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

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## Chapter 4

### Understanding the cardinal virtues.

“...we are unfashioned creatures, but half made up, if one wiser,  
better, dearer than ourselves - such a friend ought to be - do not lend  
his aid to perfectionate our weak and faulty natures.”

*Frankenstein; or, The Modern Prometheus*

Mary Shelley

The illustrations above, drawn from the life of Dr Takashi Nagai, demonstrate a complex interplay between the cardinal virtues in each of his deliberate actions. In **Chapter 4** I investigate the distinctive qualities of each of the cardinal virtues. In **4.1** I argue for a restricted reading of Aquinas’ notion of “rational by participation”<sup>1075</sup> in reference to the dispositions of the sensitive appetites and examine the case for and against whether fortitude and temperance may be considered essentially biophysical qualities; in **4.2** I seek to clarify the specific tasks of the cardinal virtues; and, and argue that each has a distinguishing biological constitution. Finally, in the light of preceding discussion, in **4.3** I present the case for the unity of the virtues.

I conclude by identifying 17 characteristics of virtue that will, in **Chapter 5**, be aligned with neuroscientific data.

#### 4.1 The cardinal virtues.

##### The argument.

In this following section, the differences between these virtues are analysed in the light of Aristotelian and Thomistic texts.

I argue that:

- Each cardinal virtue has a distinctive biophysical “signature”.

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<sup>1075</sup> ST, Ia-IIae, Q.50, Art.4. See also Q.59, Art.4, and Q.61, Art.2.

- Prudence and justice consist in habits perfecting the rational faculties: in the performance of a virtuous act, their role is consequent to the presentation of arduous goods and pleasurable goods to the intellect and will by the sensitive appetites. The habits of prudence and justice are corporeally manifested in perfections of certain biological structures that are necessarily associated with rationality in the embodied life.
- Fortitude and temperance are essentially perfections of biological structures of the body which facilitate the presentation of appropriate arduous goods and pleasurable goods for rational consideration.<sup>1076</sup>
- Consequently it may be concluded that in actions of perfect virtue all four cardinal virtues are present, not simply because Aquinas said it should be so, but rather because the four cardinal virtues each perform different roles, all of which are needed for the completion of a good action.
- These arguments form a compelling case for the notion of the unity of the virtues.

And these clarifications are essential if we are to identify that which is bodily in relation to each of the cardinal virtues, the task which is the role of this study. These views will inform **Table 4.1** and therefore the work of **Chapter 5** where pertinent biological structures will be discussed in detail, and the actual part-constituents of virtue will be sought – the specific regions, neural pathways and biophysical processes – that underpin virtue, in the sense already explained in **Chapter 1**. Hence a necessary task of this chapter is the delineation of the roles specific to each of the cardinal virtues.

### Overview

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<sup>1076</sup> The view that temperance and courage are essentially embodied has its advocates. Titus and Moncher write, “An Aristotelian-Thomist perspective, for its part, has argued that certain virtues reside in the embodied emotional dispositions (not just in reason and will)... (relying on) instinctual and acquired neural circuitry, and thus are properly considered bodily. The virtue tradition has distinguished two large areas of affective virtues that accord with two types of embodied affectivity: the emotions of desire (the attractive good) and those of difficulty (the difficult good).” Craig Steven Titus and Frank Moncher, “A Catholic Christian Positive Psychology: A Virtue Approach,” *Edification* 3, 1 (2009): 57-63.

It is essential now to look closely at the individual cardinal virtues in order to better understand their individual characteristics.

I argue that fortitude and temperance are essentially biophysical qualities of the human body disposing the sensitive appetites to seek good that is in keeping with reason. They are caused by reason either in that they are developed through childhood training obedient to the reason of their parents, as simplistically speaking, a dog develops obedience; or they are developed as a consequence of one's own rational actions.

Aquinas states, following Aristotle, that the moral virtues are rational "by participation".<sup>1077</sup> This section argues for a restricted reading of this notion. It is argued that fortitude and temperance should be understood most properly as dispositions of the sensitive appetitive faculties, obedient to reason disposed by its own proper virtues – in other words, that fortitude and temperance do not pertain to rationality as their subject, and in themselves they do not moderate rationality properly speaking, which is the task of both prudence and justice. Rather, in their formation they require the ordering contribution of rationality. In disposing acts of temperance or fortitude, the virtues of temperance and fortitude are guided by reason disposed by knowledge of first principles, as well as the virtues of prudence and justice. Although the virtues of fortitude and temperance may be said to be caused by rationality and to dispose the body to rationality, they are not dispositions of rationality.

Prudence and justice are habits of the operative (rational) powers, distinct from fortitude and temperance (habits of the sensitive appetites). In the performance of acts of virtue, it is argued that rationality itself is perfected only by the specific virtues of the operative powers. It will be argued that the contribution of the virtues of the sensitive appetite is prior, properly speaking, to the dialogue between intellect and will as the human act unfolds.

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<sup>1077</sup>ST, Ia-IIae, Q.50, Art.4. See also Q.59, Art.4 and Q.61, Art.2.

This preclusion of direct involvement of rationality in the intrinsic operation of the moral virtues of the sensitive appetites, and the integrated involvement of the four cardinal virtues in all virtuous acts, will be seen in **Chapter 5** to be most consistent with the neural structures associated with the operation of the virtues. It will be suggested in **Chapter 5** that an analysis of the biological part-constituents of virtue supports the views developed in this section and adds a dimension of experimental proof to the distinction between moral virtues.

There will be continued emphasis on the human act serving to emphasise the interdependence of the virtues and their integral operation in the completion of the human act. Further illustrations will be drawn from the life of Nagai, serving to test the discussion against reality, demonstrate the complex involvement of virtues within individual good human actions, and illustrate the integrated cooperation of various virtues in the exercise of such actions.

I now present the case for a restricted reading of Aquinas' notion of "participation" in reason by the moral virtues of the sensitive appetites. In **4.1.1** we will examine the principal arguments opposed to a restricted reading and these arguments are answered systematically in **4.1.2**. Specifically, the discussion is focused on arguments for and against the view that fortitude and temperance are more than ordered biophysical qualities of the human person. Clarity on this issue will enable us, in **4.2** to look in turn at each of the cardinal virtues identifying distinct features, and in **4.3** to reflect on the way in which the cardinal virtues work together in the completion of the human act.

#### **4.1.1 Arguments opposing the view that fortitude and temperance are ordered biophysical qualities of the human person.**

Note that arguments presented below in **4.1.1.1-10** are answered in turn in **4.1.2.1-10**.<sup>1078</sup>

#### **4.1.1.1 Virtue is of the soul.**<sup>1079</sup>

Virtue is properly of the soul. A good action is “activity of the soul in accordance with virtue.”<sup>1080</sup> Human habits may only reside in the soul.

They cannot reside in the sensitive powers as such. These powers, considered independently of reason, are determined to their act by a kind of natural bent.... Only in the intellect do we encounter that multiplicity of indeterminate powers capable of being combined and organised among themselves. ... (These habits) are super added determinations which establish definite relations between the intellect and its objects or possible operations.<sup>1081</sup>

Hence virtuous action is freely elected; not only is habit “that which one uses when one wills,”<sup>1082</sup> but virtue is the facilitation of the rule of reason. It would appear therefore that fortitude and temperance are necessarily more than ordered biophysical qualities of the person.

#### **4.1.1.2 Reason is the “form” of the virtues.**

Aquinas offers a most perceptive insight into the structure and nature of virtue in his discussion “Whether the moral virtues remain after this life?” In this topic he addresses the challenge of distinguishing that which in virtue is biophysical, and therefore prone to decomposition, from that which is formal. Aquinas argues “the

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<sup>1078</sup> An echo of the *Summa*’s methodology seems appropriate here.

<sup>1079</sup> *NE*, 1185.

<sup>1080</sup> *NE*, 1198a18.

<sup>1081</sup> Gilson, *The Christian Philosophy of St Thomas Aquinas*, 257.

<sup>1082</sup> *ST*, Ia-IIae, Q.50, Art.5.

formal element is precisely this order of reason”,<sup>1083</sup> that the formal element of virtue is the ordering of the material organism to facilitate the management by reason of passion. This is a consequence of the notion that the soul, the intellectual principle, “is united to the body as to its form.”<sup>1084</sup> “Form,” insists Aquinas “causes matter to be.”<sup>1085</sup>

As virtue represents an *ordering* its association with reason seems inescapable. Aquinas explains that the virtues consist in the ordering, according to reason, of the various powers of the soul, an ordering to each other and to external ends:

Virtue ... is an ordered disposition of the soul, in so far as, to wit, the powers of the soul are in some way ordered to one another, and to that which is outside.<sup>1086</sup>

Elsewhere we read: “Moral virtue is properly a perfection of the appetitive part of the soul in regard to some determinate matter.”<sup>1087</sup>

Rationality is the *form* of virtue, according to Aquinas. Rationality disposes matter to support virtue, to sustain the operations of the soul, including understanding, choosing, and more broadly, forming and exercising virtue. It seems therefore reasonable to suggest that fortitude and temperance may not be understood simply as ordered biophysical qualities of the human person.

#### **4.1.1.3 Virtue is a “habit of choosing” and therefore all virtue would appear to be a disposition of the rational appetite.**

Quoting Aquinas, Jean Porter seems to insist that moral virtue resides in the reason.

Thomas distinguishes the intention of the end, which belongs to the moral virtues, from the specific choice, which belongs to

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<sup>1083</sup> *ST*, Ia-IIae, Q.67, Art.1.

<sup>1084</sup> *ST*, Ia, Q.76, Art.1.

<sup>1085</sup> *ST*, Ia, Q.75, Art.5.3.

<sup>1086</sup> *ST*, Ia-IIae, Q.55, Art.2.1.

<sup>1087</sup> *ST*, Ia-IIae, Q.64, Art.1.

prudence.<sup>1088</sup> “Finally, according to the *Ethics*, the principal act of moral virtue is choice.”<sup>1089</sup> Choice, however, is not an act of the irascible and concupiscible powers, but of reason, as has been said above. Moral virtue, therefore, is not in the irascible and concupiscible powers, but in the reason.<sup>1090</sup>

In fact, as has been seen Aristotle presents each of the virtues as a “habit of choosing”. This leads commentators to adopt the view that all virtues are essentially about the perfection of the will: “the moral virtues perfect the will.”<sup>1091</sup> Thus, even the virtues of the sensitive appetites seem to play a direct role in perfecting the rational appetite.

