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2012

An investigation into the neural substrates of virtue to determine the key place of virtues in human moral development

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Publication Details

Mullins, A. P. (2012). An investigation into the neural substrates of virtue to determine the key place of virtues in human moral development (Doctor of Philosophy (PhD)). University of Notre Dame Australia. <http://researchonline.nd.edu.au/theses/78>

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## Chapter 1

### Aristotle and the neuroscientists sit down to talk.

“There is something at work in my soul, which I do not understand.”

*Frankenstein; or, The Modern Prometheus*

Mary Shelley

#### 1.1 The structure of this study.

This study argues that the Aristotelian-Thomistic theory of human flourishing, the acquisition and development of virtues that are understood as stable and intentional dispositions of character to behave in habitual, specific, positive ways, is supported by neuroscientific knowledge.

**Chapter 1** commences with a preamble in which *prima facie* evidence is presented to support the view that there are both material and non-material factors involved in the analysis of human rationality. I situate this task on the spectrum of contemporary approaches to philosophy of mind, discussing advantages of the hylomorphic philosophy of the person and critiquing various other philosophies of mind. I place the study within eudaimonist virtue ethics in the tradition of Aristotle and Aquinas. Further possible outcomes of this study are then projected: a scientific validation of virtue ethics, benefits to be derived by virtue ethics itself from the cross disciplinary insights of neurobiology, and brief reflections on the potential contribution of moral education and parenting.

This multidisciplinary study will focus both on current neuroscience and on Aristotelian-Thomistic notions of virtue. **Chapter 2** proposes six lines of neural investigation that appear to be of most relevance to this study. In **Chapter 3** I examine the Aristotelian-Thomistic view of virtue illustrated by real life case studies. In **Chapter 4** I investigate the distinctive contributions of prudence, justice, temperance and fortitude, the virtues which Aristotle and Aquinas regarded as core dispositions of mature character. I seek to draw conclusions

about what is known as the “unity of the virtues”, the view that these four cardinal virtues play an integral part in every human act.

The central methodology of the study will be to propose the neural structures and processes that appear to underpin the identified characteristics of virtue. **Chapter 5** proposes this alignment of neuroscientific data. Finally, in the light of what has proceeded, in **Chapter 6** I investigate the notion of flourishing. I reflect on the biological aptitude of the human being for the acquisition and development of virtue, and draw out implications of this study for science, ethics and moral education.

In summary, the central areas of investigation in this thesis are:

- To develop a methodology by which I can identify the core characteristics of the Aristotelian-Thomistic view of moral virtue.
- To identify, on the basis of current neuroscientific knowledge, the neural substrates that may reasonably be demonstrated to play a substantial role in the acquisition and exercise of virtue.
- In the light of neurobiological evidence, to draw conclusions about the role of virtue in human flourishing.
- To consider wider implications of these findings, with particular respect to philosophy of mind, ethics and parenting.

## **1.2 Preamble. The *prima facie* case.**

The monster that Victor Frankenstein fashions from the sinew and cartilage of dead men is endowed with intelligence, a yearning for happiness and love, but also a fearsome capacity for burning hatred and vengeance. Frankenstein had proclaimed that his experiments would “unfold to the world the deepest mysteries of creation”,<sup>1</sup> and he does not disappoint us. There is a depth of being in the creature for which dead flesh can offer no account. I do not intend a

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<sup>1</sup> Mary Shelley, *Frankenstein*, (New York: Barnes & Noble, Inc., 1993), 40.

deeper analysis of this fable, yet, as an introduction to the task of this study, it confronts us with questions about human existence, about that by which we are constituted, and about that to which we look for fulfilment. We too are bone and sinew, yet we too yearn for happiness.

In this preamble I overview *prima facie* evidence that our biological processes are implicated in our rational function. First of all in **1.2.1** I examine phenomena that suggest there is a physical substrate to human rationality. Second I consider phenomena suggesting that any wholly material conception of human rationality may have explanatory deficiencies. Third I look briefly at intimations of a profound integration of the rational and the material.

In **1.2.2**, I consider the *prima facie* evidence for neuronal implication in the acquisition and exercise of moral virtue, understood as good habits.

### **1.2.1 Material and non-material constituents to human rationality.**

Phenomena at the genetic, biochemical, and neuroscientific level suggest that the material is implicated in what is commonly understood as the rational. Philosophy also offers arguments that implicate the physical in mental activities.

At first sight many of the points below (in **1.2.1.1**) would seem to invite material explanations for rationality that would overcome the apparent problems. Yet (as will be seen in **1.2.1.2**) material explanations for rationality struggle to account for human freedom.

#### **1.2.1.1 We are not disembodied spirits. Evidence of the involvement of the physical in rationality.**

Aristotle pointed out that the health and age of the body affects intellectual function. Just as the elderly would see more clearly had they eyes of youth; so too we think with greater clarity when our bodies are in their prime.<sup>2</sup>

What we do with our body, and what happens to our body, influences our mental state.<sup>3</sup> It is clear that all cognitive activity is unconditionally dependent on certain bodily parameters, for example, loss of oxygen leads to loss of consciousness and cognitive function. Experiments show time and again that a negative environment can contribute to a negative mood, and vice versa. In a similar way we see that learning is dependent on directed attention, and knowledge on accurate information gathering by the bodily senses.

There is considerable *prima facie* evidence for a strong biochemical component to human behaviours. For example behaviours can be triggered by sensory inputs (the need to care for a sick child elicits extraordinary generosity from a mother); drug therapies can profoundly affect our mood, our behaviours, and the way we perceive the world; the dissemination of hormones in the body can also affect behaviour.

Conversely, thought seems to lead to bodily changes,<sup>4</sup> thoughts seem to trigger chemicals! For example, just thinking of a scene can increase our blood pressure. The mere apprehension of a stimulus can initiate behaviours, or unleash passion, triggering a biochemical cascade propelling action. This would appear to suggest that there is natural affinity between thought and biochemical processes or at least a biochemical component to the human experience of thinking. Without such connaturality, no interaction would be possible. Furthermore we see that our past behaviours influence even unintentional future behaviours, as is the case

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<sup>2</sup> Aristotle, *De Anima*, 408b. (Hereafter *DA*.) Aristotle. *The complete works of Aristotle*. ed Jonathan Barnes. Princeton, NJ: Princeton University Press. Volumes 1 and 2.

<sup>3</sup> Typified in the science of biological psychology. See for example, S. Marc Breedlove, Neil V. Watson and Mark R. Rosenweig, *Biological Psychology. An introduction to Behavioural, Cognitive and Clinical Neuroscience*, 6th ed. (Sunderland: Sinauer Associates Inc, 2010).

<sup>4</sup> See discussion, for example in J. M. Schwartz and S. Begley, *The Mind and the Brain* (New York: Harper, 2002), 319.

most dramatically in addiction. That this can happen even in the case of *unintended* future patterns of behaviour, seeming to suggest that our actions can create some *material* blue print for future action. Our actions seem to change us as people.

Furthermore, our genetic makeup, including temperament, exerts forces on us to act in particular ways: often a decisive influence on behaviours specific to the species, and a major influence on our temperamental behaviours over which we maintain some capacity for modification. Genetically attributable behaviour may be traced to the programmed release of specific amino acids into our developing metabolism. In other words, chemicals are ultimately a significant influence on the type of person we allow ourselves to become.

Neural studies show that illness, and impairment in specific brain areas, have cognitive consequences. It has been shown that certain cognitive processes (such as the capacity to plan and to have due regard for consequences) are impaired if there is damage to the *prefrontal cortex* (PFC).<sup>5</sup> It is also well documented that these neural pathways of the PFC can be interfered with by powerful emotional experience. Also, vivid memories and extreme sense input can override activity in the PFC, cutting out of the loop circuitry apparently essential for cognitive processes.<sup>6</sup>

Memories, initiated by electrical messaging from the senses, can have rich emotional associations and be integrated with our cognitive life. Images arising in our memories are capable of evoking not only impulsive behaviours but of initiating considered behaviours; for example sight of an animal suffering beside a road may, on the basis of certain past experiences, provoke us to stop a car, pick up the animal, and pay veterinary fees. All this suggests that concrete material

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<sup>5</sup> To be discussed at length in **Chapters 2** and **5**.

<sup>6</sup> For example Post Traumatic Stress Disorder (PTSD) deficits can be effectively treated by cognitive-behavioural therapies (CBT). See discussion: JoAnn Difede and Judith Cukor “Evidence-based long-term treatment of mental health consequences of disasters among adults” in Y. Neria et al. *Mental health and disasters* (Cambridge: Cambridge University Press, 2009), 336-339.

input to the mind is decisive in higher function. Furthermore, it is clear that there is emotional interaction with cognition. Encouragement and emotional affirmation are shown to help children learn; the provision of information may well be inadequate to help a child acquire knowledge, behaviours or habits, or the motivation to do so.<sup>7</sup>

It is common experience that specific memories can be very concretely associated with other specific memories created at the same time.<sup>8</sup> Hence, a memory can trigger very specific previous associations in the mind: for example sliced potatoes might always bring to mind Friday nights in front of TV as a child; potato scallops always bring to mind a specific fish shop; the sight of a vodka bottle evokes a particular moment in time thirty years before, etc. This is consistent with the accepted principle of neuronal development, “neurons that fire together wire together” (see **2.2.1**), that more direct connections form between associated memories and associated actions. Too often experience shows that people out of sight fall out of mind. Skills, memories, and even human relationships, can deteriorate over time. Such degradation is consistent with biochemical explanations at the synapse.

#### **1.2.1.2 Nor are we mere bodies. Intimations of the non-material.**

Learning takes time, but insight and choice, can be instantaneous. In a flash of illumination, a person may conceive a new profound and complex insight, or totally change an opinion. This suggests a fundamental difference between these manifestations of rationality. That certain intellectual processes take place in what appears to be an instantaneous way suggests that material processes are less significant in certain operations of knowing or choosing. This is consistent with the insights of Aquinas.<sup>9</sup> The bodily process of acquiring sense data, and presenting a

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<sup>7</sup> Teresa M McDevitt and Jeanne Ellis Ormrod, *Child Development and Education* (New Jersey: Merrill, 2010), 425-427. Also see Motivation. 480-515.

<sup>8</sup> This associative principle is central to the development of neural connectivity.

<sup>9</sup> Aquinas, *Summa Theologia*, ed. various (Cambridge: Blackfriars/McGraw Hill, 19650, Q.75, Art.2.

coherent image to the mind may take time, but the person grasps knowledge instantaneously.<sup>10</sup> For this reason, Aquinas argues it is “impossible for (the mind) to understand by means of a bodily organ.”<sup>11</sup>

Man can transcend the material and the concrete. He may, for example, choose to respond with habitual detachment to the material world; in the midst of constant contact with consumerism and access to all comforts and pleasures, he may keep himself detached. As an extension of this insight, it is universal experience that man has the capability of acting contrary to emotional and bodily impulses. For example, one can resist action consequent to a specific emotion such as anger or hatred. Not only can one resist emotion, one can still carry out an action out of conviction or will power when there is indifference or apathy at the level of feelings.<sup>12</sup>

Although man’s senses may access only sense knowledge, we see that man can develop and hold to beliefs and convictions that are not sense derived however much sense experience may be necessary to convey them.

The not infrequent occurrence of altruism, of aid to others through one’s time, energy or money without tangible reward, indicates that non-material factors play a significant role in human motivation.<sup>13</sup> Non tangible realities can move us physically and even change us as persons.<sup>14</sup>

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(Hereafter *ST.*) Aquinas suggests that while “The body is necessary for the action of the intellect”, it is so, “not as its organ of action, but on the part of the object; for the phantasm is to the intellect what colour is to sight.”

<sup>10</sup> Furthermore, human beings are capable of conceptual discussion, again indicating a capacity to transcend the immediate and material.

<sup>11</sup> *ST*, Ia, Q.75, Art.2.

<sup>12</sup> Mischel’s experiments in 1972 into infant capacity for delayed gratification demonstrate the human capacity to transcend concrete incentives. Behaviours can be opposed to considered choices at times: one can find oneself following behaviours contrary to what one wishes were the case, for example in the case of addictions or a weakness of will. We are conscious of alternatives to the material and immediate. Walter Mischel, et al., "Cognitive and attentional mechanisms in delay of gratification," *Journal of Personality and Social Psychology* 21,2 (1972): 204–218.

<sup>13</sup> That rationality has the capacity to respond to the non material is also demonstrated in the observation that faith-based convictions or ideals that motivate behaviour. Take for example the teaching of Therese of Lisieux that we should attend to the smallest detail out of love of God:

In contrast it appears that an animal can only be motivated by sense-affecting incentive. The apparent contrast between human and animal behaviours suggests that man is capable of operating at a level transcending the immediate. There is no conclusive evidence that any animals, even primates, have the capacity to manage their own actions outside of an immediate context, nor do they appear to have any equivalent to man's capacity to direct his own actions on the basis of prior mental reflection.

### **1.2.1.3 A *prima facie* case exists for a profound integration of the physical and rational in the human person.**

This study, in line with the Aristotelian-Thomistic view, understands human beings as "ensouled bodies", "animated flesh". Human rationality and biology are fully integrated. Possessing a non-material dimension, human beings enjoy, within limits, the capacity to make free choices.

By this view it appears incorrect to attribute agency to the body or to the mind. Rather it is the position of this study that it is the person who acts. Our somatic and rational faculties are integrated in human operations. It is the sensing, emotion-responding person who acts. The person imagines, remembers, desires, conceptualises, and thinks logically and rationally.

A strong *prima facie* case exists for a profound integration of the physical and rational in the human person:

- i. It may be argued that the capacity we have to modify our habits and behaviours, and ultimately personality, derives from the material dimension to our personality. Matter by its very nature is changeable. A

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"Miss no single opportunity of making some small sacrifice, here by a smiling look, there by a kindly word; always doing the smallest right and doing it all for love."

<sup>14</sup> Loving relationships attest to the reality of the non material. The reciprocal gift of persons in a loving relationship, a non-material form of gift that does not diminish the giver, is only conceivable in a world of non material realities.

corollary of this profound integration of body and mind is that man achieves his end in his body or not at all.

- ii. Passion and reason are able to be integrated. Emotion and passion may lead to impulsive, imperfectly rational responses, yet universal experience is also that an emotion-proposed course of action can be tested against principles of reason and either pursued or rejected.
- iii. We are able to inform these principles of reason by general laws to which we bind ourselves in conscience. We are capable of testing intended actions against conscience. Conscience then may be reasonably proposed to consist in a judgement based on universal principles, transcending specific memory and hypothetical action. In each judgement of conscience there are complex interplays of concrete and the universal evident.<sup>15</sup>
- iv. The interplay of the immediate and the universal suggests a profound integration of body and rationality. Aquinas and Aristotle proposed a psychological model in which universal knowledge is derived from immediate sense knowledge.<sup>16</sup> They suggested that intellectual knowledge is derived from the senses. Universals are necessarily linked to experience of the particulars. Aquinas argues that the material phantasm or image facilitates the grasp of universals. Whenever we reason, we reason with reference to the particular. Even in a simple syllogism, universal terms evoke accompanying specific images and specific characteristics:

Frankenstein’s creature seeks vengeance on humankind.  
Dr Frankenstein is human.  
The creature seeks vengeance on Frankenstein.
- v. Rationality appears to begin in sense knowledge but utilises rules of logic, analogy, and inductive processes to move from the specific to the general rule or conclusion. The concrete and material plays a necessary role in rationality, but rationality transcends the concrete. Reason would not be able to know universals and manipulate sense data by means of inductive and deductive reasoning were the intellect not integrated with the senses.

