideas can also learn from Catholic thinking which has profound perspectives on life, time and eternity,

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<sup>26</sup> Nicanor Pier Giorgio Austriaco, O.P., “The Soul and Its Inclinations: Recovering a Metaphysical Biology with the Systems Perspective,” in Pontifical Academy of St. Thomas Aquinas, *Doctor Communis: Human Animal: Procreation, Education, and the Foundations of Society*, Proceedings of the X Plenary Session 8-20 June 2010 (Vatican City: Pontificia Academia Sancti Thomae Aquinatis, 2011), pp.48-63

<sup>27</sup> Austriaco, *The Soul and Its Inclinations*, p.55

<sup>28</sup> Austriaco, *The Soul and Its Inclinations*, p.56

<sup>29</sup> Austriaco, *The Soul and Its Inclinations*, p.57

seemingly too vast for neuroscience's method of controlled experiments, each one original in order to be publishable, with limited sample sizes, targeted aims and conclusions. The research findings definitely augment the rapidly-expanding body of knowledge,<sup>30</sup> but generally as one more new piece added to a mounting unindexed archive, which for the most part narrowly and necessarily specialised and uncoordinated.<sup>31</sup>

A practical question is, with whom does one dialogue with? The neurosciences across the globe have many laboratories and practitioners, with no overall or even agreed spokespersons, except perhaps for popular authors and experts speaking in the mass media.<sup>32</sup> Now we look back and look forward.

As the thesis has made clear, dialogue on the matter of the human soul is a very difficult exercise, from both religious and scientific perspectives. A mediating position is perhaps a comment by the philosopher L. Dupré who acknowledges that while the origins of the idea of the soul are pre-Christian, "I would hesitate to touch on a subject that has received such a long continuous acceptance and such careful philosophical reflection. Nevertheless, I am not convinced that theology ought to close this subject to further discussion. ...As long as the belief in life after death is not jeopardized, I do not believe that either natural development or divine intervention is excluded."<sup>33</sup>

In addition to some suggested areas of mutual discussion raised in the previous chapter between philosophers and scientists, e.g. the meaning of terms in the respective disciplines, another one proposed earlier in the thesis was human dignity, in the context of neurodegenerative conditions, memory loss and the sense of self. It needs to be remembered that the Catholic view, shared by various other Christians,

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<sup>30</sup> Koch & Reid, *Observatories of the mind*, pp.397-398; Buzsáki, *Rhythms of the Brain*, pp.109-110

<sup>31</sup> As noted in Part I, it is ever-expanding research that is comprehensive but unintegrated due to its sheer volumes. Steriade, *The Intact and Sliced Brain*, p.65

<sup>32</sup> But on matters of life and time, dialogue is likely promising in an evolutionary framework. For example, Tommaso's comparative ideas of the human soul i.e. the rational soul with the simpler nutritive and sensitive souls, and comparisons with brute animals as opposed to reasonable beings.

<sup>33</sup> Louis Dupré, "Intelligent Design: Science or Faith?," in Louis Caruana (ed.), *Darwin and Catholicism - The Past and Present Dynamics of a Cultural Encounter* (London and New York: T. & T. Clark, 2009), pp.171-180 (p.179)

the human body shares in the dignity of "the image of God": it is a human body precisely because it is animated by a spiritual soul.<sup>34</sup>

Then again, the 'ontological leap'<sup>35</sup> of the soul in human nature is something to be further explored in dialogue with materialists and contemporary theologians alike. Besides evolutionary brain evidence for human uniqueness, one could advance the case for a spiritual dimension unique to human beings, namely, the souls. This can be part of a wholistic and even transcendent portrait of human beings. As mentioned already, to think humans are apes is to contradict Darwin's intent to study the origin of the human species, and thus reduce humans to their descent.<sup>36</sup>

A contemporary perspective on the soul therefore should be eagerly seeking new information on how the brain within the body may relate to the spiritual principle, and how to dialogue with concepts and language from the neuroscientific era. Respect for the dignity of the human person and human rights are universal concerns. To whatever humanitarian grounds there exist for respecting persons, the spiritual principle which is also believed to be universal reinforce the value and uniqueness of human.

Finally, we noted at the beginning of the thesis how traditional Catholic thinking on the soul is a philosophical, theological and ecclesial account of the soul. This latter *ecclesial* characteristic is at times missing from dialogue about philosophy and theology in relation to the sciences. Its absence does not mean it lacks meaning. On the contrary, the spiritual nature of persons, especially their life after death, is manifested in the Catholic Church as the Communion of Saints, a bond of charity and of communion with the dead and the one family of God.<sup>37</sup> As we saw during the thesis, the belief in the resurrection of the dead is embodied in Catholic worship and expresses the belief that the bonds forged during life endure.<sup>38</sup> The funeral rites affirm the union of the Church on earth with the Church in heaven. Although

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<sup>34</sup> *Catechism of the Catholic Church*, no.364; p.93. On the other hand, there is not agreement among all Christian scholars about the soul. There are, as seen earlier in the thesis, other Christian thinkers who see no need for a soul, such as those advocating nonreductive physicalism.

<sup>35</sup> ITC, *Communion and Stewardship*, no.64, p.244

<sup>36</sup> Marks, *Darwin's ventriloquists*, p.2

<sup>37</sup> *Catechism of the Catholic Church*, no.946-962; pp.247-250

<sup>38</sup> ICEL, *Order of Christian Funerals*, no.4, p.2

separated from the living, the deceased are united with the community of believers on earth and benefit from their prayers.<sup>39</sup>

These major communitarian dimensions are part of the beliefs of Christianity as expressed in the Apostles Creed. This includes belief in the holy catholic Church, the communion of saints, the forgiveness of sins, the resurrection of the body, and life everlasting. For Catholics, this is perhaps the most meaningful and ultimately significant contexts for the soul and body of human persons.

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<sup>39</sup> ICEL, *Order of Christian Funerals*, no.6, p.3