Furthermore, at the most refined level, Aquinas specifies the connection between love and virtue. Virtue ensures that our loves are under the sway of rationality.

When we say that virtue is the order or ordering of love, we refer to the end to which virtue is ordered: because in us love is set in order by virtue.<sup>1092</sup>

To love is an operation proper to the rational appetite, and therefore it would appear that all virtue is ordered to love, and that rationality is inseparable from the virtues.

#### **4.1.1.4 Aquinas appears to suggest that the moral virtues are rational.**

Texts of Aquinas appear to reinforce the notion that reason operates intrinsically within virtue. In Aquinas’ vision of the perfected man, virtue has an integral role

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<sup>1088</sup> *ST*, Ia-IIae, Q.56, Art.4.4.

<sup>1089</sup> *NE*, 1163a22.

<sup>1090</sup> Jean Porter, “Contested categories: Reason, Nature, and the Natural Order in Medieval accounts of the Natural Law,” *Journal of Religious Ethics* 24, (1996): 259.

<sup>1091</sup> John E. Naus, *The Nature of the Practical Intellect according to St Thomas Aquinas* (Roma: Libreria Editrice dell Universita Gregoriana, 1959), 75.

<sup>1092</sup> *ST*, Ia-IIae, Q.55, Art.1.4.

to play for it is none other than a rightly ordered management of the body. He writes,

Whereby just as virtue directs the bodily limbs to their due external acts, so does it direct the sensitive appetite to its proper regulated movement.<sup>1093</sup>

This view, appearing to attribute the ordering of reason to the virtues of the sensitive appetite would seem difficult to reconcile with the view that fortitude and temperance are essentially biophysical.

#### **4.1.1.5 The practical intellect appears to play an intrinsic role in the virtues.**

Christine Swanton appears to ascribe an intrinsic role to the practical intellect:

Aristotle (rightly) regards practical wisdom as the glue which not only integrates the components of the profiles of the individual virtues, but also unites those virtues one to another.<sup>1094</sup>

If by “integrates the components of the profiles of the individual virtues”, Swanton means an agent that is intrinsic to virtue, and use of the word “glue” seems to suggest just this, then practical reason would seem to play some form of intrinsic role in each of the virtues.

#### **4.1.1.6 The speculative intellect appears to play a role within each of the virtues.**

It would appear that the speculative intellect is also necessary for virtue. We read for example:

Moral virtue can stand without wisdom, science, or art, but not without the habit of first principles and prudence.<sup>1095</sup>

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<sup>1093</sup> *ST*, Ia-IIae, Q.59, Art.5.

<sup>1094</sup> Swanton, *Virtue Ethics: A Pluralistic View*, 27.

<sup>1095</sup> Naus, *The Nature of the Practical Intellect according to St Thomas Aquinas*, 75. Cf *ST*, Ia-IIae, Q.58, Art.4.; *ST*, Ia-IIae, Q.65, Art.1.3.

Hence, it would appear that speculative intellect plays an intrinsic role in each of the virtues.

**4.1.1.7 It would appear impossible to hold the view that acts of individual virtues are not rational.**

Aquinas appears to suggest that each virtue is instrumental in the exercise of its own acts.

The function of virtue (is)... to make (the sensitive appetites) execute the commands of reason, by exercising their proper acts.<sup>1096</sup>

If the moral virtues were not inherently rational it would seem difficult to argue that there could be, for example, acts of temperance or fortitude.

**4.1.1.8 Virtue results from the ordering of corporeal processes by reason.**

Although the virtues of the irascible and concupiscible reside in the sensitive part of the soul we also read that they are in the reason and will according to their “origin and beginning”. Aquinas argues that the rational constituent of virtue consists in the ordering of the sensitive appetites by reason.

...habits of moral virtue are caused in the appetitive powers, according as they are moved by the reason....<sup>1097</sup>

So, it would appear that the co-constituents of virtue to be reason and biophysical processes. Hence it would seem that the notion of virtue must embrace reason.

**4.1.1.9 As virtue is “perfection of a power to act”, therefore it “belongs to that which is proper to the soul”.<sup>1098</sup>**

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<sup>1096</sup> ST, Ia-IIae, Q.59, Art.5.

<sup>1097</sup> ST, Ia-IIae, Q.51, Art.2.

<sup>1098</sup> ST, Ia-IIae, Q.55, Art.2.

Aquinas argues that as virtue is a power to act, it would appear to be necessarily of the soul.

Virtue implies some perfection of power... power in reference to being is on the part of matter... power in reference to act, is on the part of the form, which is the principle of action, since everything acts in so far as it is in act... the body holds the place of matter, the soul that of form. ... only those forces proper to the soul, namely the rational forces, belong to man alone. And therefore, human virtue... cannot belong to the body, but belongs only to that which is proper to the soul. Wherefore human virtue does not imply reference to being, but rather to act.<sup>1099</sup>

#### **4.1.1.10 The habits of virtue all enjoy a certain durability.**

It would appear that the habits of virtue all enjoy a certain durability:

No bodily change seems capable of corrupting the intelligible species residing in the intellect; since the intellect independently of the body is the proper abode of the species; for which reason it is held that habits are not lost either through old age or death. ... For the same reason neither can habits of virtue be corrupted, since they are also in the rational soul, and as the Philosopher declares (*NE*, 1, 10) "virtue is more lasting than learning".<sup>1100</sup>

Ramsay suggests that, even after dissolution of the body, both the rational and sensitive appetites shed corporeal aspects but that the moral virtues, as rational dispositions, all are retained:

After mortal life the absence of needs and disorder among the bodily passions means that the material aspects of the virtues

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<sup>1099</sup> *ST*, Ia-IIae, Q.55, Art.2.

<sup>1100</sup> *ST*, Ia-IIae, Q.53, Art.1.3.

will not endure, but since the Blessed will possess perfect rationality concerning every part of their existence and complete conformity of their appetites to this, virtue will still endure formally. Perfect virtue, the perfectly rational disposition, is not a habit in the passions or the will, but *a unifying experience of reason* which is extended to every intellectual operation and with which every appetitive operation conforms. The virtues, then, point towards Virtue as an experience of reason.<sup>1101</sup>

This view seems incompatible with a conception of fortitude and temperance as essentially corporeal.

#### **4.1.2 Arguments supporting the view that fortitude and temperance are ordered biophysical qualities of the human person.**

##### **4.1.2.1 Virtues “in the soul” must be understood correctly.**

Even our superficial glance at the life of Nagai demonstrates that Nagai *is* the man with these personal qualities. There is a grand inescapable reality about the virtuous man... that he is the sum of his habits, and the corollary: that he operates therefore through his habits. The person acts, in a moral sense, through his virtues. Virtues empower us to act well. Because members of the body are organs of the soul’s power, moral virtue is said to be of the soul.<sup>1102</sup>

The fact that the moral virtues are all “rational” should not lead to an assertion that fortitude and temperance have no basis in the biophysical qualities of the human person. As there is an obediencial relationship, in a state of virtue, of the sensitive powers towards reason, it is not necessary to assert some intrinsic role

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<sup>1101</sup> Ramsay, *Beyond Virtue. Integrity and Morality*, 173.

<sup>1102</sup> *ST, Ia-IIae, Q.17, Art.9.* “... all movements of members that are moved by the sensitive powers are subject to the command of reason.... as the powers of the soul stand in respect of obedience to reason, so do the members of the body stand in respect thereof.”

for reason within fortitude and temperance.<sup>1103</sup> Aristotle and Aquinas maintain a clear distinction between what is rational and what is sensitive.<sup>1104</sup> Aquinas demonstrates the distinction between virtues perfecting the rational as their subject and those of the irrational part of the soul, by speculating on the state of the human soul after death.<sup>1105</sup> Aquinas clarifies that the powers of the sensitive soul cannot exist without the body and therefore these virtues do not either.<sup>1106</sup>

All human acts require operation of the rational appetite informed by the intellect; it is therefore clear that the virtues of justice and prudence, associated with these rational operations, must be powers of the soul.<sup>1107</sup> This is so because, “Habit needs to be in that power which is the principle of the act”, and hence for example, “the possible intellect is the subject of intellectual habits”.<sup>1108</sup>

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<sup>1103</sup> Naus, *The Nature of the Practical Intellect according to St Thomas Aquinas*, 69-70. “Some actions proceed from the soul through the body, and are, therefore, principally in the soul, secondarily in the body. The same is true of the habits which modify them: they dispose the body habitually to serve the operations of the soul. Accordingly there can be habits in the sensitive powers in so far as they act under the command of reason. ... (These moral virtues nevertheless) perfect man as man. These are the intellectual and moral virtues of intellect and sense and intellectual appetites.”

<sup>1104</sup> Aristotle and Aquinas hold that the virtues of the irascible and concupiscible reside in the sensitive, irrational, part of the soul.

<sup>1105</sup> *ST*, Ia, Q.77, Art.8. “Some powers belong to the soul alone as their subject; as the intelligence and the will. These powers must remain in the soul, after the destruction of the body. ... Now accidents cannot remain after the destruction of the subject ... such powers do not remain actually; but they remain virtually in the soul as in their principle or root.”

<sup>1106</sup> Aquinas, *Disputed questions on the cardinal virtues*, Art 4 Ad 13. “It should be said that some teach that the irascible and concupiscible, the subjects of temperance and fortitude, are in the higher part, not in the sensitive part of the soul. But this conflicts with what the Philosopher says in *Ethics* 3, namely, that virtues are in the irrational parts. Others say that the powers of the sensitive part remain in the separated soul either according to potency alone or according to act. But this cannot be because the acts of the sensitive power cannot exist without the body; otherwise the sensitive soul of the brutes would be incorruptible, which is erroneous.”

<sup>1107</sup> Strictly speaking, justice and prudence are not powers of the soul, but “in a power of the soul”. Aquinas further states: “a power of the soul is the subject of virtue.” (*ST*, Ia-IIae, Q.56, Art. 1). For the purposes of this thesis however, I do often refer to “person” as the subject of virtue. This is an acceptable convention: for example, Jean Porter writes of “the person of true virtue” and “it is proper to justice among the other virtues to direct the human person” (Jean Porter, *The Recovery of Virtue*. (Louisville: Westminster/John Knox Press, 1990), 114 and 124). Clearly, however, debate over the true subject of the virtues is an important part of scholarship concerning Aquinas’s moral theory.