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<sup>15</sup> Refer for example to the model of the human act proposed by Aquinas. See **3.1.3**.

<sup>16</sup> See discussion below in **1.4.2**.

- vi. It can be argued that distinctively human activity always requires involvement of the intellect. It would appear that the body can operate without the mind (although such “vegetative function” may not be described as truly human activity), but application of the rational powers appears to require bodily-dependent capacities such as imagination, sense knowledge or memory of the specific events or of concrete objects, and desires. For example, human acts can be triggered at times by simple sensory input, such as the smell of food, the picture of a loved one. Concrete symbols, such as a blood soaked flag, or a cross, can carry associations of meaning that can stir us to considered action.<sup>17</sup> The Thomistic view is that the point of death is that point at which bodily functions are no longer able to sustain rationality.
- vii. A rational act may be conducted through the instrumental activity of the body. Action in and through the body involves complex neural instruction to muscles as well as monitoring of feedback from our senses and muscles. There is a profound integration of the biomechanical with higher functions of goal setting and executive direction of activity.
- viii. Persons are able to express their very selves and communicate by medium of material things. For example, we express our love of benevolence towards others by means of material gifts. We use words, complex patterns of compression waves through the atmosphere, to convey notions of truth, beauty, and goodness.
- ix. Rationality is not an end in itself. It may be argued that rationality empowers human beings to love, to unite their own will to that of another. In this view, rationality is fulfilled by generosity and gift of self.<sup>18</sup> In this context, reason enables us to transcend the material, in order to know and love others.

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<sup>17</sup> See discussion pertaining to scenarios in **3.1.2**.

<sup>18</sup> An advocate of this rationally founded view has been John Paul II who insisted that man is fulfilled by loving and experiencing the love of others. *John Paul II, Familiaris Consortio*, 11. “Love is the fundamental and innate vocation of every human being.” See also discussion of fulfilment in my **Appendix 1. A Response to the Claims of Emergent Rationality by Non-reductive Materialism**.

- x. A profound unity of hearts and minds is seen to exist in certain relationships between persons. Such profound union appears to be nourished by positive emotional engagement, attention, touch and communication. The material facilitates the transcendent. It is generally agreed that the bodily phenomenon of emotions plays a significant role in helping us empathise and connect as persons. Furthermore, love between human beings appears better able to flourish where there is contact and communication. The more present, the more personal; the more concrete our experience of the other, the more love is facilitated.
- xi. Similarly, it may be argued that the capacity to choose to unite oneself to the will of another is necessarily evidence of freedom and hence of a non-material dimension to personality.<sup>19</sup> It may be argued that the highest expression of human existence is to be found in reciprocal relationships where fulfilment of the will of the other is the goal.

### **1.2.2 *Prima facie* evidence for a neuronal underpinning of virtue**

I suggest that the neuroscience of virtue, understood in the Aristotelian/Thomistic sense, offers a pleasing consonance with the natural world. The development of virtue, in contrast with other ethical paradigms, is proposed as necessarily experiential: this is consistent with the explanation that developing neural structures of the human brain require experience and environment for maturity.<sup>20</sup>

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<sup>19</sup> The capacity to be able to *choose* to unite one's own will to the will of others (a capacity we see in obedient children and teenagers, diligent workers, spouses in close relationships, soldiers in battle) counters arguments asserting that human actions are predetermined by biology. Even if, in refutation of such a free will argument, one attempts to argue that the very choice to do what someone else suggests may be biologically dependent, nonetheless to commit oneself to *always* follow the will of another, for example in a committed relationship of love, effectively cuts one's actions loose from one's biology. It is absurd to argue that while some people have a biological predisposition to act in individual and specific ways (ie heeding sensible appetency), others have a biological predisposition to commit themselves to the choices of another (ie heedless of sense appetency). This would be to have a bet both ways. Hence, this is an effective refutation of biological determinacy.

<sup>20</sup> It is evident that there are no "child prodigies" when it comes to virtue. It is necessary to work at one's character.

Furthermore, informed by the explosion of neuroscientific knowledge in recent decades, it is reasonable to propose that several major neurobiological strands are implicated in any neurobiological component to virtue.

- Neural plasticity which permits alterations to established, or establishing, neural connections. Closely associated to plasticity are the mechanisms of synaptic strengthening.
- Mechanisms for learning, memory, habit formation, imitation, emotional management, goal election, and executive control.
- An understanding of the various discrete constituent structures of the brain, together with a mapping of neural interconnections.
- The contribution that integrated systems and complex neural mechanisms play in support of human rationality.

On the basis of advances in neuroscientific knowledge and on the Aristotelian notion of moral virtue as a habit directed towards human flourishing (see **1.6.3** and **Chapter 3**), it is reasonable to propose for investigation the following *prima facie* evidence for a neuronal underpinning of virtue:

- i. Insights into neuronal development and its relationship with behaviour appear to be consistent with the notion of virtue as a preferred model for moral development. This is because virtue development is experience based rather than theory based. It is derived from analysis of the facts of human experience, development and flourishing, rather than from intuitive, internally consistent, principles. Hence, a study of the neuroscience of virtue is not an arbitrary choice to study one ethical system among many, but a choice well grounded in the compatibility of virtue development with neuroscientific knowledge.
- ii. The brain is plastic. Every experience brings about functional response of some type in the brain. Structural change can accompany and underpin functional responses, in a wide array of neural processes collectively known as structural plasticity. Developmental plasticity is essentially

irreversible; this plasticity with respect to processing of sensory inputs and control of motor function is now well established. It is also well established that plastic neuronal change is at work in learning and in that particular form of learning classified as habit formation. I argue that plasticity is also a central neuronal process in those specific types of habit that we call virtue. (See extensive discussion of plasticity in **2.2.**)

- iii. Virtue is a form of learning. Various features of learning, for example habit formation, suggest a neurobiological basis, that learning has a material substrate in the brain. (See discussion of habit learning in **2.4**)
- iv. Certain pathways of habit formation are now quite well described. All behaviours are essentially reinforcing: the more we do something the more we reinforce that behaviour. (See discussion of habit formation in **2.4.**)
- v. Memory too plays a significant part in learning, and appears to operate via neurobiological mechanisms. (See discussion of memory in **2.3.**)
- vi. Imitation is a form of learning from direct experience. A neural component facilitating imitation, the mirror neuron, has recently been identified. Imitation is known to play a role laying down new neural pathways. (See discussion in **2.3.6.**)
- vii. There is considerable work now written on the interplay between emotion and rationality. This study focuses on the interplay of emotion, rationality and habit formation. (See discussion regarding regulation of emotion in **2.5.**)
- viii. The cognitive processes at the heart of executive control are understood to be supported by areas and processes in the cortex, particularly the PFC. This area of the brain maintains rich inhibitory linkages with the emotional centres of the brain. (See discussion regarding cognition and executive function in **2.7.**)
- ix. “Happiness is the reward of virtue” wrote Aristotle.<sup>21</sup> Virtue is the facility to act in ways that complement our nature bringing us increased self-

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<sup>21</sup> Aristotle, *Nicomachean Ethics*, 1099b16. (Hereafter *NE.*). Aristotle. *The complete works of Aristotle*. ed Jonathan Barnes. Princeton, NJ: Princeton University Press. Volumes 1 and 2.

mastery and fulfilment. This study will argue that human flourishing, including moral flourishing, has a biological basis, showing that there is a neuroscience of virtue development in which the brain has neural mechanisms that, if perfected, provide for ease of action in the moral sphere. I argue that virtue development is therefore the path of development for the human being most in accord with human nature, denoting maturity at the levels of personality and biological development.

### **1.3 Situating this study within contemporary approaches to the philosophy of mind.**

This current study falls into the field of philosophy best described as philosophy of mind. Therefore at this introductory point it is most appropriate to situate and justify this study in the field of contemporary approaches to the philosophy of mind. This will be a three step process. First I offer a broad overview of the various currents of contemporary philosophy of mind. Second **(1.4)** I review the basic tenets of hylomorphic theory as proposed by Aristotle and Aquinas. Third, especially in **Table 1.1** and in **Appendix 1**, I summarise the spectrum of contemporary positions in philosophy of mind and offer a brief hylomorphic critique of each.

In the history of twentieth century philosophy of mind there have been a number of more significant figures and lines of development. Among these we find Ryle and his articulation of logical behaviourism, Identity Theory developed by Lewis and Armstrong, Functionalism proposed by Putnam and Fodor, Davidson's articulation of non reductive materialisms, Dennett and Churchland with respect to instrumentalism and eliminative materialism, and Block and Chalmers, among others, in the search for philosophical understandings of consciousness and qualia.

This panorama has been characterised, for the most part, by materialistic and physicalist explanations for mental phenomena in which language also has played

a significant role. Recent years have been dominated by non-reductive physicalist acknowledgement of the reality of consciousness in an emergent paradigm. To some extent these currents are reactions to substance dualism, with its inability to explain causation in any rationally satisfying manner, and to behaviourism, with its reluctance to discuss matter at all.

Despite the quantity of writing and energy of debate, there is a certain sameness evident. None of the major lines of development of philosophy of mind in the twentieth century have accorded ontological legitimacy to the non-material. The non-material has been dealt with:

- i. In pragmatic fashion with no interest in metaphysical possibilities and explanations (logical behaviourism).
- ii. As causally disconnected (epiphenomenalism).
- iii. As immediately dependent on the material (Identity Theory, and type functionalisms).
- iv. As ultimately dependent on the material (emergentism, forms of functionalism, non-reductive materialisms such as Davidson's Anomalous Monism, and mentalist emergent views).
- v. Or as a fictional construct (eliminative materialists and projectivists, neurobiological physicalist explanations).

The inevitable outcome of mechanistic and materialistic approaches, and of epiphenomenal inabilities, is that contemporary philosophy of mind is generally dismissive of non-instrumental rationality and human freedom. None of the current approaches to philosophy of mind offer a way forward able to accommodate human freedom in a manner that is rationally acceptable.<sup>22</sup> This is the elephant standing in the philosopher of mind's lounge room because freedom cannot be easily dismissed. It is apparent that man possesses a certain freedom;

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<sup>22</sup> This is not to say that many philosophers don't accept and advocate an emergent free will. They do; but they are unable to offer any articulation of how the limitations of animal life can have given rise to man's demonstrable capacity for universal truths and freedom. In contrast stands the Thomistic model, based on an enriched notion of causality embracing formal causality, that man enjoys participation in rationality as a principle of unity and function.

indeed, freedom must be a prerequisite for such widespread belief in the need for ethics. Either the great architects of ethics, from the times of Socrates and Confucius, have been deluded, the historical and political figures who sought to improve the lot of man were acting on false presumptions, and the teachings of Christ and Muhammad deceive over half the human race into thinking we have any control over our actions – or our moral philosophies require an adequate account of human freedom. It is time to revisit the suppositions of contemporary philosophy of mind.

This denial of human freedom in philosophy of mind is found in much of contemporary neuroscience.<sup>23</sup> Larry Squire writes in standard reference text, “Neuroscience is a large field founded on the premise that all of behaviour and all of mental life have their origin in the structure and function of the nervous system.”<sup>24</sup> Another prominent neuroscientist, Nobel prizewinner Eric Kandel, is equally adamant. He writes,

Most neuroscientists and philosophers now take for granted that all biological phenomena are properties of matter. This physicalist stance breaks with the tradition of dualism stemming from ancient Greek philosophy. The break with the tradition that mind and consciousness arise from a mysterious interaction of spirit with body actually focused the problem of consciousness for the 20<sup>th</sup> century neuroscientist.

Philosophically disposed against dualism, we are obliged to find a solution to the problem in terms of nerve cells and neural circuits.<sup>25</sup>

The common view in neuroscience is simply that the materialist and the dualist are the fundamental categories defining attitudes to the mind-body problem: the

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<sup>23</sup> Neuroscientist Christof Koch substitutes “compatibilism” for freewill, the view that man has the capacity to follow his desires as determined by his chemical programming. See Christof Koch, “Finding Free Will,” *Scientific American Mind*, May/June, 2012, 22.

<sup>24</sup> Larry Squire et al. *Fundamental Neuroscience*, 3<sup>rd</sup> ed. (Burlington, MA: Elsevier, 2008).

<sup>25</sup> Eric R Kandel et al. *Principles of Neural Science*, 4<sup>th</sup> ed. (New York: McGraw-Hill, 2001), 1317.

materialist says that the mind is the body; the dualist says that the mind and body are two different things.

Kandel appears not to have considered the implications of a “different substances view” nor any non Cartesian understanding of mind and body interaction, namely the integrated view of Aristotle and Thomas.

#### **1.4 The hylomorphic underpinnings of this study.**

An Aristotelian-Thomistic understanding of the human person underpins this project. This multidisciplinary investigation into the neural substrates for virtue emphasises the rational person, the ensouled body, as the subject of action. In the sections that follow I explore this concept. The sections below (**1.4.1 - 1.4.3**) set out the hylomorphic, psychological, and personalistic frameworks underpinning the philosophical reflections in this current study. In **1.4.4** I discuss the relative merits of the hylomorphic approach.

In the quotation above Kandel reveals that he does not conceive of a third possible understanding of matter, one that is neither materialistic nor dualistic: this third way will now be presented as the hylomorphic view, that matter and mind are both expressions of the same reality. The clues are of course implicit in matter itself –when a human being dies, the body itself ceases to be a body, decomposing to a mess of chemicals that no longer have a principle of unity: it is evident there was a principle of unity that held the constituent substances in order. We need a wholly different view of this type of matter, matter that is ensouled. Only while it is ensouled is there a human body; the soul, or form, makes it to be what it is. The clues are in what we see; acceptance of hylomorphism does not depend on an interpretation of qualia or an appreciation of subjective experience, nor even on the debate about the degree of freedom man enjoys. Hylomorphism provides an account of matter that not only

accommodates universals and the possibility of freedom, but also what is manifested to our senses about matter itself.<sup>26</sup>

I look first at the key features of hylomorphic theory, the Aristotelian theory of substances, then specifically at living intelligent material substances in a review of the rational psychology developed by Aristotle and refined by Aquinas. Finally I review the evolution of the concept of personhood, in the Boethian sense as individual rational substance, through the fragmentation that followed Descartes and at recent efforts to restore the hylomorphic understanding of person. In the process I review the significance of an adequate understanding of person.

With these understandings, we then return in more detail to the principal currents of contemporary philosophy of mind **(1.5)** in order to offer the summary of current positions. In so doing I argue for the suitability of an hylomorphic solution to the mind-body problem and so prepare the way for the proposition that brain function is part-constitutive of human moral development.

#### **1.4.1 An overview of hylomorphic theory<sup>27</sup>.**

Aristotle's studies of the *what*, *how*, and *why* of existence were further developed by Aquinas. Their metaphysics and rational psychology seek to explain what makes things, including creatures and people, to *be*, to be *what* they are, and why they *act* the way they do. It is a satisfying, rich, coherent and systematized account that integrates science, psychology, ethics and social philosophy. Some understanding of the principles of their teaching is required in order to appreciate the potential it has to accommodate human behaviour and learning, the core area of this study.

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<sup>26</sup> See **1.5** and **6.4.2**.