<sup>1108</sup> *ST*, Ia-IIae, Q.54, Art.1.

Ultimately that virtues are “in the soul” means that they can be utilised by the human person to facilitate his wellbeing, they are not a rule unto themselves. It does not imply that all virtues belong to the soul as their subject.

In summary, it is clear that moral virtues are properly “in the soul” as they are acquired and directed by the person. Yet, as these moral virtues of fortitude and temperance are habits of management of bodily emotion, they must corporeal. The argument of this study is that this substrate consists in anatomical parts, processes, and pathways which may reasonably identified within the organism.

Specifically, the virtue of fortitude will exhibit part-constituents with roles mediating apprehension and management of fear, pain and anxiety. The virtue of temperance will exhibit part-constituents mediating reward systems and apprehension of pleasure. In common they will consist in part-constituents which link emotional centres with cortical regions implicated in imagination, memory, deliberation, and goal election. Each also will feature part-constituents which account for habit formation, habituation of specific processes, etc. These characteristics will be explored in **Chapter 5**.

#### **4.1.2.2 Reason as the “form” of virtue correctly understood.**

That reason is the “form” of the virtues may, at first sight, seem to suggest that reason, as a matter/form co-constituent, is intrinsic to all virtue. But I suggest this is an erroneous reading of this key source passage:

The material element in these virtues is a certain inclination of the appetitive part to the passions and operations according to a certain mode:- and since this mode is fixed by reason, the formal element is precisely this order of reason.<sup>1109</sup>

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<sup>1109</sup> ST, Ia-IIae, Q.67, Art.1.

The material element absent after death, is “a certain inclination of the appetitive part to the passions and operations according to mode fixed by reason”.<sup>1110</sup> It is this “certain inclination” that is the very subject of this study. Aquinas’s words, “a certain inclination of the appetitive part”, are consistent with the view proposed by this study that the human organism is able to develop neural pathways that dispose for self directed higher cortical modification of emotional reactions.

The formal element is not reason itself but “the order of reason”<sup>1111</sup> which has fixed the material element in a certain way.

In the life of Nagai, we witness extraordinary qualities of character in his later years; his impressive peace and self-control have been noted above. It is eminently clear that these qualities have a material element for they include the ability to transcend fears of death, and separation from his deceased spouse for whom he held a passionate love.

The position of this study is that our free and conscious efforts form, or reform, our very biophysical constitution. By the effort we invest in good behaviours we actually build virtue, we order our material constitution into neural structures, better capable of supporting effective self management at the rational level. Fortitude and temperance are habits caused in the sensitive appetite by repetition of actions, actions which are repeated owing to the settled rational conviction that personal actions for human flourishing must demonstrate fortitude and temperance. It would appear that reason, perfected by prudence, the habitual disposition of the practical intellect for right counsel, judgement and command, plays a role in ordering the biophysical processes that are part-constituents of the other cardinal virtues. Reason, human thought, directs the very ordering of matter.

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<sup>1110</sup> *ST*, Ia-IIae, Q.67, Art.1.

<sup>1111</sup> *ST*, Ia-IIae, Q.67, Art.1.

For reason to be the form of the virtues of temperance and fortitude poses a further challenge. These virtues are “of the soul” because they are at the free service of the person, but they are dispositions of the sensitive appetite, and these facts seem difficult to reconcile. A key to the solution lies in the fact that, as we have seen in the life of Nagai, the cardinal virtues operate together. Acts of the virtues of fortitude and temperance, dispositions of the sensitive appetites, will be directed by rational operations which are themselves disposed by justice and prudence. Without acts of prudence and justice there can be no rational direction of the sensitive appetites; without prudence and justice rationality is unable to inform the acts of these pathways of habituation. Therefore, as virtues are known through their acts, acts of temperance and fortitude will be informed by acts of prudence and justice. It would seem then that reason directing the individual acts through acts of prudence and justice, builds up and characterises as virtues, the virtues of fortitude and temperance.

The canine analogy can help. A dog has a trained disposition to obey the reason of his master. Yet the dog is wholly material. So too fortitude and temperance are acquired (and finely attuned) dispositions to obey our rational choices.

#### **4.1.2.3 A correct understanding of “habit of choosing” is required.**

It is true that virtue is presented by Aristotle and Aquinas as a “habit of choosing”, yet this notion also must be reconciled with the clear distinction between virtues of the sensitive appetites and those of the rational appetite and intellect.

The human act is a team effort: deliberation of the will informed by the intellect leading to choice, and all with the prior input from the lower appetites, appetites that to a greater or lesser extent have been already schooled in rational management, to the extent that they are already disposed by pre-existing habits.

Choice resides formally in the will, but it does result from a concurrence of the intellectual and volitional powers through a

mutual causality in the orders of specification and exercise respectively.<sup>1112</sup>

A key to clarification of the various roles of the virtues, the good moral habits, lies in a correct understanding of habit. Habits hold a very special place in the anthropology of Aquinas.

Habit is presented as a most broad category. Etienne Gilson observed:

Habits are not only qualities and accidents, but they are qualities and accidents which lie closest to the nature of a thing, and which come closest to entering into its essence and integrating themselves into its definition.<sup>1113</sup>

Each power, rational and sensitive, is disposed by its distinctive and corresponding habit. It is apparent that *habit* is a most broad category, simply indicating the disposition appropriate to the power that it perfects.

Aquinas wrote:

Every power which may be variously directed to act, needs a habit whereby it is well disposed to its act.<sup>1114</sup>

Within this broader category of habit Aristotle positioned virtue. Each faculty directly involved in moral action is disposed by its appropriate habit. The appropriate habits for the sensitive appetites are moral virtues of the concupiscible and irascible appetites. The rational appetite, too, has its own proper disposition, justice. The practical intellect is disposed by its own habit, prudence.

The good habit, or virtue, appropriate to the nature of each power (the speculative and practical intellect, and the rational and sensitive appetites) assists

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<sup>1112</sup> Edward Cook, *The deficient cause of moral evil according to Thomas Aquinas* (Washington: Paedeia Publishers and The Council for Research in Values and Philosophy, 1996), p93. This text is a volume of *Series on the foundations of moral education and character development*.

<sup>1113</sup> Gilson, *The Christian Philosophy of St Thomas Aquinas*, 256.

<sup>1114</sup> *ST*, Ia-IIae, Q.50, Art.5.

in the operation and function of that power, in integrated concert with the action of the other habits, with the outcome that the whole organism flourishes.

It therefore stands to reason that wherever rational operations coincide with sensible powers the rational operations can only be disposed by their own proper virtues. Therefore, strictly speaking, it is incorrect to assert that all virtues pertain to rationality as their subject.

A certain imprecision of terminology abounds in this area. We read: concupiscence “judges its own desires to be good”<sup>1115</sup>, yet it is clear that unmoderated sensual pleasure cannot judge. At best we can say that the intellect presents to the will the principle that pleasure is to be pursued, and so pleasure in the will is then pursued. But in this case it is clearly the rational appetite, not the vice of intemperance, that does the choosing.

The capacity for choice does not properly reside in temperance and fortitude as they are perfections of material appetites. For virtue to be a habit of choosing, it is necessary, as a minimum, that every virtuous action be guided by rationality. This is achieved by the contributions of prudence and justice in every action of perfect virtue.

#### **4.1.2.4 The moral virtues of the sensitive appetite are rational “by participation”.**

Aquinas argues that: “According to the mind of Aristotle... it is manifest that the sensitive powers are rational, not by their essence, but only by participation (*Ethic* i 13).”<sup>1116</sup>

I propose that to say of virtues that they are rational “by participation” is to say that they are biologically grounded habits which reflect the right ordering of

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<sup>1115</sup> *ST*, IIIa, Q.156, Art.3.

<sup>1116</sup> *ST*, Ia-IIae, Q.50, Art.4. See also Q.59, Art.4 and Q.61, Art.2.

reason as their cause, and which perfect their respective appetites to desire pleasures and avoid pains in keeping with right reason. Therefore I propose a restricted reading of rational “by participation”; this view contrasts with a certain accepted reading of Aquinas that suggests, wrongly in my opinion, an intrinsic role of reason in the virtues of the sensitive appetites.

Fortitude and temperance, as habits of the sensitive appetites, lack in isolation the necessary intrinsic rationality to be described properly as “rational”. Aquinas says that “in so far as they *obey* reason the sensitive powers are said to be ‘rational’.”<sup>1117</sup> Elsewhere we read: “Appetite is the principle of human acts insofar as it partakes of reason.”<sup>1118</sup>

They are not even dispositions of the intellect or will, properly speaking.

Yet, again Thomistic terminology can be frustratingly equivocal. For example, Aquinas makes cardinal virtues, instead of the agent, the subject of active verbs: for example, he writes that prudence brings about the good respecting the consideration of reason; that justice brings about what is due and upright in operations; that temperance “restrains desires for the pleasures of touch”<sup>1119</sup>; that fortitude brings about firmness of soul against any of the passions. This transfer of agency can somehow give the impression that the virtues are in command, or that somehow they are synonymous with reason. Yet only the person acts; and properly speaking, for example, it is only with the assistance of temperance that the person restrains desires.<sup>1120</sup>

The view that all four cardinal virtues contain in some way an intrinsic rational element appears to adopt this, unintended, transfer of agency. Such imprecise

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<sup>1117</sup> *ST*, Ia-IIae, Q.53, Art.1.

<sup>1118</sup> *ST*, Ia-IIae, Q.58, Art.2.

<sup>1119</sup> *ST*, Ia-IIae, Q.61, Art.3.

<sup>1120</sup> Naus, *The Nature of the Practical Intellect according to St Thomas Aquinas*, 72. Here we read for example, “Moral virtues perfect the appetitive part of the soul to desire good.” The active verb “perfects” can be understood correctly, or if mistakenly, can perpetuate this mistaken view that the virtues have more authority than they do.

readings of Thomistic texts appear to reinforce mistaken assumptions about virtue.

What Aquinas means by “participation” may be further clarified by reference to the doctrine of “participation in being”, introduced in **Chapter 1**, as analogously relevant.<sup>1121</sup> Participation implies exercise and enjoyment of certain benefits that are not properly one’s own. It should be remembered that Aquinas taught that substances possess being only *by participation* - being is predicated of finite creatures by participation:<sup>1122</sup> “All other beings that are not their own being but have being by participation must proceed from that one thing.”<sup>1123</sup>

We can relate these reflections back to our discussion of Nagai. It has been noted a number of times that each of the actions of Nagai appear to reflect dispositions of various virtues, both at the material and the rational level. For example, the compassionate treatment of the enemy soldier reflects not only justice but also temperance (understood in a broad sense), fortitude, and prudence. Hence it may be argued from this example that habits of the sensitive appetite are able to be guided by habits of rationality, and in this sense we are able to say that these habits are rational “by participation”.

#### **4.1.2.5 The practical intellect is perfected by its own proper habit, prudence.**

In a tightly argued text, Aquinas provides insights into the operation of prudence, a “habit of the reason”. The text attributes to prudence an explicit ordination to human flourishing, a direct consequence of the rectitude, the perfection, of reason resulting from exercise of the virtue. He argues that prudence is needed to perfect reason and so provide effective guidance to the other virtues. He concludes, “An intellectual virtue is needed in the reason, to perfect the reason,

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<sup>1121</sup> Arguably, according to Aquinas, the participation of virtue in reason is not only analogical but ontological. Such a discussion would stretch the parameters of this current study.

<sup>1122</sup> Torchia, *Exploring Personhood*, 129.

<sup>1123</sup> Aquinas, *On the Power of God*, Q3 a5.

and make it suitably affected towards things ordained to the end; and this virtue is prudence.”<sup>1124</sup>

Nagai’s consistent mastery of his own actions demonstrates the presence of a perfecting habit of the practical intellect. It makes no sense to hold that this habit is intrinsic also to the perfecting habits of the sensitive appetites, which demand their own perfecting habits which *by necessity* must be distinct from habits perfecting rationality.

Reason exercises royal command. Reason governs the virtues of the sensitive appetite not directly, or “despotically” as Aquinas would say.<sup>1125</sup> Rather, he explains, the appetites may or may not obey. Aquinas holds that fortitude and temperance obey reason “royally”. This principle may also be used to demonstrate what we could call the “exteriority” of reason to the sensitive appetites.<sup>1126</sup>

The bottom line is that rationality, which must be present in any human act, will have its own proper disposing virtues. When rationality is involved in acts of fortitude and temperance, it will be disposed to act well by its own proper virtues of justice and prudence. Fortitude and temperance are rational virtues, not

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<sup>1124</sup> *ST*, Ia-IIae, Q.57, Art.5. The full quotation is as follows: “Prudence is a virtue most necessary for human life. For a good life consists in good deeds. Now in order to do good deeds, it matters not only what a man does, but also how he does it; to wit, that he do it from right choice and not merely from impulse or passion. And since choice is about things in reference to the end, rectitude of choice requires two things; namely, the due end, and something suitably ordained to that due end. Now man is suitably directed to his due end by a virtue which perfects the soul in the appetitive part, the object of which is the good and the end. And to that which is suitably ordained to the due end man needs to be rightly disposed by a habit in his reason, because counsel and choice, which are about things ordained to the end, are acts of the reason. Consequently an intellectual virtue is needed in the reason, to perfect the reason, and make it suitably affected towards things ordained to the end; and this virtue is prudence. Consequently prudence is a virtue necessary to lead a good life.”

<sup>1125</sup> *ST*, Ia, Q.80, Art.3.

<sup>1126</sup> We have seen that virtues facilitate the rule of reason. A number of times Aquinas contrasts the terms “despotic” and “royal”. “Royal” supremacy, “whereby the free are governed”, denotes for example the rule of reason over the appetites. He argues clearly that the moral virtues, of the rational and of the sensitive appetites, partake of reason but that there is no intrinsic role for, as opposed to obediential relationship to, intellect in acts of the virtues of the sensitive appetite. He applies this view also to justice, the habit disposing the rational appetite.

because rationality is intrinsic to them, but rather because they are dispositions of their respective appetites to obey reason.

There are intimations of this distinction in the scenarios presented about the life of Dr Nagai. The process whereby he brings his emotions under the rule of reason is demonstrated in his response to the Allied leaflet dropped from the plane. This contrasts with the apparently instantaneous insight to treat friend and foe with the same kindness.

**4.1.2.6 If in addition to prudence, the speculative intellect plays a role in virtue, the speculative intellect will be perfected by its own proper habits.**

Keenan clarifies the relationship between the speculative intellect, the practical intellect and moral virtue. Each is distinct. He writes of “an implicit hierarchy” in Aquinas: synderesis,<sup>1127</sup> prudence, and then the moral virtues.<sup>1128</sup> It is “Natural reason known as synderesis (that) appoints the end to moral virtues.”<sup>1129</sup> Each is distinct: “Prudence relies on the moral virtues to dispose themselves to those ends that synderesis has appointed.”<sup>1130</sup>

That the speculative intellect disposes moral virtue to its end, does not mean that the speculative intellect is somehow internal to moral virtue. In fact we read that the speculative intellect is perfected by its own appropriate habit: there are three habits of the speculative intellect: wisdom, science and understanding.<sup>1131</sup>

Although we read that the virtue of understanding<sup>1132</sup> (habitual awareness of first

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<sup>1127</sup> Porter, “Contested categories: Reason, Nature, and the Natural Order in Medieval accounts of the Natural Law,” 218. Jean Porter notes that synderesis is not the natural law but “the habitual knowledge of the fundamental principles of the natural law”

<sup>1128</sup> James F. Keenan, “The virtue of prudence” in *The Ethics of Aquinas*, ed. Stephen J. Pope (Washington DC: Georgetown University Press, 2002), 260. See *ST*, IIa-IIae, Q.47, Art.6.

<sup>1129</sup> “The moral virtues tend to an end appointed by human reason.” (*ST*, IIa-IIae, Q.47, Art.6.3.)

<sup>1130</sup> Keenan, “The virtue of prudence,” 261.

<sup>1131</sup> *ST*, Ia-IIae, Q.57, Art.2.

<sup>1132</sup> “Sometimes, in the context of practical intellect (this is) called synderesis” Naus, *The Nature of the Practical Intellect according to St Thomas Aquinas*, 87. “The habits from which conscience is informed, although they be many, nevertheless all have efficacy from one first source, sc., from the habit of first principles which is called synderesis.” *ST*, Ia, Q.79, Art.13.3.

principles) is necessary for the operation of virtue, we return to the fundamental principle that each power is perfected by its own specific virtue. In summary, the speculative intellect does play a prior role in the exercise of moral virtue but is, itself, perfected by its own distinct virtue, understanding.

Understanding and prudence do not operate like justice, nor justice like temperance or fortitude. The rational virtues operate in modalities quite different from those of the virtues of the sensitive appetites. A disposition of the sensitive appetites must itself have exclusively sensible characteristics. Again consider the analogy of the “self control” of a dog sitting on command, a self-control founded on biological processes and elements; on the other hand, a disposition of the reason, or of the rational appetite, may be expected to manifest less “materiality”.

**4.1.2.7 Rather than of “an act of an isolated virtue” it appears more appropriate to think in terms of “a moral operation perfected by the integral involvement of multiple virtues”.**

Although it is common usage, strictly speaking it is a misnomer to think or write in terms of “acts of individual virtues”. Virtues do not act, rather they are dispositions that perfect moral action. Furthermore, it would appear that “moral acts disposed by individual virtues” itself is a rather theoretical construct. In practice, every moral act requires prudent judgement and deliberation, consideration of impact of the actions on others, and habitual self management disposed by the virtues of the sensitive appetites.

It is evident from the scenarios presented in the life of Dr Nagai, that each of the actions we examined in detail could be interpreted as an action in which dispositions of the four cardinal virtues were all in evidence. For example, his fabrication of the Japanese flag from his own blood demonstrates prudent action, a concern for those he leads, as well as remarkable fortitude and self control.

It is more accurate for us to utilize language such as, “a moral operation perfected by various virtues.” If we think in terms of “moral operations”, actions disposed by virtues in concert, rather than actions disposed by “moral virtues acting in isolation from each other” there is no longer any difficulty in ascribing rationality to the actions of temperance and fortitude.

In contrast to a view that each of the individual moral virtues requires its own internal “package” of rational and corporeal components, let us think rather in terms of moral operations. Aquinas seems to suggest as much when he writes,

As much as the intellect considered in its purity differs from the composite of soul and body, so much does speculative operation differ from operation which takes place according to moral virtue.<sup>1133</sup>

Note that he applies the term “operation”, specifically reserved to the action of the intellect and will, to virtuous action in general which he suggests in the analogy has a corporeal as well as rational dimension, a dimension extending into the domain of the virtues of the sensitive appetites. If this reading is correct, he therefore suggests the integrated complicity of various virtues in the completion of one moral operation.

Furthermore, complexity of motivation suggests that virtues are present in concert. Considerations of motivation are a useful lens through which we can study whether or not “actions of individual virtues” may be said to occur. The appropriate motivation of any action is that the deed be worthy in itself and carried out for a noble end, that is, an end which is according to right reason and which takes into full account one’s duties towards others. Hence the simple act of a doctor carrying out a most unpleasant act is disposed by fortitude, and carried out therefore according to right reason (prudence) with perfect regard for their

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<sup>1133</sup> Aquinas, *In X Ethicorum*, trans. C. I. Litzinger (Chicago: Henry Regnery, 1964), 1, 11.

impact on others (justice); yet while it may be disposed by fortitude, it is clearly an operation involving the contribution of all the virtues.

And is temperance involved in this action? Most definitely. One of the reasons Aquinas offers for separate virtues for the concupiscible and irascible appetites is that at times these appetites operate at cross purposes: the arduous and nauseating good of treating a putrid wound is undermined by one's desire for delectable sensation. Both virtues are required.

It is clear that in this arguably-single action, Nagai is motivated by a variety of intentions: to exercise his duty of leadership, to withstand pain sufficiently to accomplish the action, to lift his own spirits. These intentions suggest the involvement of various virtues, respectively justice, fortitude and perhaps some virtue associated with temperance. Hence in this action of Nagai all the virtues are arguably present.