<sup>27</sup> According to Royce, William James is on record as accepting hylomorphism as "probably the best ultimate explanation of man", although he himself did not adopt it in his writing. James also reached acceptance of the notion of soul "in which scholastic psychology and common-sense have always believed." William James, *The Will to Believe, and Other Essays in Popular Philosophy* (1897), reprinted in *Human Immortality: Two Supposed Objections to the Doctrine*, (New York: Dover, 1956), Vol. 1, 181.

## a) Substance

An appreciation of causality underpins the hylomorphic notions of substantial form and prime matter.

Aristotle proposed a theory of hylomorphism that non-material properties adhere together with material properties in a single substance.<sup>28</sup> Hylomorphism means “matter and form” (*υλη* meaning “lumber”, later “matter”; *μορφη* meaning “form”); the underpinning constituents of substance. Hylomorphism underpins the Aristotelian-Thomistic notion of virtue, the core matter for this study, and best describes the approach to philosophy of mind.

To understand what something is, Aristotle argued that it is necessary to employ a notion of causality, what causes it to be what it is. Defending the unity of substance, he argued that any material being is a composite of two co-principles of substance: substantial form and prime matter, reflecting notions, respectively, of act and potency. Substantial form makes something what it is; prime matter makes it potentially other things.<sup>29</sup>

He proposed that form perfects matter, making something the fundamental sort of thing it is.<sup>30</sup> Prime matter and substantial form bestow essence and compose actual material substance, which itself will be expressed through its characteristics, or “accidents”. Individual substances exist in themselves; a substance is that which can be “by itself”.

Aristotle’s notion of causality extends beyond activation of matter, to psychology, to learning and to acting, with significant implications throughout this study.<sup>31</sup>

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<sup>28</sup> The Shorter Oxford defines “hylomorphism” as “the doctrine that primordial matter is the first cause of the universe.”

<sup>29</sup> James E Royce, *Man and his nature* (NY: McGraw Hill, 1961), 287.

<sup>30</sup> Leslie Stevenson and David L Haberman, *Ten Theories of Human Nature*, 4<sup>th</sup> ed, (NY: OUP, 2009), 94.

<sup>31</sup> Alan Donagan, “Thomas Aquinas on human action”, in *Cambridge History of Later Medieval Philosophy*, (Cambridge: Cambridge University Press, 1982), 653. Donagan writes, “To many

### The act of *esse*.

To the preoccupation with “what things are” in Aristotle’s matter and form, substance and accidents, and act and potency, Aquinas adds an overriding existential concern about “why things are”, with the distinction of essence (what a thing is) and existence (the fact of its being).<sup>32</sup> “Because of (this)... stress on the act of existence, rather than upon substantial form, Thomistic metaphysics is said to rise above Aristotelian metaphysics.”<sup>33</sup>

Aquinas wished to address squarely the challenge of explaining how things may come into existence and may cease to be. He emphasized what he called the *unity of being*. He observed that finite beings may come to be and cease to be: they do not possess being. He taught that finite things are compositions of potentiality and act in two senses, first matter and form, but also, importantly with respect to essence (what they are) and *esse*.<sup>34</sup> A possible being has essence, but only a really existing being has *esse*. Hence essence is “in potency to” *esse*.

Aquinas emphasized that matter and spirit differ in degree of perfection of being, not in kind. This is a particularly significant insight providing a key to the refutation of a substance dualism that overlooks any principle of actual existence, the act of *esse*, and considers only the essence of material and non-material reality.<sup>35</sup>

Aquinas taught that unity of being comes from *esse*, and that every being that is created must *participate* in the Divine act of existing. Aristotle too had argued for

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twentieth century philosophers, the feature of Aquinas’ theory that is most objectionable is his retention of Aristotle’s conception of causation as the exercise of a power or capacity, which allows him to think of human beings themselves, and not only of events occurring within them, as genuine causes of their actions – ‘agent causes’”.

<sup>32</sup> Joseph Torchia OP *Exploring Personhood*. (Maryland: Rowman and Littlefield, 2008), 128.

<sup>33</sup> Herman Reith, *The Metaphysics of St Thomas Aquinas* (Milwaukee: Bruce, 1958), 111.

<sup>34</sup> “This being is distinct from that being inasmuch as it is the being of this or that nature”. Aquinas, *On the Power of God*, trans. English Dominican Fathers (Westminster, Maryland: Newman, 1952), Q.7.2. ad 9.

<sup>35</sup> Aquinas also differentiates between the human soul and the possibility of spiritual beings, subsistent and complete in themselves, such as angels or even God himself.

such an ultimate principle of existence.<sup>36</sup> “Since everything that moves and undergoes change requires an act responsible for initiating these processes, Aristotle reasons that the entire universe requires some ultimate principle of actuality.” To avoid the impossible situation of infinite regress, an unmoved mover is posited, the ultimate end, “the final cause producing motion as being loved.”<sup>37</sup>

#### The concept of participation.

Aquinas taught that substances possess being only *by participation*, that being is predicated of finite creatures by participation.<sup>38</sup> He wrote: “From that one being all other beings that are not their own being, but have being by participation, must needs proceed.”<sup>39</sup>

In summary, each actual finite being will be actualized in three ways: by a substantial form making it to be *that which it is*; by a participatory act of being, *that by which a thing is*, eg its colour, shape and smell; and, by further perfection *by its accidents* which are non essential characteristics of a substance.

#### Nature: the principle of operation.

Our behaviour follows upon the type of creature we are: “*operatio sequitur esse*”. Do follows be: “*agere sequitur esse*.” Observations of the operation of a being allow us to draw conclusions about its nature: “The nature of a being as such is not directly observable. We must observe its operations and then draw conclusions about its nature.”<sup>40</sup>

### **b) Soul**

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<sup>36</sup> In seeing existent reality as a dynamic act, Aquinas transcends the essentialist approaches that preceded him. He argued that the distinctive nature of human beings, with their capacity to grasp the non material, derives from their rationality which imparts a unique mode of existence. The intentionality of God is the first efficient cause, bringing things into being so his goodness might be communicated to creatures in a manifold and variegated manner. Torchia, *Exploring Personhood*, 131-2. See also *ST*, I, 47 1.

<sup>37</sup> Torchia, *Exploring Personhood*, 77.

<sup>38</sup> Torchia, *Exploring Personhood*, 129.

<sup>39</sup> Aquinas, *On the Power of God* Q.3. ad5. Aquinas, *On the Power of God*, trans. English Dominican Fathers (Westminster, Maryland: Newman, 1952), Q.3.5.

<sup>40</sup> Royce, *Man and his nature*, 25.

### Soul as life principle and principle of unity.

Aristotle taught that all life forms a hierarchy and that the life principle of something is its soul. Aristotle defines soul as “the actuality of a body that has life potentially”.<sup>41</sup> In other words, the soul activates the body.

Hence it is not accurate to think of the soul as a free standing substance. It is not a thing, but the very principle of unity of the body itself. The soul can admit no division for there is no further principle of unity. Whereas substances without souls expand through “addition”; a living thing is nourished when it “receives in its very self something that serves to maintain it”.<sup>42</sup> “Only ensouled things truly grow.”<sup>43</sup>

It is the soul that bestows on a substance its nature. “While it cannot be a body, it is in a body and a body of a definite kind.”<sup>44</sup> In contrast with Plato, Aristotle affirms the explicit contribution of the body to humanness. The body is potentiality with respect to the soul, “The soul is suited to be the form of a body; the body in turn has a receptivity to ensoulment.”<sup>45</sup>

It is better to talk of “ensouled”, having distinctive ways of functioning, rather than “having a soul” as if it were a substance.<sup>46</sup> Body and soul make one thing (*unum*) according to Aquinas.<sup>47</sup> The unity of the soul and body is illustrated by the integrity of wax and the imprint it bears.<sup>48</sup>

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<sup>41</sup> DA, 2.1, 412a

<sup>42</sup> DA, 2.9, 135-36.

<sup>43</sup> DA, 2.9, 152-3.

<sup>44</sup> DA, 2.1, 414a.

<sup>45</sup> Torchia, *Exploring Personhood*, 85.

<sup>46</sup> Matter of course is vital to the whole understanding; forms exist only in individuated matter. Matter is the principle of individuation.

<sup>47</sup> Robert Pasnau, *Thomas Aquinas on human nature: a philosophical study of “Summa Theologiae” 1a75-89* (Cambridge: Cambridge University Press, 2002), 73.

<sup>48</sup> DA 2.1, 412b.

Aristotle proposes that there are three kinds of soul: the rational, sensitive, and vegetative. Adopting a teleological perspective from Plato<sup>49</sup> Aristotle argues that the potency of matter is limited by its form, or soul. Fullness of potentiality, for example, “human flourishing”, is inherently associated with final causality, the purpose of human existence. Thus final and formal causes are related. As its form, the soul directs each living body to its true *telos*.<sup>50</sup>

Aquinas emphasises that the parts cannot survive without the whole.<sup>51</sup> The soul “perfects not only the whole but each part” of the organism, it is present as a whole in every part of the matter that it actualizes.<sup>52</sup> Nor, he writes in anticipation of Descartes’ error, is the soul to be found in a determined location in the body, “as a sailor in a ship.”<sup>53</sup> <sup>54</sup>The body itself does not remain after death;<sup>55</sup> as has been noted, the substance that is the being of the animal decomposes to its constituent substances.

“For living things, living is existing”<sup>56</sup>; “living is the mode in which living things have existence”. “The soul does not merely make the body to be of a certain kind, the living kind; the soul also gives a body its very existence.”<sup>57</sup> Hence, the decomposition of death, entails division and loss of this specific form; the prime matter is activated by other forms. “The soul itself forms that body that fits it; it does not take up one already prepared.”<sup>58</sup> The body has no existence outside of

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<sup>49</sup> Torchia, *Exploring Personhood*, 6.

<sup>50</sup> Torchia, *Exploring Personhood*, 77.

<sup>51</sup> 43, *Thomas Aquinas on human nature: a philosophical study of “Summa Theologiae”* 1a75-89, 93. This is not to say that the whole cannot survive without some of its parts at times.

<sup>52</sup> “The whole soul is in the whole body and in each of its parts, nor is it joined bodily as bodies are joined to each other... The soul performs all its operations through its powers.” Aquinas, *Summa Contra Gentiles*, trans. James F. Anderson (NY: Hanover House, 1955-7), II.72; cf *ST*, Ia, Q.76, Art.8.

<sup>53</sup> Aquinas wrote of ridiculous assumptions of those who consider the soul’s being in body as in a place, like a sailor in a ship, or as if it is a point at an indivisible location. cf *In 1 Sent* 8.5.3c.

<sup>54</sup> *ST*, Ia Q.76, Art.1. Nor is rationality united to the body as a “motor”.

<sup>55</sup> Aquinas writes, on death, “No part of the body has its proper function, whereas anything that retains its species retains the operation belonging to that species” *ST*, Ia, Q.76, Art.8. See also Pasnau, *Thomas Aquinas on human nature: a philosophical study of “Summa Theologiae”* 1a75-89, 88.

<sup>56</sup> Aquinas quotes Aristotle *DA*, II 4, 415b13.

<sup>57</sup> Pasnau, *Thomas Aquinas on human nature: a philosophical study of “Summa Theologiae”* 1a75-89, 96.

<sup>58</sup> In *DA* I. 8.358-59.

the substance, and exists as a human body or not at all, corrupting into secondary substances<sup>59</sup>.

### The human soul is the substantial form of man.<sup>60</sup>

Aristotle argues that man, as other material substances, is composed of the two constitutive principles of matter and form:<sup>61</sup> “People are constituted in two substantial elements, the soul with its reasoning power (understanding and will), the flesh with its senses.”<sup>62</sup> Man’s soul is the “ultimate integral formal principle by which we live”.<sup>63</sup> The soul is not within man causing him to act in certain ways; rather “it refers to the fact that man is capable of causing these activities, and that man is not just matter since matter of itself does not live.”<sup>64 65</sup>

The soul, in actualising matter, forms the body. It has no specific locus within the body. “It is really just as correct to say that matter is in the soul as to say that soul is in matter.”<sup>66</sup> The soul is wholly there, wherever man is.<sup>67</sup> The soul has a virtual presence, by virtue of power exerted.

### Integrity of the human person.<sup>68</sup>

Aristotle insisted that it is the person who acts, not the soul, not a part of the person: “It is surely better not to say that the soul pities, learns, or thinks, but that the man does these with the soul.”<sup>69</sup> As the immaterial soul admits of no real division, rationality is predicated essentially: “Humans are sentient as well as

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<sup>59</sup> Richard Taylor, “Mind and Body” in *Exploring Philosophy: an introductory anthology*, ed. Steven M. Cahn (Oxford: OUP, 2000), 102.

<sup>60</sup> See discussion in Torchia, *Exploring Personhood*, 135.

<sup>61</sup> Royce, *Man and his nature*, 282.

<sup>62</sup> *ST*, Ia, Q.75, Art.6 ad3; and *ST*, Ia, Q.77, Art.8.

<sup>63</sup> Royce, *Man and his nature*, 293

<sup>64</sup> Royce, *Man and his nature*, 293

<sup>65</sup> Torchia, *Exploring Personhood*, 149. “The soul is the primary metaphysical principle of the essence of human nature... being or esse provides the constitutive principle and a way of being appropriate to nature.”

<sup>66</sup> Royce, *Man and his nature*, 316.

<sup>67</sup> *ST*, Ia, Q.75, Art.8.

<sup>68</sup> This section draws from excellent discussion in Torchia, *Exploring Personhood*, 130-150.

<sup>69</sup> *DA*, 408b15.

intelligent beings. By extension, then, the body which allows for sensation, is part of a being that is essentially rational.”<sup>70</sup>

He divides the powers of the human being into reason and that which can obey reason.<sup>71</sup> He writes of theoretical and practical reason,<sup>72</sup> and of the rational and non rational aspects of the soul.<sup>73</sup>

Aquinas also maintained the complementarity of soul and body. He adopted the Aristotelian hylomorphic understanding of humans “as composites of the formal principle of the soul and the material substrate of the body”, that the human subject is an “inextricable union comprising one substantial reality”.<sup>74</sup>

In virtual anticipation of contemporary philosophy of mind dilemmas, he strongly rebutted the naturalism that did not distinguish between body and soul, and the ancients who asserted “that only bodies were real things; and that what is not corporal is nothing; hence they maintained that the soul is something corporeal.”<sup>75</sup>

Adopting a Boethian line of thinking, he wrote, “In a more special and perfect way, the particular and the individual are found in rational substances, which have dominion over their own actions... actions belong to singulars. Therefore individuals of a rational nature even have a special name among other substances; and this name is person.”<sup>76</sup> Person derives from *persona*, the Latin word for “mask”; it suggests the voice sounding through the mask of the individual actor, *per-sonare*, possibly conveying the dignity of the great person portrayed.<sup>77</sup>

Thomas suggests that the dignity of the person derives from its spiritual, therefore

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<sup>70</sup> Torchia, *Exploring Personhood*, 135.

<sup>71</sup> *NE*, 1098a5.

<sup>72</sup> *NE*, 1139a5.

<sup>73</sup> *NE*, 1192a28ff.

<sup>74</sup> Torchia, *Exploring Personhood*, 131-2.

<sup>75</sup> *ST*, Ia, Q.75, Art.1.

<sup>76</sup> *ST*, Ia, Q.29, Art.1.

<sup>77</sup> Reith, *The Metaphysics of St Thomas Aquinas*, 118.

indestructible, act of subsistence.<sup>78</sup> He wrote, “Person signifies what is most perfect in all nature – that is, a subsistent individual of a rational nature”<sup>79</sup>

### Ensouled bodies; animated flesh.

Classical philosophical texts typically describe human beings as “composite realities of soul and body” but this can be more confusing than helpful. It is much truer to the thought of Aristotle and Aquinas to think of soul as the “animating principle of matter”. I suggest the term “animated flesh” even more than “ensouled body” for it better avoids any erroneous suggestion that the soul is somehow an entity in itself.

Both Aristotle and Aquinas argued that when the soul is in a state united to the body the soul and the body may *only* act in concert. This understanding is of great importance in this study. Aristotle emphasised that the highest part of the rational soul, the intellect, is inseparable from the body: “No one can learn or understand anything in the absence of sense, and when the mind is actively aware of anything, it is necessarily aware of it along with an image.”<sup>80</sup> Thomas too avoids both “excessive spiritualism and naive materialism regarding human nature”. Torchia sums up this feature: “Soul and body require each other: the soul depends on the body as its instrumentality in the world, and the body depends on the soul as its principle of life and activity.”<sup>81</sup>

The reality of ensoulment allows our thoughts to impact on our physical constitution, and conversely the body to influence our mental life. It is clear that thought is in constant and reciprocal interchange with bodily state: anxiety causes tummy ache, stress induces cancer, life meaning impacts on bodily health, hope prolongs the life of a terminally ill person... and neural pathways are instruments for higher thinking.

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<sup>78</sup> Reith, *The Metaphysics of St Thomas Aquinas*, 119.

<sup>79</sup> *ST*, Ia, Q.29, Art.3.

<sup>80</sup> *DA* III 8 431b.

<sup>81</sup> Torchia, *Exploring Personhood*, 138

### Immortality of the soul.

Aristotle wrote of the human capacity for “thought and intellect”<sup>82</sup> and does suggest that the faculty of contemplation can exist separately from the body “as the everlasting can from the perishable”.<sup>83</sup> Yet ultimately, both Aristotle and Plato deemed the only basis for human individuality to be the perishable body.<sup>84 85 86</sup> Aquinas held the view that the disembodied soul enjoys another mode of existence.<sup>87 88</sup> He argued that the human soul must be a substantial reality,<sup>89</sup> but that alone the soul does not constitute a human being.<sup>90</sup>

### **1.4.2 Rational psychology**

#### Overview.

Rational psychology is the discipline whereby we seek to understand human nature by “diligent and subtle investigation”<sup>91</sup>, as a preliminary to understanding what fulfils human nature and how human beings should act. A correct grasp of the Aristotelian understanding of soul is crucial if one is to arrive at an adequate metaphysical understanding of the role of matter in the human constitution, of great relevance to this current study. Aristotle writes of the nature of man in *De Anima*. Aquinas sets out his anthropology in the *Summa Theologiae* 1a 75-89. It is

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<sup>82</sup> *DA*, 414b19.

<sup>83</sup> *DA*, 413b26.

<sup>84</sup> Stevenson and Haberman, *Ten Theories of Human Nature*, 90-92.

<sup>85</sup> Aristotle argued that the disembodied soul has no memory, “It is in its separated state that the intellect is just that which it is, and it is this alone that is immortal and eternal, though we have no memory, as the separate intellect is unaffected, while the intellect that is affected is perishable, and in any case thinks nothing about the other.” *DA*, III 5 430a.

<sup>86</sup> Stevenson and Haberman, *Ten Theories of Human Nature*, 94-5. Aristotle held that the soul is a “complex property of living bodies”, a “set of capacities for a living body” and so cannot exist without a body.

<sup>87</sup> Torchia describes Aquinas’ view of the disembodied soul: “a mode of understanding directed towards simple intelligible objects”, by which it grasps “the singulars to which they are determined by the knowledge they acquired in this life, or by some affection, natural aptitude, or disposition of the divine order.” Torchia, *Exploring Personhood*, 149.

<sup>88</sup> Torchia, *Exploring Personhood*, 133. It is “...because mind (as an incorporeal substance) operates independently of body, Aquinas designates it as something subsistent.”

<sup>89</sup> This is in accord with the Christian belief that personal identity remains after death.

<sup>90</sup> *ST*, Ia, Q.75, Art.2. In a state of independence from the body he argues that the soul is able to engage in operations *per se*, as an incorporeal knowing substance. He writes of the soul as “substantial form”.

<sup>91</sup> *ST*, Ia, Q.87, Art.1.

immediately apparent that Aristotle and Aquinas firmly ground their discussion in material reality. Aquinas writes, for example, “It belongs to the notion of this particular man to be composed of this soul, of this flesh, of these bones.”<sup>92 93</sup>

In this section we look briefly at the psychology that follows from an hylomorphic notion of substance, and in particular an hylomorphic understanding of the relationship between the rational soul and the body. This is of essential significance to this study which looks in detail at the interconnection between rationality, and bodily emotion and passion. It is within rational psychology that Aristotle and Aquinas developed their understanding of virtue and its role in human action and fulfilment.

I start with the notion that human biology must be attuned to the operations of the soul.

Man is endowed with a body suited to the operations of the soul.

Man is endowed with a “distinctive cluster of faculties including reasoning, that are fundamental to the human way of living and functioning.”<sup>94</sup> The soul is the principle of these operations. The most complex relationship exists between the soul and human body. “It was necessary that the intellectual soul be united to a body fitted to be a convenient organ of sense”.<sup>95</sup> In other words, the body possesses a suitable potency.<sup>96</sup> Man as a type of animal uniquely capable of rational thought has a body with biology attuned to human operations: cognition, perception, belief; appetite and desire; locomotion, growth, flourishing, and

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<sup>92</sup> *ST*, Ia, Q.75, Art.4.

<sup>93</sup> Royce, *Man and his nature*, 157. Investigation in rational psychology may move inductively (*a posteriori*) from observation of experience and of what man does, to conclusions about his abilities, powers and principles of operation, to conclusions about the kind of being he is, his nature, essence and ultimate principles of being. Investigation may also proceed by reasoned analysis (*a priori*). For example, applying the principle of finality to cognition, a form possessed by the knower, we can say that this form must be for the sake of something else.

<sup>94</sup> Stevenson and Haberman, *Ten Theories of Human Nature*, 94.

<sup>95</sup> *ST*, Ia, Q.76, Art.5.

<sup>96</sup> Stevenson and Haberman, *Ten Theories of Human Nature*, 89. Aristotle presents the soul as the cause of life and principle of operations, but also satisfies the demand for a certain overlap with the body. “According to Aristotle, even thinking (the privileged sphere of the rational soul) involves the body drawing on the imagination and sense experience for its data.”

decay. These correspond to the three powers of the human soul: the rational, sensitive, and vegetative.<sup>97</sup>

It is inaccurate to suggest that the soul as the life principle of the body operates through the body, as if the body were a *mere* instrument. Torchia writes, “If powers are related to the soul, it is because the soul is their cause or principle, not necessarily their subject.”<sup>98</sup> When the soul animates the body there can be only one subject operating, the person, the ensouled body. There is no other possibility. Aquinas insists that we understand not because we are moved by our intellects, but that we are moved by our intellect because we understand, because we are rational.<sup>99</sup> Hence, intellect is not just another cause among physical causes.<sup>100</sup>

Rationality embraces the whole person but it will be argued there is a dependence of rationality upon the body as upon a material cause.<sup>101</sup> This carries enormous significance in this current study. All human operations, including rationality, are conducted with cooperation of the body. While the soul is always the “principle of action”, in its united state, it is the person, animated body, who acts.

### The process of knowing.

Aristotle and Aquinas insisted that the pursuit of knowledge is fundamental to the human psyche, “All humans desire to know by nature”<sup>102</sup> and that this pursuit of wisdom is characterised by knowledge of first causes.<sup>103</sup> For this task man

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<sup>97</sup> Royce, *Man and his nature*, 148. Aristotle and Aquinas “preferred to talk about a substantial form which was human but virtually animal and vegetative.”

<sup>98</sup> Torchia, *Exploring Personhood*, 137. Torchia then proceeds with less clarity, open to the misinterpretation that the soul can somehow be the subject of action in embodied form: “While some operations of the soul (eg understanding and willing) are performed without the body (and corporeal organs), others (eg sensation) have the composite human being as their subject.” The composite human being cannot but be the subject when the soul is embodied and therefore by necessity, all operations of the soul in an embodied state are performed with the body.

<sup>99</sup> *ST*, Ia, Q.76, Art.1.

<sup>100</sup> In a similar way, Socrates had refuted the naturalists and argued the soul to be the ultimate cause of the body’s life. Plato, *Phaedo* 96a – 100e.

<sup>101</sup> Note enriched notions of causality in **6.4.2.2**.

<sup>102</sup> Aristotle, *Metaphysics* 980a. (Hereafter *M*.)

<sup>103</sup> *M*, 981a – 982b.

possesses non-material powers of rationality: the intellect (our power to understand).<sup>104 105 106</sup>

Knowledge starts with sense impressions. According to Aquinas, man uses his senses to grasp realities external to himself. Raw sense information informs memory, imagination and appetites, impulses and drives, emotions and passions. And at the rational level, this information may inform simple apprehension, judgements (including conscience), reasoning, rational desires, and choices. This accords with the scholastic adage: *“There is nothing in the intellect that was not previously in some way in the senses.”*<sup>107</sup>

### Motivation and action.

The intellect has being as its object; the will, which is the power of the soul to choose and to love, has that which is good for one’s nature as its object.<sup>108</sup> Just as we can be moved by sense appetites, the will is our intellectual appetite. Aquinas defines will as a rational appetite in keeping with the rationality we find in the human soul. We seek what our bodies or our intellects perceive as good.

Our appetites sideline rational decision-making when we act impulsively to satisfy that appetite, be it hunger or the craving of a kleptomaniac; alternatively our sensory appetites inform our rational choices when behaviour is consequent to the judgements we make in our will.<sup>109</sup> We will see this has great relevance in the action of the moral virtues.

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<sup>104</sup> *ST*, Ia, Q.76, Art.2.

<sup>105</sup> For an succinct review of proofs of the immateriality of the intellect: Royce, *Man and his nature*, 91-105.

<sup>106</sup> *ST*, Ia, Q.76, Art.1:“The human soul is the highest and noblest of forms. Wherefore it excels corporeal matter in its power by the fact that it has an operation and a power in which corporeal matter has no share whatsoever. This power is called the intellect.”

<sup>107</sup> Royce, *Man and his nature*, 126.

<sup>108</sup> *ST*, Ia, Q.76, Art.2.

<sup>109</sup> Royce, *Man and his nature*, 155-6: “... psychology uses a great variety of terms to describe (appetition): motivation, orexis, conation, dynamics. ... paired terms are sometimes used, such as attraction-aversion or approach avoidance.”

Will is this power of rational appetition.<sup>110</sup> In a well balanced personality, our choices are based on an appreciation of the facts. Normally our intellect, assisted by our emotions, and with sound convictions and reasoning processes, guides the judgements and choices of our will.

#### Emotions and passions.

Embodied souls have emotions “*passiones animae*”, essentially physical phenomena, involving “some physiological modification”.<sup>111</sup> People are agents with desires, purposes and goals, and their actions are performed by virtue of intellect and will. People chose in accord with what they know.

Emotions and passions are closely linked to our senses, but, as we have seen, require the guidance of reason. We are a package deal; our happiness is linked with use of our reason to manage our choices, our passions and our emotions. Ultimately our actions all may be traced back to considered or impulsive choices, to well or poorly managed passions and emotions.

#### Human acts.

Aquinas distinguishes acts of a human being (*actus hominis*) from human acts (*actiones humanae*), genuinely moral acts. The acts of a human may not necessarily involve reason, whereas human acts are rational and voluntary - acts motivated by reason. Aquinas argues that “That over which we hold mastery can be said to be voluntary.”<sup>112</sup> He accepts that animals can undertake limited forms of voluntary action.<sup>113</sup>

#### Virtues and vices.

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<sup>110</sup> ST, Ia, Q.83, Art.3.3.

<sup>111</sup> ST, Ia-IIae Q.22, Art.3.

<sup>112</sup> ST, Ia-IIae Q.6, Art.3.

<sup>113</sup> Brian Davies, “Being Human” in *The Thought of Thomas Aquinas* (Oxford: OUP, 1992), 221.

Habitual dispositions for positive human acts are known as virtues.<sup>114</sup> Human life is not limited simply to isolated acts, episodic and detached from the bigger perspective; this can overlook the importance of action on the basis of “*habitus*”<sup>115</sup>, dispositions. “For Aquinas, *habitus* ... puts one’s activity more under one’s control than it might otherwise be.”<sup>116</sup> The concepts of *habitus* (“an acquired quality that we change only with difficulty” according to Thomas) and connaturalisation are essential to the notion of virtue.<sup>117</sup>

### Cardinal virtues.

The four cardinal virtues are the umbrella habits that accord us effective management of our thinking, and of our passions and feelings. In a well rounded personality, through these four habits we maintain a level of management over our passions, acknowledging their aptitude for the good, but not surrendering to them.

Of the four cardinal virtues, sound judgement refers to effective management of our thinking. But the other three help us manage our passions, feelings and relationships so that passions and feelings do not manage us, and so that we truly respect others. For example, without self control, our passions of desire or anger could dominate our decision-making. Without fortitude, our fears would stop us thinking clearly, and without responsibility to keep our self love in check, our decisions could neglect our duties to others.

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<sup>114</sup> *ST*, Ia-IIae, Q.49, Art.1: “A disposition is a state which is either a good state or a bad state for its possessor either absolutely or relatively.” (Aquinas is referring to *M* 1022b10ff.)

<sup>115</sup> *ST*, Ia-IIae, Q.6, Art.7. cf *ST*, Ia-IIae, Q.6, Art.6.

<sup>116</sup> Davies, “Being Human,” 225.

<sup>117</sup> C. S. Titus. “Moral Development and Connecting the Virtues: Aquinas, Porter, and the Flawed Saint” in Reinhard Hütter and Matthew Levering (ed.), *Ressourcement Thomism: Sacred Doctrine, the Sacraments, and the Moral Life* (Washington, D.C.: Catholic University of America Press, 2010), pp. 330-352. He writes: “A *habitus*, as an operational disposition that involves rational, volitional, and emotional qualities, is unlike the habit of tying one’s shoes without looking. It requires not only continued congruous acts in theoretical and practical matters (depending on the type of quality), but also creativity in novel situations. It involves the intelligence and creativity to bring the general notion of justice, for example, to adjudicate a dispute between neighbors about a broken window. *Habitus* is a quality that disposes one to act and that becomes a second nature (*connaturalis*).”

### Human fulfilment.

In the *Nicomachean Ethics* Aristotle addressed human fulfilment. He argued that human flourishing is to be found most perfectly in the life of the mind. Aristotle wrote in the *Nicomachean Ethics* of “The life of the intellect (as) the best and most pleasant life for man”.<sup>118</sup> Both Aristotle and Aquinas held that, nevertheless, a less perfect beatitude is to be found in the practice of moral virtue as it disposes us to rational operations, and hence to contemplation.