#### **4.1.2.8 As it is the cause of virtue, reason is necessarily external to moral virtue.**

The moral virtues of the sensitive appetites may only exist properly speaking in ensouled matter; the human body enjoys its capacity virtue because human beings are rational. At the metaphysical level, the soul animates the body, rationality disposes matter for virtue; and at the biophysical level, virtue is "caused by human acts... (proceeding) from reason, by whose power and rule the aforesaid good is established."<sup>1134</sup> The very acquisition of virtue is natural to a human being. These insights offer far reaching implications for this study.

There is no question that reason, guided by the rationality of the agent, plays a decisive role in the formation of the virtues. We read: "Habits of moral virtue are caused in the appetitive powers, according as they are moved by the reason."<sup>1135</sup>

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<sup>1134</sup> *ST*, Ia-IIae, Q.62, Art.2.

<sup>1135</sup> *ST*, Ia-IIae, Q.51, Art.2.

Yet another, short, fascinating passage assists us in interpreting this “according to mode fixed by reason”<sup>1136</sup>. Aquinas allows either for habits acquired by training as a young child, or acquired by deliberate personal choice of repetition of acts. He states that virtue is caused by human acts carried out at the direction of reason. He writes,

Human virtue.... can be caused by human acts... (proceeding)  
from reason, by whose power and rule the aforesaid good is  
established.<sup>1137</sup>

This is born out also in a passage where Aquinas differentiates between the material presence of the virtue and the origin of the sensitive virtues whereby they are in reason and will, virtually, as a root. He uses the case of the separated soul to illustrate the limitations of the virtues of the sensitive appetites.<sup>1138</sup>

Of course, and here is the crux of the argument, if reason is decisive in giving virtue its form, in being “origin and beginning”, then it is *extrinsic* to virtue. Reason in such a role, would need to be perfected itself by previously existing habits.

At times Nagai takes decisions that subsequently serve to build up his virtuous character. For example, the decision to treat enemy patients with compassion and the subsequent exercise of this decision, led to an habituation of these selfless actions and to the discovery of the joy intrinsic to the virtue. In this we see an example of how reason gives rise to virtue as its cause.

#### **4.1.2.9 Analysis of the human act supports the view that various virtues are present in concert in a single human act.**

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<sup>1136</sup> *ST*, Ia-IIae, Q.67, Art.1.

<sup>1137</sup> *ST*, Ia-IIae, Q.62, Art.2.

<sup>1138</sup> Aquinas, *Disputed questions on virtue*, 4 ad13. “Powers (of the sensitive part of the soul) ... do not remain in the separated soul, save virtually, as in a root, because the powers of the soul flow from its essence. But these virtues are in the irascible as far as their derivation goes, but according to origin and beginning they are in reason and will, because choice is the principle act of moral virtue and it is an act of rational appetite. But by a kind of application this choice terminates in the passions of the irascible and concupiscible because of temperance and fortitude.”

Virtue empowers us to act, but it is incorrect to conclude that therefore all virtue pertains to the soul as its subject. It is argued here, in considering the elements of the human act, that all the virtues are required for a perfect human act, and that these virtues perform quite distinct contributions within the human act as it evolves. Again the moments we have studied from the life of Nagai appear to bear out the view that the various virtues are all present. Also, we see, for example in his consideration of the leaflet, that it was only after he mastered his anger and sensitivity to the enemy leaflet's wording, that he was able to rationally assess the message.

- i. Input from the sensitive appetite precedes the rational in the human act. Aquinas states clearly that in the completion of good human acts, both intellectual and moral virtues are needed.

...for a man to do a good deed, it is requisite not only that his reason be well disposed by means of a habit of intellectual virtue; but also that his appetite be well disposed by means of a habit of moral virtue.<sup>1139</sup>

But what is the relationship between these virtues as the act “evolves” through the steps of *intention* and *execution* as outlined in **Table 3.1**?

Reflection on the “structure” of the human act suggests that input from the sensitive appetite takes place prior to the interplay of intellect and will that is present in every human act. Therefore it would be incorrect to confuse the virtues of the sensitive appetite and the various virtues disposing rationality.

At their origin, there are two basic kinds of appetitive potencies, one pertaining to sense knowledge, the other to intellectual knowledge.<sup>1140</sup>

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<sup>1139</sup> *ST*, Ia-IIae, Q.58, Art.2.

<sup>1140</sup> H. D. Gardiel OP, *Introduction to the Philosophy of St Thomas Aquinas (III Psychology)*, (St Louis: Herder, 1956), 82.

In man there are but two principles of human actions, namely, the intellect or reason, and the appetite: for these are the two principles of movement in man as stated in *De Anima* iii text 48. Consequently every human virtue needs be a perfection of one of these principles.<sup>1141</sup>

The appetitive potency relating to sense knowledge has its own proper disposition.

Sensitive appetite tends only towards particular goods as such, but intellectual appetite, which is the will, always desires these goods under some universal aspect of good.<sup>1142</sup>

Thomas argues the sensitive appetites is composed of the concupiscible, attracted to easily attained goods, and the irascible, attracted to arduous goods. The concupiscible appetite is moved by the imagination and the common sense, the irascible by the cogitative and the memory.<sup>1143</sup>

Gardiel reflects, “Since the faculties eliciting these acts are organic powers, the acts necessarily involve bodily changes,”<sup>1144</sup> changes, according to Thomas, in the passions.<sup>1145</sup>

These organic powers present input to the rational appetite, by way of phantasm, in the first steps of the human act.

Because these steps precede the interactions of the intellect and will that have been outlined in **Table 4.1**. Because of this temporal precedence, *in actu* it is evident that rationality and the sensitive appetites are distinct.

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<sup>1141</sup> *ST*, Ia-IIae, Q.58, Art.3.

<sup>1142</sup> Gardiel, *Introduction to the Philosophy of St Thomas Aquinas (III Psychology)*, 82.

<sup>1143</sup> Gardiel, *Introduction to the Philosophy of St Thomas Aquinas (III Psychology)*, 83.

<sup>1144</sup> Gardiel, *Introduction to the Philosophy of St Thomas Aquinas (III Psychology)*, 84.

<sup>1145</sup> Aquinas enumerates 11 passions: love or hatred, desire or aversion, hope or despair, courage or fear, anger, and joy or sorrow. See *ST*, Ia-IIae, Q.22-48.

- ii. The contribution of emotion to rationality also argues for a “moral-operations view” rather than of a view of actions disposed by isolated virtues.

Analysis of the human act will not only account for rational action but for rational action enriched with emotional input. In illustration we see in the life of Nagai that the remarkable fabrication of the flag is propelled by patriotic emotion. An analysis of how this happens can assist us in defining the respective roles of the virtues.

There is necessarily a point in the deliberation preceding the completion of a human act where emotional readings of the situation and an appreciation of context of action come into play. I suggest that this can happen at two points.

First, positive emotion associated with an action can provide stimulus prior to the action. For example, a love of nature leads Nagai to write poetry with imagery drawn from nature. Note that this refined pleasure is prior to the actual choice to act. (Also prior to the action proper, negative emotions can be mastered, as we have seen in his reaction to the leaflet.)

Second, positive emotion can be generated at the level of relationships with others. Pertaining to the virtue of justice, and therefore in the rational appetite, this takes place within the steps outlined of the human act. This contribution takes place, it would appear, at the stage in the human act which some term the practico-practical judgement in Aquinas’s psychology (Steps 6-8 in **Table 3.1**), in which the will adds its own particularising content to the input it receives from the intellect (correspondingly the speculative-practical judgement) prior to its act.<sup>1146</sup> This particularising content is arguably moderated by the virtue of justice.

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<sup>1146</sup> For clarity of understanding about the role of the practico-practical judgement (not extending however to implications for the virtue of justice) I have drawn on an article of Alice Nelson, Centre for Thomistic Studies teaching materials: <http://www.cts.org.au/articles> (accessed 24/10/2012).

This is a further argument for the complex interplay of all the virtues in each act of virtue and a further compelling argument that no fully moral action can be performed without taking the impact of one's action on others into account.

iii. Furthermore, discrete ascription of a particular action to a single virtue is problematic. Actions in real life manifest the constellation of virtues.

Actions in the real world defy discrete classification into boxes of one virtue or another. For example, Jean Porter has drawn attention to the folly of considering acts of temperance as if these are pursuits distinct from concern for others. It is not possible to consider sexual temperance in isolation from justice understood as a consideration for how one's actions impact on others. Every sexual act impacts potentially, and often immediately, on others. Both notions, and therefore both virtues, are present.<sup>1147</sup>

It would seem too that acts of perfect virtue must be enriched by justice. Nancy Sherman draws attention to the need for virtuous acts to be moderated by justice: "Virtuous agents act taking into account the wellbeing of others, the common good."<sup>1148</sup> This is in accord with the intuition that it is necessary to take into account the impact of our actions on others for a given action to be just. In fact, acts of prudence will not be perfect unless they take into account "circumspection". I suggest that to do so, in those matters relating to the rights and good of others, the habit of justice is required in the will.

Jean Porter insists that it is recurring real life actions that provide the matter for virtues. "Justice is concerned with actions which involve others,

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Accessed 24/10/2012

<sup>1147</sup> This is of course in keeping with the Thomistic view (*ST*, Ia-IIae, Q.61, Art.4).

<sup>1148</sup> Sherman, *The Fabric of Character*, 4.

and not just the agent herself". We should consider that all actions require require rationality informed by justice for their perfection.<sup>1149</sup>

Note that Porter contrasts virtuous actions in real life with a rarefied theoretical perspective that would like unrealistically to see a neat delineation of virtues. Surprisingly she finds fault in Aquinas's view of acts of temperance, suggesting that such acts seem to exclude justice. Yet it is Aquinas himself who insists that in a perfect act of one virtue all virtues are present. (See also **4.3.1.**)

However a perfect moral virtue is a habit directed to a good work, done well. And taking the moral virtues in this way, we ought to say that they are connected, as nearly everyone agrees.<sup>1150</sup>

#### **4.1.2.10 The "durability" of the individual virtues differs in meaning according to the specific virtue.**

The hypothetical discussions in Aquinas about the duration of the virtues in the disembodied state are most illuminating on this question of the differences between the virtues. He makes crucial distinctions between the virtues perfecting rational operations and those perfecting the sensitive appetites.

Aquinas argues that the habits of virtue all enjoy a "certain" durability but draws significant contrasts. In what does their durability variously consist?