Further Aristotle and Aquinas regarded man as a social animal.<sup>119</sup> Rationality may be seen as the capacity for loving personal relationships. In this sense, intelligence and virtue are at the service of freedom and love.<sup>120 121</sup>

Flashing insights into the truth of things nor the instants of choice characterize us as rational. Our rationality is a state of being. It is an abiding participation in the capacity for rational thought and choice that empowers us to know ourselves, to understand the real world in which we operate as agents, but at the same time to stand above that world, capable of altering it and of discovering in it the pleasures of loving relationships.

Aquinas argued that only God can fulfill a composite of a body and a soul with a capacity for infinite good.<sup>122</sup> Love of God in the will is better, in this sense, than

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<sup>118</sup> *NE X 7,9*; cf *NE X 8,7* where Aristotle writes, “Among human activities that which is most akin to the divine activity of contemplation will be the greatest source of happiness.”

<sup>119</sup> *NE 1097b11*.

<sup>120</sup> Davies, “Being Human,” 220. Davies writes, “Intellect is that by which one recognises what is true. Will... is a matter of being drawn to things insofar as one knows them and is attracted to them”.

<sup>121</sup> In Aquinas’ worldview, the concept of personal loving relationship extended to the Divine Being. The relationship of man with the First Cause fascinated Aquinas. Torchia writes, “Any attempt to penetrate the richness of Aquinas’s anthropology must address how humans stand in relation to their creator and how they exist within the larger scheme of creation.” (Torchia, *Exploring Personhood*, 128.) Aquinas taught that man has what he calls “obediential potency” for elevation to the supernatural life. He linked activation of this potency with man’s ultimate fulfilment.

<sup>122</sup> In *ST*, Ia-IIae, Q.10, Art.2 Aquinas argued that an object perceived as “universally and from every point of view” good moves the will necessarily. “The will cannot but will it.” He called “beatitude” this adherence to the greatest of goods.

knowledge of God in the intellect.<sup>123</sup> Thomas says the human will is in a state of potency to its *summum bonum*, the ultimate Act of Being.<sup>124</sup> The will cannot be moved necessarily by any created finite good; it is only “our rational apprehension of an unqualified good (that)... frees us from ... attachment to any finite good”. Man may only be fulfilled, ultimately, in love of God. He argued that this capacity to love is a consequence of rationality, which in turn, is disposed to perfect operation by virtue.<sup>125</sup>

He argued that it is the potency for a loving relationship with God as first cause and final end of the person, that bestows on each human person an intrinsic dignity. Man’s fulfilment is in the activation of this potency. “...all things exist to the extent that they share in God’s self-subsistent *esse*, all things desire to be like God as their final end. Accordingly to become like God is the ultimate goal and completion of all things.”<sup>126</sup>

This lies beyond the strict scope of this study.

### **1.4.3 Restoring the hylomorphic notion of person.**

The concept of person (1.4.1) within an hylomorphic understanding of reality provides a powerful alternative to the current fragmentation of approaches that characterize contemporary explorations into philosophy of mind. In this section following a brief overview of how different schools of philosophical thought have approached the concept of person, and I outline certain advantages that the notion of person offers for reaching valid conclusions about human agency including virtue development.

#### Overview of changing understanding of person.

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<sup>123</sup> *ST*, Ia, Q.82, Art.3.

<sup>124</sup> *ST*, Ia, Q.105, Art.4.

<sup>125</sup> Torchia writes, “Humans differ from other finite creatures to the extent that they are able to internalise reality through their intellect and even grasp something of the infinite majesty of God.” (Torchia, *Exploring Personhood*, 148.)

<sup>126</sup> Torchia, *Exploring Personhood*, note on 152 cites Aquinas, *Summa contra gentiles*, II, 20.

Aristotelian-Thomistic anthropology presents an integrated vision of the material and the rational in the human person. Torchia articulates the view that perceptions of personhood have moved through relatively distinct phases. Plato and Aristotle reached an understanding of humans in generic terms, as *anthropos* or *homo*. The Christian era, viewing persons as individual, unique and relational, reached a high point in the work of Aquinas. Following the Cartesian revolution and reactions to it, Torchia identifies a “steady undermining of a metaphysical understanding of a unified abiding self during the modern and contemporary periods”.<sup>127</sup>

Essential to the Platonic and Aristotelian vision was the notion of an underlying subject. Plato identified that subject with the soul. Plato argued that the human soul has a non corporeal nature.<sup>128</sup> He was criticized by Aquinas for regarding the soul in the body “as a sailor in a ship”<sup>129</sup> from which the inescapable conclusion had to be that soul and body were distinct things unable to make one composite unity.

Addressing this dilemma, Aristotle argued that the subject possessed both physical and psychic properties. Aristotle in *De Anima* regarded people as composite individuals, “complex unities both mental and physical”.<sup>130</sup> Crucially, as we have seen, he proposed that people are ensouled bodies:<sup>131</sup> “We can wholly dismiss as unnecessary the question whether the body and soul are one: it is as meaningless as to ask whether the wax and the shape given to it by the stamp are one.”<sup>132</sup> Aristotle argued that semantics must reflect reality.<sup>133</sup>

The neo-Platonic early Christian era built on these understandings. In *City of God* Augustine emphasised the composite model: “Man is not a body alone or a soul

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<sup>127</sup> Torchia, *Exploring Personhood*, xiv.

<sup>128</sup> Davies “Being Human,” 212.

<sup>129</sup> SG 2,57.

<sup>130</sup> Davies “Being Human,” 209.

<sup>131</sup> Davies “Being Human,” 209.

<sup>132</sup> *DA*, 412b6.

<sup>133</sup> Torchia suggests that Aristotle resolves this error at a semantic level, but it would appear that the fundamental principle he defends is metaphysical. Torchia, *Exploring Personhood*, 80.

alone. He is composed of both body and soul.”<sup>134</sup> He insisted on an “harmonious union” of the inner spiritual and outer bodily man, and acknowledged the subjective ego: “You stood me face to face with myself...”<sup>135</sup>. In line with Plato and Aristotle, he proposed that will underpins personal moral responsibility.<sup>136</sup> The later Augustine referred explicitly to individual person of composite body and soul.

Building on Augustine’s concept of “harmonious union”, Aquinas argued not only for the dual properties of the one subject, “a compound whose substance is both spiritual and corporeal”<sup>137</sup>, and that the mental and physical are notions that are not reducible to each other, but that the soul is the very principle of life. *Anima*, for Aquinas is “that which animates”, “that which gives life”; it is “the root principle of life in living things within our experience.”<sup>138</sup> There is no “medium connecting the two together”. As we have seen above he argued that the soul is the form of the body. “The soul is the substantial form of the body, giving to the whole body and to each of its parts their act of existing and species. Furthermore, the whole constituted of these parts is a substantial unity.”<sup>139</sup>

Importantly too, Aquinas took Boethius’s landmark definition of person:

“*rationalis naturae individual substantia*”<sup>140</sup> (individual substance of a rational nature) adapting it to “a person is a subsistent individual in a rational nature”.<sup>141</sup>

He argued that substance is the basis of individuality clarifying the equivocal usage in Aristotle who used substance to mean both the individual and the genus.<sup>142</sup>

Aquinas thus more clearly reflects the autonomy of the individual.

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<sup>134</sup> Cf. Augustine, *De Civitate Dei*, trans. Marcus Dods (Digireads.com Publishing, 2009) ,13, 24.

<sup>135</sup> Cf. Augustine, *Confessions* trans. Edward Pusey (Digireads.com Publishing, 2009) VIII 7, 16.

<sup>136</sup> Torchia, *Exploring Personhood*, 115.

<sup>137</sup> *ST*, Ia, Q.75.

<sup>138</sup> *ST*, Ia, Q.75, Art.1.

<sup>139</sup> Aquinas, *In De Anima* , trans. John Patrick Rowan (St Louis and London: Herder, 1949) 10, a. 16.

<sup>140</sup> Boethius, *De Duabus Naturis* (n.d.), 4.

<sup>141</sup> *ST*, Ia, Q.29, Art.3. See earlier comments. **1.4.1.**

<sup>142</sup> *ST*, Ia, Q.29, Art.1.

In texts such as *Meditations on First Philosophy*, Descartes interpreted personhood in terms of consciousness. In a dualist paradigm, he identified the person with his mind or soul. He held that mental stuff (mind) and physical stuff (body) are distinct but connected, and able to influence each other. He argued that persons are identical with their minds but not with bodies. "I have a body that is closely joined to me".<sup>143</sup>

The immediate successors of Descartes, Geulincx (1625-69) and Malebranche (1638-1715), rejected interaction of soul and body, and in its place advocated occasionalism, a psychophysical parallelism dependent on God's intervention, with a denial of causality.<sup>144</sup> This denial of common sense helped to provoke the intellectual reaction that sought no further explanation for human behaviour in an incorruptible and immaterial mind.

In the centuries following the Cartesian revolution, the concept of person was effectively lost under pressure from empiricism.

Once we discard any metaphysical understanding of personhood and dismiss any non-material dimension we are left only with the perceptions themselves.

John Locke (1632 – 1704) argued that personal identity derives from consciousness.

To find wherein personal identity consists, we must consider what person stands for, which, I think is a thinking intelligent being, that has reason and reflection, and can consider itself as itself, the same thinking thing, in different times and places, which it does only by that consciousness which is inseparable from thinking.<sup>145</sup>

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<sup>143</sup> Rene Descartes, *The Philosophical Writings of Descartes*, trans. John Cottingham, Robert Stoothoff, and Dugald Murdoch (Cambridge: Cambridge University Press, 1985), ii. 54.

<sup>144</sup> Torchia, *Exploring Personhood*, 178-179

<sup>145</sup> John Locke, *An Essay Concerning Human Understanding*, ed. AD Woozley (NY:New American Library, 1964), 2:27,9.

The empiricism of Locke was followed by Hume's arguments against consciousness and person. Finding his antecedents in Francis Bacon (1561-1626) and Newtonian physics, Hume (1711-1776) employed a mitigated scepticism that questioned the dogmas of metaphysics. The impact of the new science was felt everywhere, mathematics focused on efficient causality, and a demand that conclusions should be evidence based.<sup>146</sup> He argued that "We have no perfect idea of anything but of a perception. A substance is entirely different from a perception. We have, therefore, no idea of a substance."<sup>147</sup> Ultimately, he argued that human beings are no more than "bundles" of perceptions.

These reactions have led to the physicalist, the functionalist and the non reductive materialist views of the last seventy years. The physicalist understanding of the person, widely encountered in contemporary neuroscientific literature and contemporary philosophy of mind, regards people as only made of matter, for example:

According to the Identity Theory, persons are identical with a set of physical states or events just as lightning is identical with electrical discharge, or just as the Morning Star is identical with the Evening Star.<sup>148</sup>

Somewhat ironically numerous commentators have pointed out that the physicalism appears as much a reaction to the inadequacies of dualism as a conviction in materialism. Of course both dualism and physicalism contrast with Aquinas's view of what people are.<sup>149</sup>

More recent approaches have blended physicalist and functionalist approaches. Daniel Dennett, dismissing a qualitative distinction between matter and spirit, ascribes personhood according to function and behaviour, the fulfilment of

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<sup>146</sup> Torchia, *Exploring Personhood*, 185.

<sup>147</sup> David Hume, *A Treatise of Human Nature: Being an Attempt to introduce the experimental Method of Reasoning into Moral Subjects*. (1739–40) Books I, IV, V. Cited in Torchia, *Exploring Personhood*, 185.

<sup>148</sup> Davies, "Being Human", 208-9.

<sup>149</sup> Davies, "Being Human", 208.

experimentally verifiable descriptors. He proposes six conditions for personality: rationality, intentionality, an attitude or stance towards intentionality, reciprocity, verbal communication, and consciousness in some special way (eg self consciousness).<sup>150 151</sup>

Reductionist (or, more properly, eliminative materialist or epiphenomenalist) understandings have replaced teleological understandings of the person. For some, selfhood is essentially denoted by conscious experience.<sup>152</sup> Dennett also targets Cartesian dualism, insisting that there is “no Cartesian Theatre”<sup>153</sup>, in other words references to the mind derive from Cartesian misconceptions.<sup>154</sup> His work represents a current endpoint of reductionism. See “Fictionalism” in **Table 1.1**.

Francis Crick has harnessed the neuroscience in a further strain of contemporary reductionism. He writes, “The Astonishing Hypothesis is that ‘You,’ our 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.”<sup>155</sup> See “Competition for Executive Control Accounts” in **Table 1.1**.

Searle is a proponent of non reductive approaches. He emphasises the subjectivity inherent in consciousness which he compares in some ways to “a surface feature

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<sup>150</sup> Daniel C Dennett “Conditions for Personhood” in *The Identities of Persons*, ed. A. O. Rorty (Berkeley: UC Press, 1976), 175-96.

<sup>151</sup> Michael Tooley, “Personhood” in *A Companion to Bioethics* ed. Helga Khuse and Peter Singer (Oxford: Blackwell, 1998), 120. Of the same ilk, Michael Tooley cites seventeen properties for personhood: consciousness, preferences, conscious desires, feelings, the ability to experience pleasure and pain, the ability to think, the capacity for self consciousness and rationality, a temporal awareness, memory of past actions and mental events, the ability to plan a future for oneself, momentary interests, the unification of desires over time, rational deliberation, the ability to choose between alternative courses of action based on moral considerations, character traits that change in a non chaotic manner, and the ability for social interaction and communication with others.

<sup>152</sup> Torchia, *Exploring Personhood*, 266.

<sup>153</sup> Daniel Dennett, *Consciousness Explained* (London: Little Brown and Company, 1991), 445.

<sup>154</sup> Torchia, *Exploring Personhood*, 266

<sup>155</sup> Francis Crick, *The Astonishing Hypothesis: the Scientific Search for the Soul* (NY: Scribner’s, 1994), 3.

of physical systems”.<sup>156</sup> Consciousness is simply bracketed off, too hard to explain, but material by definition. See “Biological Naturalism” in **Table 1.1**.

Chalmers also resists reductionism but his epiphenomenal approach fails to bridge the mind body divide. Nevertheless his work has highlighted the transcendent nature of consciousness.

Even such “revolutionary” developments as the invocation of connectionist networks, non linear dynamics, artificial life, and quantum mechanics will provide only more powerful functional explanations... but the mystery of consciousness will not be removed.<sup>157</sup>

See “Epiphenomenalism” in **Table 1.1**.

Simultaneously, there are various other currents which have defended the “person”. Bernard Williams, pursuing a non Aristotelian, relativistic, anti-utilitarian approach, argued that if there is no body there can be no person, and that human identity is necessarily bodily, although body is seen as a separate substance, not integrated to the mind.

Henry P. Stapp, Evan Harris Walkers and others, including Roger Penrose, have proposed a quantum theory explanation of consciousness. Some, among them Jeffrey Schwartz<sup>158</sup>, have seen this as a way of preserving a spiritual dimension to the human person, but it appears essentially to be another form of non reductive materialism, in this case proposing that sub particle physics can have something to tell us about the soul.<sup>159</sup> Essentially it is another physicalist explanation for the mind body connection. See “Quantum Indeterminism” in **Table 1.1**.

### An enriched understanding of “person”.

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<sup>156</sup> Torchia, *Exploring Personhood*, 266.

<sup>157</sup> David J Chalmers, *The Conscious Mind: In Search of a Fundamental Theory* (NY:OUP, 1996), 121.

<sup>158</sup> Schwartz and Begley, *The Mind and the Brain*.

<sup>159</sup> See for what seems to be a surprisingly positive discussion of this theory: Torchia, *Exploring Personhood*, 268-271.

It was not until the early 20<sup>th</sup> century that there was a rediscovery of “person” through the philosophy of Jacques Maritain and others. Much of this work is inherently attuned to hylomorphic theory.

In recent decades through Karol Wojtyła’s (the future Pope John Paul II’s) articulation of “personalism”, the notion of the person as “an objective entity, which as a definite subject has the closest contacts with the whole (external) world, and is most intimately involved with it precisely because of its inwardness”<sup>160</sup> has gained traction. Wojtyła’s notion of person is founded broadly and synthetically on hylomorphic principles. He writes of the distinctive character of the person, having an “inner life”, “of whose nature reason is a property”<sup>161</sup>, and with the power of free will, of self determination.<sup>162</sup> He proceeds to argue that love is “always a mutual relationship between persons”<sup>163</sup>, in fact, “the unification of persons”<sup>164</sup> and it is the “authentic commitment of the free will of one person (the subject), resulting from the truth about the other person.”<sup>165</sup> He says, “Freedom exists for the sake of love.”<sup>166</sup> Wojtyła proposes a vision of human fulfilment in which our materiality and sexuality are truly integrated with rationality. He provides a philosophical defence of human rationality and freedom, and a vision of human flourishing dependent upon the integration of the spiritual and material properties of man. It is significant that Wojtyła ties his discussion explicitly to Aristotle’s *Nicomachean Ethics*.<sup>167</sup>

Furthermore, without a vision of the integration of the rational and the material, it is *not possible* to attribute to man non-material goals.<sup>168</sup> Charles Taylor writes:

A self or person ... is not like an object in the usually understood sense. ... We don’t have selves in the way we have

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<sup>160</sup> Karol Wojtyła, *Love and Responsibility*, trans. HT Willets (NY: Farrer, Strauss, Giroux, 1981), 23.

<sup>161</sup> Wojtyła, *Love and Responsibility*, 22.

<sup>162</sup> Wojtyła, *Love and Responsibility*, 24.

<sup>163</sup> Wojtyła, *Love and Responsibility*, 73.

<sup>164</sup> Wojtyła, *Love and Responsibility*, 38.

<sup>165</sup> Wojtyła, *Love and Responsibility*, 123.

<sup>166</sup> Wojtyła, *Love and Responsibility*, 135.

<sup>167</sup> Wojtyła, *Love and Responsibility*, For example: 86.

<sup>168</sup> See my argument in Appendix 1d.

hearts and livers.... We are only selves insofar as we... seek and find an orientation to the good.<sup>169</sup>

Note these analyses also would not be possible without the hylomorphic foundation.<sup>170</sup>

Torchia has noted the postmodern tendency to separate human nature from moral personhood, an approach at contradiction with Aquinas's definition of person as an individual subsistent reality. Torchia writes, "A qualitative sense of personhood must rest on a fundamental metaphysical one, as the core of our humanity and individuality."<sup>171</sup> He notes the scepticism or even hostility of many contemporary thinkers to the claim that there is a set of universal human traits grounded in a stable abiding "nature" which all humans share (simply by virtue of their humanity.)<sup>172</sup> This is found, for example, in the work of Peter Singer.

In another line of investigation relevant to the task of this study, Haldane and Torchia both question the possibility of consciousness studies offering a way forward in philosophy of mind. Haldane comments, "Contemporary philosophers of mind confirm the persistence of Cartesianism in their preoccupation with the status of qualia. I remain agnostic about the possibility of a naturalistic account of qualia."<sup>173</sup>

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<sup>169</sup> Charles Taylor, *Sources of the Self: the Making of Modern Identity* (Cambridge: Cambridge UP, 1989), 34.

<sup>170</sup> Bewailing that "there seems no rational way of securing moral agreement in our culture", Alasdair MacIntyre also adopts both the teleological understandings of Aristotle and the Aristotelian-Thomistic understanding of human nature, in order to mount a philosophical defence of a morality founded upon the rationality of man's nature. Torchia writes, "In MacIntyre's project we find an ongoing attempt to come to grips with the fragmentation of moral conversation by means of a teleological understanding of human nature rooted in Aristotelianism and, in broader terms, in the Thomistic tradition of inquiry." MacIntyre proposes a critique of contemporary relativism and perspectivism, and is scathing of the post modern neo-Enlightenment which, failing to recognise rationality in traditions, has raised self to moral sovereign, and stripped moral rules of their teleological grounding. (Alasdair MacIntyre, *Whose Justice? Which Rationality?* (Notre Dame, Ind: UND Press, 1988), 348. Alasdair MacIntyre, *After Virtue* (Notre Dame, Ind: UND Press, 1981), 6.)

<sup>171</sup> Torchia, *Exploring Personhood*, 248.

<sup>172</sup> Torchia, *Exploring Personhood*, 3.

<sup>173</sup> John Haldane, "A return to form in the philosophy of mind," *Ratio* 11, 3 (1998): 253-277.

In like vein Torchia writes that personal identity is not based only on continuity of self awareness but “rooted in enduring human nature that persists in the midst of accidental changes flowing from the substantial union of soul and body. This is why humans require a metaphysical explanation that is more encompassing and penetrating than any scientific account of any biological or biochemical processes.”<sup>174</sup>

The discussion in **1.4.1 - 3** highlights the significance of Haldane’s analysis above: that the current impasse in philosophy of mind can only be broken by a metaphysical breakthrough about the nature of man. Torchia concludes, “Once we define ourselves as embodied spirits, the insolubility of the modern mind-body problem is effectively neutralised.”<sup>175</sup> The physicalist backlash to dualism has ultimately failed to explain human nature and human behaviour. A richer understanding is needed.

#### **1.4.4 Advantages offered by an hylomorphic notion of person.**

Serious deficiencies arise in discussion of the human being or human agency when the hylomorphic notion of person is lost:

- i. The concept of an underlying subject is easily compromised. Man becomes equated either to his mind, or to his physiology. To equate man to his mind implies a loss of dignity of the body. To equate him to his physiology implies a loss of dignity and a denial of any necessary distinction between human nature and animal nature.
- ii. A loss of the concept of form, a loss of the notion of an animating principle for matter, opens the way to a dual substance view in which matter and man’s actions can be too easily diminished in comparison to subjective perceptions and intentions, and in which it becomes impossible to explain satisfactorily psychic causality of the physical (or better to say “non-

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<sup>174</sup> Torchia, *Exploring Personhood*, 139.

<sup>175</sup> Torchia, *Exploring Personhood*, 271.

material causality”). Ultimately this line of thinking leads, as in the work of Hume, to a denial of the very principle of causality.

- iii. A loss of this integrity of mind and matter also makes it very difficult to account for the interaction between thought and emotion, or to account for choice and election of action. Ultimately too, it diminishes the dignity of human sexual relationships, expressed bodily.
- iv. A lack of understanding of the potential of the hylomorphic explanation for the human person has led, in neuroscientific circles, to the assumption that all theories of a non physical component to the human person have a substance dualism at their core.
- v. We have seen that explanations for the interaction of the material and the rational resort either to some form of non reductive physicalism or epiphenomenalism. These non reductive approaches assume there to be no metaphysical difficulty in accounting for rationality within such frameworks. They are unable however to provide a satisfactory physicalist or epiphenomenalist explanation for the hylomorphic conclusion that rationality must be considered as a spiritual power because it permits the possession of truths which are universal, not just particular. (See Appendix 1.)
- vi. The lack of a satisfying rational psychology opens the door to empiricist, behaviourist, and functionalist approaches, in which a richer metaphysical explanation can be dismissed as inaccessible, irrelevant, or simply too hard.

And this, I suggest, is precisely what has happened.

An Aristotelian-Thomistic understanding of person provides:

- i. An effective response to physicalist understandings that deny the possibility of human freedom. (See **1.3** and **Table 1.1**).
- ii. A scientifically coherent alternative to dualist understandings for the interaction of body and mind. (In the process I will draw attention to the simplistic understanding of non-materialism, considering all proponents as dualists, by many in contemporary neuroscience.)

- iii. A satisfying epistemology that accounts for the interaction of human being with the material world.
- iv. A metaphysical basis for human dignity. Human dignity is founded not in our rationality, as such, but in the fact that we have a rational soul.<sup>176</sup> As persons we are unique, having our own personal dignity, and we are at the same time, relational. This is the core of Aquinas' doctrine of the person.<sup>177</sup>

### 1.5 An hylomorphic critique of 20th century currents in philosophy of mind.

In this section I argue for the legitimacy of an hylomorphic approach to philosophy of mind. In the light of the preceding understanding of the human person, it is possible now to offer a critique of 20th century currents in philosophy of mind and to argue that a philosophy of mind founded upon an hylomorphic notion of the human person offers distinct advantages.

By offering an understanding of how the material and non-material can coexist and interact as properties of a single substance, hylomorphism provides a robust foundation for a philosophy of mind and a framework for criticism of other approaches to brain and mind, and of freedom and virtue.<sup>178</sup> The integration of material and non-material properties offered by hylomorphism stands in contrast to one-or-the-other understandings of the material and mental offered by what

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<sup>176</sup> *ST*, Ia, Q.75, Art.1.

<sup>177</sup> Torchia, *Exploring Personhood*, 139-140. Torchia writes, "Aquinas's understanding of humans as substantial unities of soul and body implies that the soul (as an act of the human composite) cannot be confined to (or localised in) some part of the body (eg the brain) or bound up exclusively with physiological processes (eg brain wave activity, consciousness, or receptivity to feelings of pleasure or pain)... rationality is not viewed as a behavioural characteristic, in Aristotelian terms, an accidental property. Rather it assumes a definitional significance, as a means of designating those who are spiritual and intellectual beings by their very nature, regardless of the quality of their rational output."

<sup>178</sup> Raymond Tallis and Peter Hacker each criticise reductive materialism as predicated on the same assumptions as dualism, that it is "crypto-cartesianism", because it conceives only of substances either material or non-material. (P. M. S. Hacker and Raymond Tallis, "Are Persons Brains? The Challenge of Crypto-Cartesianism - P. M. S. Hacker and Raymond Tallis" Youtube. Accessed 22.10.12.) Arguably however the same criticism could be levelled at Tallis' own non reductive emergent view. Hacker's pure Wittgensteinian silence is more difficult to buttonhole. In contrast however, the hylomorphic theory of substance opens a new Pacific of possibilities.

can be seen as the three basic approaches to philosophy of mind: dualism, reductionism, and eliminativism.<sup>179</sup>

John Haldane's writings on the advantages of an hylomorphic approach to philosophy of mind emphasize the necessity for a metaphysics that permits material and non-material properties to be integrated. He argues that beneath thought and action we must discern the acting person: "A correct account of the nature of persons will include, as essential aspects, accounts of the nature of thought and of action, since these are the primary modes of activity of those beings whose nature is that of persons."<sup>180</sup> His work in this field offers an approach and credibility for the hylomorphic underpinnings of this study.

Hylomorphism offers a number of advantages over competing ontologies utilised in philosophy of mind debate.

- i. Progress on the knotty mind-body question is possible once we accept the hylomorphic premise that "do follows be", that actions follow upon the nature of the entity. Hylomorphism offers an understanding of the nature of persons, and of the metaphysical priority of person over thought and action.<sup>181</sup>
- ii. The perennial difficulty for philosophers of mind to explain how mental phenomena could possibly cause physical events appears overcome using an hylomorphic framework.<sup>182</sup>

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<sup>179</sup> Georges Rey, *Contemporary Philosophy of Mind*. (Cambridge MA: Blackwell, 1997).

<sup>180</sup> Haldane, "A return to form in the philosophy of mind", 49.

<sup>181</sup> The application of the concept of person to philosophy of mind has some history. In 1958 P.F. Strawson argued that the concept of person is more basic than that of a person's mind or body, observing, "We routinely attribute to the very same thing, persons, both material and mental properties: I walk, and sleep, as well as think and feel." (For reference see: Kirk Ludwig, "The Mind-Body Problem: An Overview" in *The Blackwell Guide to Philosophy of Mind*, eds. Stephen P Stich and Ted A Warfield (Cambridge MA: Blackwell, 2003), 17.

<sup>182</sup> Descartes proposed matter and spirit, body and mind, to be irreconcilable realities, separate substances, though causally interacting. On the other hand hylomorphism proposes that matter and spirit differ in degree not in kind; Aquinas says they differ in their degree of perfection of being, and that they are properties of the substance, not substances in themselves. Although D. M. Armstrong argues that the "considerable difficulty and confusion which surrounds the philosophical theory of properties" poses a challenge for the "one substance view" which includes hylomorphism, nevertheless the one substance view of hylomorphism is not only rigorously articulated but is consistent with the facts of human experience. See D. M. Armstrong, "Mind body

- iii. A further nagging problem for philosophers of mind has been to offer an explanation for mental responses to the environment. Hylomorphic philosophers argue that it is that we possess the object itself in our intellect, a conformity of mind to thing; we do not “perceive visual experiences, we have them” as Putnam says in the Dewey lectures.<sup>183</sup> Haldane too recognises the fertile ground here for hylomorphism to offer a clear understanding of the intersection of mental and physical.<sup>184</sup>
- iv. Causality, since Descartes, has been a central issue in the mind-body problem. Again hylomorphism offers a way forward with its rich understanding of causality and the distinction it offers between efficient and formal causation.<sup>185</sup>
- v. Haldane argues that an hylomorphic understanding of substance permits an effective critique of both dualism and materialism as flawed philosophical notions.<sup>186</sup> (See also **6.4.2**)

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problem: philosophical theory,” in *Oxford Companion to the Mind*, 2<sup>nd</sup> ed., ed. Richard L Gregory (Oxford: OUP, 2004).

<sup>183</sup> Hilary Putnam, “Sense, Nonsense and the Senses: An Inquiry into the Powers of the Human Mind,” *Journal of Philosophy* 91 (1994): 445-517 at 453-4.

<sup>184</sup> Haldane argues that a well articulated hylomorphic account protects realism from falling into conceptual relativism because it offers an understanding of how perceptions are grasped objectively. He draws on the hylomorphic notion of form, that which “makes something to be what it is”, “informing” of the kind of thing something is. Form is act; the hylomorphic notion of prime matter is pure potentiality. Matter makes individuals of the same form distinct; where there is universality there is no matter. Concepts in the intellect are particular types of forms. Concept and substantial form “though distinct in the modes of their actualisation, *in esse naturale* as opposed to *in esse intentionale*, are specifically alike.” Haldane argues that thought is *intrinsically* related to its object because it shares the same form.

<sup>185</sup> Haldane argues that formal causation in knowing must not be confused with efficient causation, which is the pathway for material causation. Yes there is efficient causality acting on the organ of sense but the result is a formal change. We take in formal causes under the material conditions of changes of sense and therefore with particularised qualities. See below: **6.4.2.2**.

<sup>186</sup> In discussing current attribute dualists who suggest that the higher region of the brain is a physical substance “with some non-physical properties”, Haldane argues that “a proper understanding of substantiality should lead one to reject the idea that a wholly physical particular could be the bearer of intrinsic attributes that are non-physical. The error of the Cartesian is to suppose that non-physical attributes imply an exclusively incorporeal substance as bearer.” Hylomorphism is equally effective against the fundamental tenets of materialism whether it takes the form of eliminative materialism, behaviourism, identity theory, central state materialism, functionalism, anomalous monism or any of the other forms of non reductive materialisms. “If thought is a non physical activity as I have argued that it is, then the intellectual powers are not physical; nor, therefore, can the substance to whose nature the powers belong.” Haldane, “A return to form in the philosophy of mind,” 58.