Prudence retains a "quasi-formal element"<sup>1151</sup>, the intelligible species that remain after corruption of the body. Aquinas naturally holds that, at the decomposition of the body, any corporeal substrate of prudence and of the moral virtues decomposes. Although Aquinas refers specifically to the phantasms the position of

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<sup>1149</sup> Porter, *Moral Action and Christian Ethics*, 143.

<sup>1150</sup> *ST*, Ia-IIae, Q.65, Art.1.

<sup>1151</sup> *ST*, Ia-IIae, Q.67, Art.2.

this study would be that the bodily substrate should be considered more broadly to include the array of neural processes, pathways and mechanisms assisting virtue. Aquinas writes:

...the phantasms, by turning to which man understands in this life by applying the intelligible species to them,<sup>1152</sup> cease as soon as the body is corrupted.<sup>1153</sup>

Similarly justice, although a disposition of the rational appetite, has a bodily element that must ultimately decompose.<sup>1154</sup>

Aquinas argues that, after the corruption of the body, in the state preceding resurrection of the body, justice nevertheless will have a presence.<sup>1155</sup>

Justice, then, enjoys an immateriality comparable to that of prudence, although the operations of acts of justice and prudence stand somewhat in contrast.

Prudence is a habit of intellect. Justice is a habit caused in the will by reason, by the settled conviction that personal actions must respect the rights of others. Acts of justice will implicate specific part-constituents in memory, imagination and presentation of the phantasm, motivation, empathy to others, reward systems of the body, etc.

Justice will only operate in concert with prudence and the virtues disposing the sensitive appetites. Aquinas says that the will is always implicated in the exercise of moral virtues: "...since the will is a rational power, it may be variously directed to act."<sup>1156</sup> On the one hand, as the virtue properly of the rational appetite and through the involvement of reason, it would seem that biophysical pathways and

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<sup>1152</sup> cf *ST*, *IIae*, Q.84, Art.7 and *IIae*, Q.85, Art.1.5.

<sup>1153</sup> *ST*, *Ia-IIae*, Q.67, Art.2.

<sup>1154</sup> *ST*, *Ia-IIae*, Q.53, Art.2.3. "The intellectual part of the soul, considered in itself, is above time, but the sensitive part is subject to time, and therefore in the course of time it undergoes change as to the passions of the sensitive part, and also as to the powers of apprehension. Hence the Philosopher says (*Phys iv* text 117) that time makes us forget."

<sup>1155</sup> *ST*, *Ia-IIae*, Q.67, Art.1.3. "Justice however will remain because it is in the will. Hence of justice is it specifically said that it is perpetual and immortal; both by reason of its subject, since the will is incorruptible; and because its act will not change, as stated."

<sup>1156</sup> *ST*, *Ia-IIae*, Q.50, Art.5.

processes are concurrently implicated in the reasoning processes of rational judgment and command, presenting particulars at the service of rationality. On the other hand, justice is not present without the presence of the virtues of the sensitive appetite. In sum, a constellation of part-constitutional processes accompany the exercise of every virtue.

On the other hand, Aquinas draws a complete distinction between virtues of prudence and justice, and the virtues of the concupiscible and irascible powers.<sup>1157</sup> Aquinas writes, “In these (moral) virtues (in the afterlife) there is a formal element, which is the ‘order of reason’ (as we have seen above), and a quasi-material element.”<sup>1158</sup> Note the contrast with prudence, which he explains retains a “quasi-formal” element.

The intellectual appetite is quite distinct from sensitive appetite “since what is apprehended by the intellect is different from what is apprehended by the senses.”<sup>1159</sup> This is consistent with the view expressed elsewhere by Aquinas that justice endures when the body and soul are separated. He explains that “the intellectual appetite ... tends to individual things which exist outside the soul... as standing under the universal; as when it desires something because it is good.”<sup>1160</sup> The virtues of the sensitive appetites do not continue to exist except for the “order of reason”, which as we have seen exists externally to the virtue, and in the somewhat perplexing “quasi-material element”; yet after death, material goods themselves are absent, nor is there any biological substrate to present phantasms of that which is pleasurable and that which is painful.

In answer to Ramsay’s suggestion that the moral virtues, as rational dispositions, continue to exist after dissolution of the body, it would seem important to clarify the meaning of “rational disposition”. The only truly rational dispositions are prudence and justice, or understanding, which perfects the speculative intellect

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<sup>1157</sup> *ST*, Ia-IIae, Q.57, Art.4.

<sup>1158</sup> *ST*, Ia-IIae, Q.67, Art.1.

<sup>1159</sup> *ST*, Ia, Q.80, Art.2.

<sup>1160</sup> *ST*, Ia, Q.80, Art.2.2.

and establishes the end of the moral virtues. Aquinas makes it very clear that fortitude and temperance are in fact dispositions of the material appetites, albeit orderly dispositions caused by reason.

In summary, what is the role of reason with respect to the sensitive appetites? Reason appears to interact with the sensitive appetites in two principal ways, which we can refer to, for the sake of clarity, as the micro level, and the macro level.<sup>1161</sup>

- i. At what we can consider as the micro level, Aristotle argues that in each human act motivated by the sense appetites one is moved by the desire for appropriate pleasures and to avoid specific pains regarded as inappropriate and disproportionate to a worthy outcome. Reason then, in bringing to completion the human act, responds to the initial appetitive stimulus, either by legitimising the choice, or rejecting it.<sup>1162</sup> Secondly, also at this micro level of individual acts, reason is able to harness the energy of the passions at the service of the person.
- ii. At what we could call the macro level, a further outcome of this process is that reason “trains” the sensitive appetites over time in what is appropriate pleasure and pain.<sup>1163</sup>

#### **4.2 Biological and functional distinctions between the virtues.**

Now, having presented a systematic case for a restricted reading of “by participation”, in the section which follows, I summarise Aquinas’ understanding

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<sup>1161</sup> Naus, *The Nature of the Practical Intellect according to St Thomas Aquinas*, 73. These two processes appear described (albeit in a rather muddy fashion) by one commentator in the following text: “Therefore reason, which moves the sense powers of appetite, and the appetites themselves need habits in order to operate well. So in the concupiscible appetite there is the virtue of temperance and in the irascible that of fortitude. These virtues keep their respective powers habitually in line with reason.”

<sup>1162</sup> *ST*, Ia-IIae, Q.57, Art.4. “... it is a requisite for prudence....that man is well disposed with regard to the ends; and this depends on the rectitude of his appetite. Wherefore, for prudence there is need of a moral virtue, which rectifies the appetite.”

<sup>1163</sup> This also corresponds to the process of “training” that Aristotle identified, along with “education” which is more to do with the rational appetite and intellect, as one of the two key methods of bringing about virtue.

of the distinctive characteristics and role of each of four cardinal virtues. Throughout I argue that Aquinas' understanding of the moral virtues of the sensitive appetites is indeed one in which reason plays a causal role in the formation of virtue, but that in themselves, the dispositions of the sensitive appetites are founded exclusively on the biological.

In order to better understand the relative roles of the cardinal virtues, and in particular, to develop a clearer understanding of areas where we will expect to find biophysical part-constituents for each, it is highly advantageous to utilise the lens of hylomorphism.

This section builds upon, and should be read in the light of **1.4** in which the hylomorphic underpinnings of this study and certain principles of rational psychology are discussed.

An hylomorphic analysis of virtue, following Aristotle and Aquinas, will assist us in discriminating between aspects of virtue associated with the operations of rationality, and aspects pertaining to sensitive activity. Such an analysis provides insights into the specific contribution of rationality to the formation and exercise of virtue, into the ordering or "disposition" of anatomical structures and dynamics which appear to facilitate virtue, and insights also into the distinction between the various virtues in regard to their "corporeality". Such an analysis is essential prerequisite for **Chapter 5**, in which neural locations, pathways and processes will be suggested, on the basis of current neuroscientific knowledge for the material substrate of virtue. As neuroscience can only shed light on the material aspects of virtue, a prerequisite for resolution of this task is to distinguish between the rational and material characteristics of virtue.

It is important to bear in mind that while the cardinal virtues are regarded as the principal umbrella categories of virtue, other virtues may or may not neatly categorise under one or other of the cardinal virtues. Nevertheless, for the purposes of clarity, this study focuses almost exclusively on the cardinal virtues.

#### 4.2.1 The cardinal virtues have distinctive roles in the operation of virtue.

As an introduction to an examination of the exercise each of the cardinal virtues, let us turn to some elegantly condensed argument from Aquinas where he explains their distinctive roles:

Things may be numbered either in respect of their formal principles, or according to the subjects in which they are: and either way, we find there are four cardinal virtues. For the formal principle of the virtue of which we speak now is good defined by reason; which good can be considered in two ways. First as existing in the very act of reason; and thus we have one principal virtue called Prudence. Secondly, according as the reason puts its order into something else; either into operations, and then we have Justice; or into passions, and then we need two virtues. For the need of putting order of reason into the passions is due to their thwarting reason, and thus the passions need a curb, which we call Temperance. Second, by the passions withdrawing us from following the dictate of reason, eg through fear of danger or toil: and then man needs to be strengthened for that which reason dictates, lest he turn back; and to this end there is Fortitude.

In like manner, we find the same number if we consider the subjects of virtue. For there are four subjects of the virtue we speak of now; viz, the power which is rational in its essence, and this is perfected by Prudence; and that which is rational by participation, and is threefold, the will, subject of Justice, the concupiscible faculty, subject to Temperance, and the irascible faculty, subject to Fortitude.<sup>1164</sup>

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<sup>1164</sup> ST, Ia-IIae, Q.61, Art.2.

In the sections below, in turn we will focus on the specific role of each of the cardinal virtues: prudence the virtue perfecting rationality, justice perfecting the will, fortitude the irascible appetite, and temperance the concupiscible.

**a) The distinction between the virtues properly of the soul and those properly of the body.**

In the examples from the life of Nagai we saw moments of instantaneous insight, convictions, and dispositions towards his fellow men, that are seemingly independent of time and place, and any process of clarification; other actions both of deliberation and of self control appear to take time with the subject acquiring progressively greater lucidity. An example of the first is the powerful conviction that he must treat all men equally; of the second, his ruminations on the import of the leaflet. These contrasting examples suggest fundamental differences between some virtues and others. Some appear to pertain to a truth that is grasped, another to a process of managing one's emotions.