- vi. An hylomorphic analysis urges a radical departure from philosophy of mind's dead-end preoccupation in recent years with consciousness and the notion of qualia. It is not the way we feel about reality that gives us a non physical dimension, it is a reflection of our nature itself. An hylomorphic analysis permits a return to being away from both epistemological and metaphysical idealism.<sup>187</sup>
- vii. The hylomorphic ontology is very much in keeping with, and provides an explanation for, our intuitions of being, our observations of human freedom, of human action and causation, and of teleological motivation.<sup>188</sup> The hylomorphic approach is in keeping with the widespread acceptance of human freedom. Without an understanding of substance that integrates the material and non-material as properties, neural explanations for consciousness, intentionality and qualia must remain as mechanistic and deterministic. It is time for a radical return to the ontological basis of subjective experience.

**Table 1.1 An hylomorphic critique of 20th century currents in philosophy of mind** (in endpapers) classes the principal currents of philosophy of mind according to categories of irrealism, conceptual reductionism, conceptual anti-reductionism, and ontological antireductionism. These categories, adapted from Ludwig, provide a convenient framework for analysis on a spectrum of physicalism:<sup>189</sup> from radical physicalist, through reductive and non reductive materialism, to ontological solutions. Hylomorphism, described by Haldane as “non physicalist, non dualist, dual aspect” theory is situated in the last of the four categories.<sup>190</sup> The subcategorisations are substantially my own. In the right hand column I offer a

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<sup>187</sup> “Contemporary philosophers of mind confirm the persistence of Cartesianism in their preoccupation with the status of qualia. I remain agnostic about the possibility of a naturalistic account of qualia.” Haldane, “A return to form in the philosophy of mind,” 57.

<sup>188</sup> It appears that some accept substance dualism, a dualism of the classical property or event variety, in order to uphold teleological motivation. Yet, “the dual aspect monism... of hylomorphism will offer the same advantages.” John Bickle, “Philosophy of Mind and the Neurosciences” in *The Blackwell Guide to Philosophy of Mind*, ed. Stephen P Stich and Ted A Warfield (Cambridge MA: Blackwell, 2003), 333.

<sup>189</sup> Malo describes physicalism as the theory whereby everything supervenes in the physical realm. Antonio Malo, “Three theories about freedom” pre publication manuscript, 145.

<sup>190</sup> Ludwig, “The Mind-Body Problem: An Overview,” 21.

brief hylomorphic critique for the various lines of thought. For the purposes of refutation, the various subcategories tend to group into recurring themes, broadly though not exclusively: eliminativist, behaviourist and functionalist, reductive and non-reductive emergent, and dualist. If hylomorphism is correct, then we have a solution to the major objection to my thesis: that it cannot relate propositions about the brain to propositions about choice and virtue.

Also by this approach I wish to suggest the incisive potential for an hylomorphic contribution to philosophy of mind and to further justify the position adopted by this current study. It is beyond my scope to offer more a more detailed critique but I do wish to demonstrate that hylomorphism exposes significant weaknesses of irrealism, conceptual reductionism, and conceptual anti-reductionism, and of dualistic forms of ontological antireductionism.

Also in the endpapers is found **Appendix 1. A Response to the Claims of Emergent Rationality by Non-reductive Materialism**. The paradigm of emergent rationality requires a more detailed philosophical response. I argue that acceptance of this position, popularised by both neuroscientists and philosophers, reveals an incorrectly framed inquiry from the start, and that acceptance must lead to a denial of the eudaimonic dimension of virtue.

## **1.6 Situating this study in current approaches to ethics.**

The Aristotelian-Thomistic view of human moral development proposes that human personality, if it is to flourish, requires the development of intrinsic qualities of self management. This study proposes that these qualities, in ways essentially described by Aristotle and Thomas, have a neural substrate.

As the field of the morality of acts, moral behaviour and moral character is broadly described as moral philosophy or ethics, it is appropriate that I briefly situate this study in the spectrum of current approaches to ethics.

During the early period of the second half of the 20<sup>th</sup> century, the prevailing view was that ethics classified conveniently into two broad groups:<sup>191</sup>

- i. Consequentialist ethical theories developed from the utilitarian doctrines of Bentham and Mill. These are essentially teleological approaches in which the ethical nature of an action is derived from the contribution of the action to the well being of human beings.<sup>192</sup>
- ii. Deontological (duty based) theories, including ethical systems where moral obligation is primarily derived from a religious or from a purely rational framework. Many of these theories take Kant as their philosophical founder. Kant argued, captured in his “Categorical Imperative”, that ethics derives from “a universal and impartial law of rationality”.

Many commentators now add virtue ethics as a third fundamental category; it is increasingly regarded as a “serious rival” for traditional moral theories of utilitarianism and deontology.<sup>193</sup>

This study, seeking out the neuroscientific aspects of the development and practice of virtue, is situated in the field of virtue ethics.

### **1.6.1 Some reasons for the growing stature of virtue ethics.**

The legitimisation of virtue ethics as an alternative ethical approach is the result of a number of factors. A 1958 paper by Elizabeth Anscombe’s is regarded as the forerunner of this philosophical revival.<sup>194</sup> Her call for a return to the notion of human flourishing founded on the development of virtue was a turning point. She argued forcefully that without a clear psychological understanding, ethics must be unproductive, that we must “stop doing moral philosophy until we get our

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<sup>191</sup> A view reflected in G. E. M. Anscombe, “Modern Moral Philosophy” in *Virtue Ethics*, ed. Roger Crisp and Michael Slote (Oxford: OUP, 1997), 26-44, and articulated in J. Rawls *A Theory of Justice* (Cambridge Massachusetts: Harvard University Press, 1971.)

<sup>192</sup> Roger Crisp and Michael Slote, “Introduction” in *Virtue Ethics*, ed. Roger Crisp and Michael Slote (Oxford: OUP, 1997), 1-25..

<sup>193</sup> Daniel Statman, “Introduction to Virtue Ethics,” in *Virtue Ethics: A Critical Reader*, ed. Daniel Statman (Washington DC: Georgetown University Press, 1997), 2.

<sup>194</sup> Anscombe, “Modern Moral Philosophy”, 26-44.

psychology straight".<sup>195</sup> Anscombe also took specific issue with modern moral ethicists in the utilitarian tradition for allowing worthy ends to justify means that are unjust.<sup>196</sup>

In the decades since Anscombe's paper, virtue ethicists have argued that virtue ethics offers distinct and inherent advantages over deontological and consequentialist approaches.

- i. It has been argued that virtue ethics holds "explanatory primacy", that deontological or teleological ethical systems focusing on moral analysis of actions beg investigation into the qualities of character that give rise to such actions. One virtue ethicist, Gary Watson, sums up this view, "Action appraisal is derivative from appraisal of character... .Basic moral facts are about quality of character."<sup>197</sup> <sup>198</sup>
- ii. Virtue based approaches have gained ground for their positivity and flexibility, and for their ability to offer solutions in the myriad of ethical

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<sup>195</sup> Anscombe wrote of "... (the current ) huge gap, at present unfillable as far as we are concerned, which needs to be filled by an account of human nature, human action, the type of characteristic a virtue is, and, above all, of human "flourishing". And it is the last concept that appears the most doubtful. For it is a bit much to swallow that a man in pain and hunger and poor and friendless, is flourishing, as Aristotle himself admitted."

Anscombe, "Modern Moral Philosophy", 44

<sup>196</sup> Anscombe, "Modern Moral Philosophy", 44

<sup>197</sup> Gary Watson, "On the primacy of character," in *Virtue Ethics: A Critical Reader*, ed. Daniel Statman (Washington DC: Georgetown University Press, 1997), 58.

<sup>198</sup> This conviction builds on the Aristotelian principle introduced above: "do follows be". At the core of this issue is what Statman calls the "meta-ethical" ethical difference between deontological and virtue ethics. Virtue theory refers to the ethical approach in which "the basic judgements in ethics are judgements about character". Virtue ethicists insist that being is prior to behaviour. The primacy of character view is well illustrated by Swanton's reference to a passage in CS Lewis emphasising the integrative function of virtue: "What is the good of telling... ships how to steer so as to avoid collisions if, in fact, they are such crazy old tubs that they cannot be steered at all? What is the good of drawing up, on paper, rules for social behaviour, if we know that, in fact, our greed, cowardice, ill temper, and self-conceit are going to prevent us from keeping them? I do not mean for a moment that we ought not to think, and to think hard, about improvements in our social and economic system. What I do mean is that all that thinking will be mere moonshine unless we realise that nothing but the courage and unselfishness of individuals is ever going to make any system work properly. It is easy enough to remove the particular kinds of graft or bullying that go on under the present system: but as long as men are twisters or bullies they will find some new way of carrying on the old game under the new system. You cannot make men good by law: and without good men you cannot have a good society. That is why we must go on to think... of morality inside the individual." C. S. Lewis, *Mere Christianity* (London: Fontana, 1955), 68-9. Christine Swanton, *Virtue Ethics: A Pluralistic View* (Oxford: OUP, 2003).

dilemmas that can occur in real life. According to Macintyre, Aristotle sees virtues as effective and explanatory of outcomes in the real world.<sup>199</sup>

Swanton praises virtue ethics for “taking seriously the richness of the moral domain, its sensitivity to context and situation, its scepticism about the codifiability of ethics”.<sup>200 201</sup>

- iii. It is argued that virtue ethics is more compatible with the dignity of the human person. The inability of both duty based and consequentialist systems to offer approaches that accommodate the dignity of human autonomy has also been pointed out, in that there is an manifest gulf, a schizophrenia, between justification and motivation. It is argued that we are diminished as human beings if we take external principles as our motivation.
- iv. Reflecting human dignity, virtue ethics is oriented towards personal relationships. It is argued that in deontological and consequentialist approaches the person disappears under the tyranny of principles; genuine relationships become impossible.<sup>202</sup>
- v. Christine Swanton argues that virtue ethics provides an enriched account of autonomy, an autonomy that even allows an agent to act apparently sub-optimally, yet, satisficing rationality, in such a way that such behaviour can be a legitimate expression of one’s character. (Swanton picks up the economics term originally coined by Herbert Simon denoting a rational approach that stops looking for alternatives once one that is “good

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<sup>199</sup> Alasdair Macintyre, “The Nature of the Virtues,” in *Virtue Ethics*, ed. Roger Crisp and Michael Slote (Oxford: OUP, 1997), 136.

<sup>200</sup> Swanton, *Virtue Ethics: A Pluralistic View*, 9.

<sup>201</sup> Virtue ethicists argue that utilitarianism and deontology share an obsession with principles as the guide of human behaviour, and that such principle based guidance is too abstract and at times contradictory to be effective. In contrast, virtue ethics proposes moral character as key factor. It is an agent based ethical system.

<sup>202</sup> See discussion with reference to the views of Stocker and Toulmin, in Statman, “Introduction to Virtue Ethics,” 6-7.

enough” is found.<sup>203</sup>) Results and consequences are avoided as the ultimate measure for the rightness or goodness of an action.<sup>204</sup>

- vi. Beyond simple effectiveness in understanding human behaviours, it is argued that virtues are constitutive elements of human wellbeing.<sup>205</sup> Slote argues that in duty based ethics, the agent’s actions are directed to the well being of others but not of self. He argues that this reduces agents to the status of tools to help others, and that this ultimately devalues the moral agent and undermines the Kantian principle that every individual is of intrinsic and equal value.<sup>206</sup>
- vii. Virtue ethics provides a view of ethical activity that is perfectly integrated with a naturalistic view of man.<sup>207</sup>
- viii. It is argued that virtue based approaches are superior to rule or end based approaches in the way they can accommodate an ethic of care. Carol Gilligan, Nell Noddings, and Annette Baier have developed a “relational ethics” that sits well with virtue ethics.<sup>208</sup>
- ix. An ethic of virtue is also most compatible with a rich human psychology that recognizes the contribution of positive human emotion in human decision making and action. Aristotle viewed virtue as “a disposition in which both reason and emotion are well ordered”.<sup>209</sup> Anscombe had drawn attention to the “lack of an adequate philosophy of psychology” in Kant and Hume.<sup>210</sup> Cottingham argues:

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<sup>203</sup> Herbert Simon, “A behavioural model of rational choice,” in *Quarterly Journal of Economics* 69, (1955): 99-118. Cited in Swanton.

<sup>204</sup> Christine Swanton, “Virtue Ethics and Satisficing Rationality,” in *Virtue Ethics: A Critical Reader*, ed. Daniel Statman (Washington DC: Georgetown University Press, 1997), 82-98.

<sup>205</sup> Statman, “Introduction to Virtue Ethics,” 6-7.

<sup>206</sup> Statman, “Introduction to Virtue Ethics,” 5.

<sup>207</sup> See Statman, “Introduction to Virtue Ethics,” 15, for elaboration of this view.

<sup>208</sup> See Statman, “Introduction to Virtue Ethics,” 17, for elaboration of this view. Canadian philosopher, Donald De Marco, drawing on the Augustinian tradition of virtue, holds that the capacity to truly love others and to be happy is a consequence of character with a well rounded development of virtues, that it is the presence of virtue that makes the effective expression of love possible. Donald DeMarco’s *Heart of Virtue* develops this idea masterfully. He describes virtues as the channel by which love is delivered to others; good intentions are insufficient. Augustine says that charity contains all the cardinal virtues. Cf. D. DeMarco, *The Heart of Virtue* (San Francisco: Ignatius, 1996); Augustine, *Epistle* CLXVII PL33, 738.

<sup>209</sup> Swanton, *Virtue Ethics: A Pluralistic View*, 8.

<sup>210</sup> Anscombe, “Modern Moral Philosophy”.

“one of the key insights of virtue theory is that the good life consists in a structured pattern of living... whose fundamentals have to be rooted in a civic culture, a culture in which the right pathways of emotion and action have been laid down in infancy and fostered by long habits of training and upbringing.”<sup>211</sup>

The bottom line is that virtue ethics appears more compatible with reflections on aspects of character such as emotion, subjectivity and human relations.<sup>212</sup> Furthermore, as will be seen, in this study I am arguing that virtue ethics is not only compatible with the psychology of emotion, but shares common ground with the neuroscience of effective self management and emotional control.

- x. Virtue ethics seems to offer a better understanding of principles of education founded on human psychology. For example, the core of moral motivation is not rules, nor do rules play a key role in moral education. “According to virtue ethics, education through moral exemplars is more effective than education focussed on principles and obligations, because it is far more concrete.”<sup>213</sup> (See **6.5**.)

However, when all is said and done virtue ethics resists direct comparison with alternative approaches to ethics. Gary Watson argues:

To think that an ethic of virtue ... is opposed to duty is a category mistake. Duties and obligations are simply factors to which certain values, for example, fidelity and justice, are responsive. They do not compete with virtue for moral attention... . One’s virtues may enable one to endorse, apprehend, correctly apply, or disregard some principle of action.<sup>214</sup>

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<sup>211</sup> John Cottingham “Religion Virtue and Ethical Culture,” *Philosophy* 69, (1994):163-80.

<sup>212</sup> Statman, “Introduction to Virtue Ethics,” 8.

<sup>213</sup> Daniel Putnam, “Virtue theory in ethics courses”, *Teaching Philosophy* 15, (1992): 51-6. See discussion in Statman, “Introduction to Virtue Ethics”, 13.

<sup>214</sup> Watson, “On the primacy of character”, 60.

The ten reasons above will be further validated by a successful description of the biological bases of virtue. In this study I am arguing not only that neural development harmonises with the development of virtue, but also that virtue ethics constitutes an ethical account that is more attuned to human nature than are the more theoretical accounts of Western ethics.

### **1.6.2 Within virtue ethics there exists a spectrum of significantly contrasting approaches.**

We have looked briefly at advantages offered by virtue ethics as an ethical system. Now we look at the range of approaches within virtue ethics, a field in which there are numerous approaches but one nevertheless in which "... the similarities between species of virtue ethics are more important than their differences."<sup>215</sup>

#### Various historical approaches to the notion of virtue.

Contrasting understandings of the notion of virtue are not a new phenomenon. Macintyre writes of three contrasting historical attitudes towards virtue. He suggests that: Homer understood virtues as means to empower a person to fulfil a social role; Aristotle and Aquinas focused on virtue as "a quality the exercise of which leads to the achievement of the human telos"; and, Franklin offered a utilitarian account of the virtues as keys to earthly and heavenly success.<sup>216</sup>

According to an alternative view:<sup>217</sup> Socrates, Cicero and Kant share a stoic emphasis on the dignity of virtue, with emphases on piety and courage; Aristotle and Aquinas offer a rich and realistic understanding of virtues as psychological habits; and, Hume transforms virtue into a useful tool to achieve social-political ends.

#### Divisions according to judgements about character.

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<sup>215</sup> Swanton, *Virtue Ethics: A Pluralistic View*, 4.

<sup>216</sup> Macintyre, "The Nature of the Virtues", 118-140.

<sup>217</sup> Nafsika Athanassoulis, "Virtue Ethics," in *Internet Encyclopedia of Philosophy*, <http://www.iep.utm.edu/virtue/> (accessed 15 November 2010).

As we have seen above, virtue ethicists will all agree that aretaic judgements (judgements about character) are prior to judgements about rightness or wrongness of actions. Again there is a spectrum of approaches.

The moderate view is some actions are always abhorrent, and hence that character need not be prior to action. Slote argues “the ethical status of acts is not entirely derivative from that of traits, motives or individuals...”<sup>218</sup> Alderman and Soloman present a more unitary view, either reducing deontic concepts to aretaic concepts, or with Anscombe and Williams, arguing that deontic concepts should be ignored completely. There is also the moral worth view proposed by Audi, whereby virtue “is the sole ground of moral goodness, even though it is not the ground of moral rightness or of obligatory conduct.”<sup>219</sup> Similarly, Hursthouse argues that an action is right if it is carried out by a virtuous character.<sup>220</sup>

#### Divisions according to universality.

Universality provides another lens for assessment of the various contemporary approaches to virtue ethics. Aristotle conceives virtues as human excellences contributing towards a form of flourishing that is perfective of human nature. Aristotle’s vision of the rational life is embraced by some contemporary virtue ethicists, such as Foot, Hursthouse, Taylor and Nussbaum; others seek to shrug off Aristotelian metaphysics.<sup>221</sup> Originally MacIntyre claimed virtues are culture specific, but later adopted the Aristotelian position.<sup>222</sup>

#### Divisions of virtue ethics according to deontological and consequentialist considerations.

The relationship of the various contemporary approaches of virtue ethics to deontology and to consequentialism is complex.

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<sup>218</sup> Michael Slote, *From Morality to Virtue*, (NY: OUP, 1992), 89.

<sup>219</sup> Robert Audi, “Acting from Virtue”, *Mind* 104, (1995): 449-71.

<sup>220</sup> Statman, “Introduction to Virtue Ethics,” 6-7.

<sup>221</sup> Gregory Velazco y Trianosky, “What is virtue ethics all about?” in *Virtue Ethics: A Critical Reader*, ed. Daniel Statmand (Washington DC: Georgetown University Press, 1997), 47.

<sup>222</sup> R. Hursthouse, “Virtue Theory” in *Ethics in Practice*, ed. Hugh La Follette (Malden MA: Blackwell, 2007), 53.

Virtue ethicists adopt either a teleological view, that virtues permit human flourishing, or a non teleological account, that virtues are worthy in themselves. Rawls understands virtues to be “strong and normally effective desires to act on the basic principles of right”,<sup>223</sup> yet virtue ethics stands against this conventional wisdom that would align virtue ethics with deontology. Velazco y Trianosky argues that, in fact, an ethics of virtue and an ethics of duty are radically different approaches to ethical questions, yet each may be either in a teleological or non teleological (deontological) form.<sup>224</sup> Furthermore, these teleological accounts may also be considered from the perspective of consequentialist principles. Trianosky argues that as many virtue ethicists maintain a form of utilitarianism when they argue for the usefulness of the virtues, they are thus teleological in orientation.<sup>225</sup>

Typical of this approach is that adopted by Von Wright: “Virtues... are needed in the service of the good of man. This usefulness of theirs is their meaning and (natural) purpose”.<sup>226</sup> Julia Driver also adopts a consequentialist view, viewing a moral virtue as “a character trait (a disposition or cluster of dispositions) which, generally speaking, produces good consequences for others.”<sup>227</sup> Other virtue ethicists while teleological may give more importance to intention rather than causality.

Watson suggests that we should consider an ethics of virtue as at once teleological and nonconsequentialist.<sup>228</sup> He points out that Aristotle is regarded by Rawls as teleological, yet he may just as readily be seen as deontological, opposed to consequentialism. He suggests that following Socrates who regarded virtue as the primary constituent of human flourishing, Aristotle saw virtue, human

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<sup>223</sup> Rawls, *A theory of Justice*, 436.

<sup>224</sup> He argues that in a teleological approach, “the rightness of actions or the virtuousness of traits depends on their causal relation to the good”. Gregory Velazco y Trianosky, “What is virtue ethics all about?” 47.

<sup>225</sup> Statman, “Introduction to Virtue Ethics,” 10-11.

<sup>226</sup> G. H. von Wright *The varieties of goodness*, (London: Humanities Press, 1963), 140.

<sup>227</sup> Julia Driver “The virtues and human nature”, 122.

<sup>228</sup> Watson, “On the primacy of character”, 57.

excellence, as constitutive of, not instrumental to, human flourishing.<sup>229</sup> This is an important distinction.

It is in this sense that Anscombe, too, is non teleological, while seeking to retain a close connection between virtue and human good.<sup>230</sup> Swanton defends the non utilitarian character of virtue ethics comparing it, for this purpose, with deontological ethics.<sup>231</sup> She too maintains a strong connection between virtue and human flourishing. Others, like Slote, are of a radical non-teleological orientation and prefer not to link virtues to wellbeing. Slote consciously adopts an agent based ethics that regards virtues as admirable traits not tied to the promotion of further good,<sup>232</sup> arguing that it is the intrinsic features of virtue that make it attractive, and even that the “contribution” of virtues to an agent’s wellbeing should be disregarded.<sup>233</sup>

Alasdair Macintyre, although adopting a teleological position, offers a meeting point for teleological and non teleological approaches. He insists that virtue is not a means to enjoyment, rather fulfilment and enjoyment are *integral* to the very exercise of virtue.<sup>234</sup>

Virtue empowers from within and cannot be understood as a means to be utilized in the pursuit of happiness. Macintyre’s understanding is that virtue empowers us to do things which will bring in themselves fulfilment.

A virtue is an acquired human quality the possession and exercise of which tends to enable us to achieve those goods which are internal (the outcome of which is a good for the

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<sup>229</sup> Watson, “On the primacy of character”, 62.

<sup>230</sup> Gregory Velazco y Trianosky, “What is virtue ethics all about?”

<sup>231</sup> Statman, “Introduction to Virtue Ethics,” 11.

<sup>232</sup> Swanton, *Virtue Ethics: A Pluralistic View*, 19-25.

<sup>233</sup> Statman, “Introduction to Virtue Ethics,” 10-11.

<sup>234</sup> Macintyre, “The Nature of the Virtues”, 135. Macintyre writes, “As Aristotle says, the enjoyment of the activity and the enjoyment of achievement are not the ends at which the agent aims, but the enjoyment supervenes upon the successful activity in such a way that the activity achieved and the activity enjoyed are one and the same state. Hence to aim at the one is to aim at the other; and hence also it is easy to confuse the pursuit of excellence with the pursuit of enjoyment *in this specific sense*.”

whole community) to practices and the lack of which effectively prevents us from achieving any such goods.<sup>235</sup>

### **1.6.3 This study is situated under the umbrella of eudaimonist virtue ethics.**

The current study subscribes to a moderate Aristotelian eudaimonist approach in which virtues, acquired and exercised for their own sake, are constitutive elements of human flourishing and wellbeing, denoted sometimes by the Aristotelian term *eudaimonia*.

While, as we have seen, virtue ethicists adopt either a teleological view, that virtues enable human flourishing, or a non teleological account, that virtues are worthy in themselves, Aristotle adopts the teleological position. According to Aristotle, it is the promotion of human flourishing, eudaimonism, that makes a trait a virtue. In line with Aristotle, Statman asks, “If the virtues are not derived from the notion of flourishing, where are they derived from?”<sup>236</sup> He argues that Aristotle takes for granted the virtues really are virtues and that the goods they promote are really worth having. Rejecting the extremes that a non teleological approach imposes, Statman argues that Aristotle held “to quite a moderate version of virtue ethics (if at all)”.<sup>237</sup>

Within the range of positions adopted by teleological virtue ethicists with respect to end, Rosalind Hursthouse and Christine Swanton offer finely nuanced accounts illustrating the richness of current scholarship. Of the two, the approach of Hursthouse is the more Aristotelian. She combines eudaimonism with “naturalism, the view that what makes a trait of character a virtue is its being partially constitutive of non-defectiveness in human beings”. She sees virtue as a trait “that makes a human good *qua* human”, serving also the flourishing of the

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<sup>235</sup> Macintyre, “The Nature of the Virtues”, 135.

<sup>236</sup> Statman, “Introduction to Virtue Ethics,” 26.

<sup>237</sup> Statman, “Introduction to Virtue Ethics,” 26.

species. Hursthouse sums up, “A virtue is a character trait that a human being needs for *eudaimonia*, to flourish and live well.”<sup>238</sup>

Swanton argues that Aristotle fails to make a satisfactory link between the demands of the world and the flourishing of the virtuous person. She suggests that he insufficiently develops an account of flourishing. “We do not, in Aristotle, understand virtues via an account of flourishing - we understand flourishing via an account of the virtues.”<sup>239</sup>

Each however provides an effective answer to The Thesis of Non Aretaic Value, the assertion that the base level goods of flourishing are prior to virtue and that therefore virtue is derivative. Swanton does so explicitly, herself drawing on Aristotle, arguing that the base level goods of flourishing must be considered more broadly than goods as such. She argues that Aristotle regarded the field of virtues as pertaining to pleasures, friends and small details, not necessarily good or evil in themselves, etc, in other words “being”, itself.

Ultimately Swanton argues that virtue is a responsiveness to being, that the appropriate responsiveness of a human being is virtuous, and that it is human nature that imparts to the goods of flourishing their value; hence their value is intrinsically related, but not prior, to virtue itself.<sup>240</sup> Ultimately, she says, the complexity of virtue is derived from the complexity of human nature itself.<sup>241</sup>

These views sit most comfortably with the notion that virtues are a flourishing at both the organic and personal levels, the approach that this study has taken. These explorations into a biophysical basis for *eudaimonia* will be taken up again in **6.2**.

### **1.7 An overview of the potential benefits of this study.**

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<sup>238</sup> Rosalind Hursthouse *On Virtue Ethics*, 167.

<sup>239</sup> Swanton, *Virtue Ethics: A Pluralistic View*, 9.

<sup>240</sup> Swanton, *Virtue Ethics: A Pluralistic View*, 55.

<sup>241</sup> Swanton, *Virtue Ethics: A Pluralistic View*, 10.

The object of this study is the accord between the acquisition of moral virtues, understood as good habits enabling human flourishing, and neuroscientific knowledge of how the human being develops. This study argues that virtue development is fitting and proper to the development of mature human beings. As such it brings together ethics and neuroscience with a view to drawing practical, albeit brief, conclusions in the field of moral education.

It is hoped that outcomes from this study will include the following.

#### Contributions to medical science.

- i. This review of mechanisms of plasticity and learning, of goal election, habit formation, cognitive processing, moral activity and emotional regulation, cross referenced to physically identifiable characteristics of virtue, will draw conclusions at the macro level about the systems, mechanisms, processes and brain structures underpinning virtue.
- ii. Among various conclusions, new insights will be offered into the role of deep cortical structures, such as the *basal ganglia* (BG), in the operation of the virtues. The view will be offered that the operation of virtue should be considered as a “macro” system within the brain.

#### Contributions to ethics.

- i. This endorsement of a virtue based approach to living has the potential to contribute to the debate evaluating the contrasting approaches to ethics.
- ii. In particular, this understanding at the biological level of the operation and development of virtues promises to emphasise the necessity for virtue, and therefore virtue ethics, for effective moral education and human flourishing.

#### Contributions to philosophy of mind.

- i. Insights into neuroscience in the light of an hylomorphic approach to philosophy of mind offer the possibility of effective critiques of other current writing on the topic.

- ii. In particular it is hoped that this study contributes to effective responses to non-reductive and reductive physicalist approaches, and to dualistic understandings of one form or another.

Contributions to Aristotelian-Thomistic philosophy.

- i. The attempt to reconcile Aristotelian-Thomistic understandings with current neuroscientific knowledge has the potential not only to enrich neuroscience by offering it a coherent template for human nature and activity, but also to enrich and contemporize this philosophical tradition.
- ii. Among other conclusions, it is hoped that discussion about the nature of various cardinal virtues yields insights into the unity of the virtues, ie the integration of the four cardinal virtues in each human action.
- iii. Furthermore it is hoped that this investigation into the nature of virtue, in the light both of neuroscience and the Aristotelian/Thomistic tradition, assists in clarifying the relationship between rationality and virtue, and therefore in delineating what could be termed “the biological dimension” of virtue.

Contributions to education.

- i. The discussion of neuroscientific development will lead to numerous conclusions about optimum pedagogical methods.
- ii. Brief and practical conclusions will be drawn with respect to parenting.

## **1.8 Conclusion**

This study investigates the neural bases for moral virtue in the Aristotelian-Thomistic understanding, and whether or not this neural basis is integral to the notion of fulfilment or *eudaimonia*.

My starting point in this chapter has been to establish a *prima facie* case for the profound integration of the physical and the rational in the human person. I have noted the effectiveness of an hylomorphic psychology in reconciling these realms and the contribution that hylomorphism has the potential to make to philosophy of mind. Having situated this study in the spectrum of contemporary approaches

to philosophy of mind, I then apply an hylomorphic critique to contemporary philosophy of mind in order to demonstrate the explanatory power of such an approach. I respond to the notion of “emergent rationality” that is prevalent in contemporary philosophy of mind.

I then consider the place of this study within current approaches to ethics. The comparative advantages offered by virtue ethics are noted and I situate this study within the spectrum of approaches to virtue ethics itself, placing it under the broad heading of eudaimonist virtue ethics. Finally I offer an overview of expected outcomes to arise from this study.