First let us consider the broader contrast between the prudence and justice on the one hand, and fortitude and temperance on the other. The cardinal virtues appear to be part-constituted to differing extents by a material substrate. As we have seen, habit is a broad term, denoting simply some form of disposition. The various cardinal virtues are not habits in the same fashion. It is helpful to distinguish between those cardinal virtues more closely associated with rationality, namely prudence and justice, and those directly associated with the sensitive appetites.

**b) Prudence and justice, as they are associated more directly with the rationality, are more removed from the biophysical substrate.**

Aquinas argues,

Some of the powers of the soul are in it according as it exceeds the entire capacity of the body, namely the intellect and will;

whence these powers are not said to be in any part of the body.<sup>1165</sup>

I suggest, on the basis of reasoning that “of the soul” can be understood broadly as “of the person”, that it is within a reasonable understanding of this passage to affirm that prudence and justice are, in part, neurobiological modifications of pathways, processes and mechanisms, and that it is within the very nature of the ensouled body, animated matter, that these pathways, processes and mechanisms perfect rationality.

Aquinas goes on to suggest,

Other powers are common to the soul and body; wherefore each of these powers need not be wherever the soul is, but only in that part of the body which is adapted to the operation of such a power.<sup>1166</sup>

In other words, powers common to the soul and body, and by this we can understand all the virtues, are quite localised. Of course this view is compatible with the view that the virtues, including fortitude and temperance, are also powers of the soul, just as any other material organ able to be directed by the rational appetite (for example the eye) operates as a power of the soul.

**c) Fortitude and temperance have a dual dependency: on the soul and on the corporeal organs.**

The soul is the principle of the act of virtue; the corporeal organs are material causes of rational operations. Aquinas explains:

Every act of a power that uses a corporeal organ, depends not only on a power of the soul, but also on the disposition of that corporeal organ: thus the act of vision depends on the power of sight, and on the condition of the eye, which condition is a help

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<sup>1165</sup> *ST*, Ia, Q.76, Art.8.4.

<sup>1166</sup> *ST*, Ia, Q.76, Art.8.4.

or a hindrance to that act. Consequently the act of the sensitive appetite depends not only on the appetitive power, but also on the disposition of the body.<sup>1167</sup>

In other words fortitude and temperance, habits by which the irascible and concupiscible sensitive appetites are docile to reason, achieve their effect wholly by means of corporeal processes and pathways that have been ordered by reason.<sup>1168</sup>

**d) Temperance and fortitude are at the heart of a rational response to pain and pleasure and therefore to appetite that is truly human.**

Examples from the life of Nagai demonstrate just how fundamental to human existence are the dual challenges of curbing wayward passions and overcoming difficulties in the pursuit of difficult goals. We see this time and again: Nagai's repulsion to the putrid wounds is overcome in order for him to put into practice his noble goal of ministering to the wounded; he overcomes his exhaustion and concern for his safety in order to give positive leadership to his workers; he masters his humiliation and anger to consider the implications of the Allied leaflet; he masters his self pity and apathy in his illness to deliver a prodigious output of writing aimed at helping others. There is no question that direction and mastery of our sensitive appetites are the very matter of our daily lives.

On the one hand, the four cardinal virtues are concerned with management of the realms of human activity... intellect, will, and sensitive appetites. But we must remind ourselves that the intellect and will operate in this material world. To some extent it is true to say that prudence and justice exist so that temperance and fortitude are well guided. Aristotle's emphasis on pleasure and pain in his discussion of virtue helps us to see this clearly, and also this *constitutive view of*

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<sup>1167</sup> ST, Ia-IIae, Q.17, Art.7.

<sup>1168</sup> Ordered by reason in two senses: first informed by rationality and therefore matter that is "special", and second because reason has contributed to the very development. (cf notion of use-induced plasticity leading to the development of neural complexity).

virtue, with its emphasis on the role of rationality in managing the biological aspects, can add clarity.

Aristotle places fortitude and temperance, ordered to the cultivation of man's passions,<sup>1169</sup> at the very heart of human appetite: to seek pleasure and avoid pain. At this most elemental level temperance in response to hedonism, and fortitude in response to fear and pain, are dispositions to self mastery. These basic motivations are widely accepted by clinical psychiatry and supported also by neuroscience. For example, the dominance of fear in the unregulated person has been noted in contemporary psychopathology:

Brain scans show that many violent adults are still driven, just like infants, by their ancient rage/fear and defence/attack responses deep in the mammalian and reptilian parts of the brain. The brain scans show all too little activity in the parts of the higher brain that naturally regulate and modify raging feelings.<sup>1170</sup>

Aristotle and the psychopathologists would agree on many things. In a similar way, children lack the wherewithal to manage their passions: The lives of children, as much as that of intemperate men are governed by their desires.<sup>1171</sup>

Aristotle explains that pain and pleasure enter into *both* temperance and fortitude.

The self indulgent man craves for all pleasant things or those that are most pleasant, and is led by his appetite to choose these at the cost of everything else; hence he is pained when he fails to get them and when he is merely craving for them (for appetite involves pain).<sup>1172</sup>

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<sup>1169</sup> Gilson, *The Christian Philosophy of St Thomas Aquinas*, 308.

<sup>1170</sup> M. Sunderland, *The Science of Parenting* (London: Dorling Kindersley, 2006), 25.

<sup>1171</sup> *NE*, 3.12.

<sup>1172</sup> *NE*, 1119a1-5.

Yet, the specific distinction between temperance and fortitude is clear.<sup>1173</sup>

The good of curbing the passions is found chiefly in those passions which are most difficult to curb, viz, in the pleasures of touch. The good of being firm in holding to the good defined by reason, against the impulse of passion, is found chiefly in perils of death, which are most difficult to withstand.<sup>1174</sup>

Aquinas stressed that these emotional responses are positively good but only if they are managed by reason.

Emotion leads away from moral behaviour in so far as it is uncontrolled by reason; but in so far as it is rationally directed, it is part of the virtuous life.<sup>1175</sup>

Now I review the specialized roles of the four cardinal virtues below with a view to gaining insights into the biophysical contribution of the body in the development, state and expression of virtue.

#### 4.2.2 Prudence.<sup>1176</sup>

The contribution of prudence, perfecting each action, has already been noted in the four scenarios pertaining to Nagai above. Prudence on the one hand it is the habit of readily recognizing and acknowledging what is right and true, and on the more practical side, it is the habit of making sound judgements about what we will do. The first refers to recognizing reality; the starting point of prudence is

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<sup>1173</sup> Gilson, *The Christian Philosophy of St Thomas Aquinas*, 263. This text from Gilson serves as a further guide: "(Fortitude and temperance) bear upon the quality of acts, considered in relation to the one performing them. Thus, they deal with the interior dispositions of the agent at the moment of acting. They deal, in a word, with passions." Hence he explains, "If the agent is actually prevented from acting by fear of danger or of effort or the like, he needs fortitude to strengthen him in the resolutions his reason dictates." Analogously, temperance moderates the concupiscible appetite allowing one to act according to right reason.

<sup>1174</sup> *ST*, Ia-IIae, Q.61, Art.3.

<sup>1175</sup> *ST*, Ia-IIae, Q.24, Art.2.

<sup>1176</sup> Aristotle and Aquinas held that prudence, *auriga virtutum*, drives the chariot of the virtues. Aquinas writes, "Prudence not only helps us to be of good counsel, but also to judge and command well."

knowledge of reality.<sup>1177</sup> Second, prudence pertains to making decisions on right principles. It is an essential virtue for effective action: “practical wisdom is concerned with action.”<sup>1178</sup> What should also be evident are the common characteristics of deliberation, judgement and action.<sup>1179</sup>

The goal of the practical intellect is “truth in agreement with right desire”.<sup>1180</sup> And the intellectual habit of the practical intellect is prudence, having “something in common with the moral virtues; for it is right reason about things to be done.”<sup>1181</sup> The role of prudence is quite distinct from that of the moral virtues.<sup>1182</sup>

Most importantly, we have seen that prudence is ordained to human flourishing: “Prudence is a virtue of the rational part capable of procuring all that tends to happiness.”<sup>1183 1184</sup>

### 4.2.3 Justice

#### a) A broad understanding of justice

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<sup>1177</sup> “that which is prudent is in keeping with reality”: Pieper, *The Four Cardinal Virtues*, 9.

<sup>1178</sup> *NE*, 1141b21; Aristotle, *De Virtutibus et Vitiis*, 1250a30-37: “To prudence belongs right decision, right judgement as to what is good and bad, and all in life that is to be chosen and avoided, noble use of all the goods that belong to us, correctness in social intercourse, the grasping of the right moment, the sagacious use of word and deed, the possession of experience of all that is useful. Memory, experience, tact, good judgement, sagacity – each of these either arises from prudence or accompanies it.”

<sup>1179</sup> Pieper, *The Four Cardinal Virtues*, 72: “Prudence implies a transformation of the knowledge of truth into decisions corresponding to reality. This transformation is achieved in three steps: deliberation, judgement, decision.” Cf Gilson, *The Christian Philosophy of St Thomas Aquinas*, 288. Gilson writes of the facets of prudence: deliberation (*eubulia*) and good judgement (*synesis, gnome*). It is not simply concerned with abstract truths. Aquinas says practical wisdom issues commands, distinct from understanding which judges the objects of practical wisdom. (*NE*, 1143a10)

<sup>1180</sup> *NE*, 11139a30

<sup>1181</sup> *ST*, Ia-IIae, Q.58, Art.3.1.

<sup>1182</sup> Aquinas writes, “It is not possible (for prudence to operate effectively) unless the impediment of the passions, destroying the judgement and command of prudence, be removed; and this is done by moral virtue.” *ST*, Ia-IIae, Q.58, Art.5.3.

<sup>1183</sup> Aristotle, *De Virtutibus et Vitiis*, 1250a30.

<sup>1184</sup> Gilson explains: “Prudence is a practical presence of mind.... well trained reason, capable of working out the particulars of a problem, of foreseeing the probable consequences of an act, of using powers of circumspection, of weighing the individual circumstances of a situation, of exercising caution lest good intentions ultimately do more harm than good. Reasoning, foresight, watchfulness, precaution are all essential elements of prudence, and there is no real prudence without them.” Gilson, *The Christian Philosophy of St Thomas Aquinas*, 288.

A broad notion of justice is exemplified in the scenes presented from the life of Nagai. His service to his enemies, his patriotic leadership, his faith, his concern for his countrymen, his diligent parenting... all of these are not strictly reciprocal, but they all reflect a deep abiding concern to respect others and to live up to one's duties towards them.

In this study I adopt the broad understanding of justice that is in best keeping with the spirit of the discussion in both Aristotle and Aquinas, and is also most consistent with the neuroscientific insights on offer.

In *The Recovery of Virtue* Jean Porter argues for a broad notion of the virtue of justice extending beyond strict reciprocity. Such an understanding, a justice by which we measure our actions by the love and respect we have for others, is able to demonstrate the deficiencies of duty and consequence based measures in accounting for truly noble behaviour. Such a view is very attractive to this current study which proposes for justice a contributory role in every perfect human act whereby the impact of one's actions on others is considered prior to the decision to act.

Justice on this broad understanding is the disposition to act at all times offering all others the respect due to them, with full acceptance of all our responsibilities in this world. A parenting author who structures much of his work around the development of virtue prefers to write of justice as just this: "respect and responsibility".<sup>1185</sup> Another has founded the Institute for the 4<sup>th</sup> and 5<sup>th</sup> Rs – denoting *respect* and *responsibility*.

Gilson describes justice in this broad manner.

(Justice) regulates the content and nature of the operation of the will... assuring the moral value and rectitude of all

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<sup>1185</sup> James B. Stenson, <http://www.parentleadership.com> (accessed 10 May 2011).

operations in which ideas of what is due and not due are implied.<sup>1186</sup>

This second of the cardinal virtues” ensures rectitude in the election of the will for means required in the pursuit of goals. Aquinas describes justice as the psychological and moral state of a man who “firmly and permanently chooses to render to each one his due.”<sup>1187</sup> Aristotle teaches, “The best man is he who exercises his virtue towards another”.<sup>1188</sup> He dubs justice “the complete virtue” because it orders one’s acts with respect to others.

Justice is often thought to be the greatest of the virtues...  
proverbially “in justice is every virtue comprehended”.

We must not define justice in terms of tangible transaction, nor narrow the scope of justice. Justice manifests externally but as a virtue it concerned with inner dispositions, with choices.<sup>1189</sup> Universally, the just denotes what is lawful; and particular case, what is fair and equal. It is a complete virtue because “it is the actual exercise of complete virtue... because he who possesses it can exercise it not only in himself but towards his neighbour also”.

It would appear that Aquinas, by aligning justice to the good of reason, himself favoured a broad interpretation.<sup>1190 1191</sup> Aquinas argues that justice is the state of character that makes people disposed to do what is just, and makes them act justly and wish for what is just.<sup>1192</sup> He explains the role of the virtue of justice.

Justice is “a habit whereby men will and do that which is just”  
(*Ethic* v 1). Therefore the will is the subject of habit. ...The will is inclined to the good of reason. But because this good is varied

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<sup>1186</sup> Gilson, *The Christian Philosophy of St Thomas Aquinas*, 263.

<sup>1187</sup> ST, IIa-IIae, Q.58, Art.1.

<sup>1188</sup> NE, 1129b25ff.

<sup>1189</sup> NE, 1134ff.

<sup>1190</sup> It is true that Aquinas explains a taxonomy of justice, corresponding to the three basic relationships: *reciprocal* justice (individuals to one another), *distributive* justice (community to the individual), and *general* justice (individual to the community).

<sup>1191</sup> Pieper *opcit* p.27 Pieper, a close follower of Aquinas was of this opinion. “It is the function of justice to carry out the order of reason in all human affairs.” “The other virtues – fortitude and moderation – serve the conservation of this good; it is their function to preserve man from declining from the good. ... Fortitude protects this realization (of the good made compelling evident through prudence) and clears the road for it.”

<sup>1192</sup> NE, 1129a7ff.

in many ways, the will needs to be inclined, by means of a habit, to some fixed good of the reason, in order that action may follow more promptly.<sup>1193</sup>

In writing about the various forms of debt that give rise to justice, it is clear that he goes beyond strict reciprocity, including duties of religion and of filial gratitude.<sup>1194</sup>

Aquinas explains that the rational appetite, being naturally attracted to the good of the subject, requires no virtue to exercise this natural operation. The virtue which disposes the rational will to act for the good of another, in contrast to that of oneself, is justice. As we have seen, justice will always act in concert with prudence, and that the moral virtues are “rational by participation”.<sup>1195</sup>

In summary, it is the position of this study that all moral acts require the deliberations of justice. Every moral act has a dimension impacting on others and so requires the exercise of justice if it is to be a good act. It is also apparent that prudence is not possible without deliberations of justice, nor temperance nor fortitude. It is perhaps for this reason Gilson suggests that justice incorporates the other virtues: “Justice is a kind of general virtue which includes all other virtues.”<sup>1196</sup>

#### **4.2.4 An understanding of the biophysical dimensions of prudence and justice.**

(Read in conjunction with **4.2.1 a** and **b**.)

##### **a) What is the matter?**

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<sup>1193</sup> *ST*, Ia-IIae, Q.50, Art.5.

<sup>1194</sup> *ST*, Ia-IIae, Q.60, Art.3. “Corresponding to these various kinds of debt there are various virtues.... Religion whereby we pay our debt to God, piety (respect) whereby we pay our debt to our parents or to our country; gratitude, to our benefactors, etc.”

<sup>1195</sup> *ST*, Ia-IIae, Q.59, Art.4.

<sup>1196</sup> Gilson, *The Christian Philosophy of St Thomas Aquinas*, 292.

Acts of prudence and justice are acts of rationality with indirect material cooperation to extent that each inform our reasoning processes involving material assistance of memory, phantasm, imagination, etc. To the extent that these biologically based processes are necessary (but not sufficient) for these virtues to operate, they may be understood as part-constituents of virtue.

Various arguments support this view.

- i. It is important to understand that the management of the concupiscible and irascible appetites is normally the product of a reasoning process. Reasoning implies a *process* of thought disposed by habit.<sup>1197</sup> In our exploration of this issue it is essential to distinguish reason from immaterial rationality.<sup>1198</sup>
- ii. A reasoning process implies that there must be biophysical elements that enable the process of reasoning: “the irascible and concupiscible are said to obey reason rather than the intellect.”<sup>1199</sup> Bodily elements imply duration in decision making. We have seen in the examples from the life of Nagai, for example in his consideration of the leaflet dropped from the Allied plane, that deliberation as a precursor to virtuous action can take just such duration.
- iii. The significance of phantasms has already been noted. Aristotle reminds us that prudence involves assessment of particulars, necessitating

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<sup>1197</sup> “Excellence in deliberation is clearly a kind of correctness.” (NE, 1142b9) It involves reasoning. It is “correctness in thinking” (NE, 1142b12). But it is not simply following formal rules of logic which could lead a bad man to evil deeds. Excellence in deliberation is that which pertains to a worthy end.

<sup>1198</sup> DA, 427b27-28. In *De Anima* Aristotle addresses the interaction of intellect with the internal senses of memory and imagination. He is of the view that the activity of “thinking” is partly in the imagination and partly in the judgement of the intellect itself. “Thinking is different from perceiving and is held to be in part imagination, in part judgement.”

<sup>1199</sup> ST, Ia, Q.81, Art.3.

The full quotation: “The irascible and concupiscible powers obey reason... universal reason directs the sensitive appetite, which is divided into irascible and concupiscible... but to draw particular conclusions from universal principles is not work of the intellect, as such, but of reason: hence it is that the irascible and concupiscible are said to obey reason rather than the intellect.... Man is not moved at once according to the irascible and concupiscible appetites: but he awaits the command of the will.”

complicity of the material.<sup>1200</sup> The same may be said of justice. Aquinas quotes Augustine's view that while the intelligible species can be held in an intellectual memory, intelligence itself "that by which we understand when actually thinking",<sup>1201</sup> only exists *in actu*.<sup>1202</sup> This supports the view that the act of understanding is concurrent with and immediately dependent upon the presentation of the phantasm. This appears to constitute a further argument that there is no independent intellectual operation, of the body and soul united, without biophysical complicity.<sup>1203</sup>

- iv. The role of the intellect and rational appetite in voluntarily calling up memories is contrasted with the formation of opinions (which Aristotle holds is not voluntary as it is a reflection of perception of truth in the intellect.)<sup>1204</sup> This interaction between imagination and reason, between the concrete representation and the universal, is present in every human act. Hence, every human act is carried out with the part-constituent of neural complicity. Aristotle insists on this.<sup>1205</sup>
- v. All this sits perfectly with the earlier discussion about the role of reason in pursuit of the pleasurable and avoidance of pain.<sup>1206</sup>
- vi. Furthermore, Aquinas tells us that "Words signify the conceptions of the intellect".<sup>1207</sup> It would appear that language facilitates reason. Without

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<sup>1200</sup> *NE*, 1141b15-25. "Practical reason is not concerned with universals only – it must be concerned with the particulars: for it is practical and practice is concerned with particulars."

<sup>1201</sup> *ST*, Ia, Q.79, Art.7.2.

<sup>1202</sup> Cf Augustine, *De Trinitate*, XIV.

<sup>1203</sup> *ST*, Ia, Q.79, Art.8. Aquinas sheds further light on material complicity in the virtue of prudence. He writes, "Reason and intellect in man cannot be distinct powers. We shall understand this clearly if we consider their respective actions. For to understand is simply to apprehend intelligible truth: and to reason is to advance from one thing understood to another, so as to know an intelligible truth." Hence, Aquinas defines reason as the progression from one thing understood to another; such a process of advancing from an understanding of "one thing" to another "thing" necessarily would require constant reference to the phantasm, and interdependence on the material. This opens the door to material processes that enable the process of reasoning, not of course the understanding itself that is the product of reasoning.

<sup>1204</sup> *DA*, 427b20.

<sup>1205</sup> *DA*, 431a17. "To the thinking soul images serve as if they were contents of perception (and when it asserts or denies them to be good or bad it avoids or pursues them). That is why the soul never thinks without an image..."

<sup>1206</sup> *DA*, 431b4-5. "The faculty of thinking then thinks the forms in the images, and as in the former case what is to be pursued or avoided is marked out for it, so where there is no sensation and it is engaged upon the images it is moved to pursuit or avoidance."

<sup>1207</sup> *ST*, Ia, Q.85, Art.5.

language, utilising, as we have seen in **Chapter 2**, specialised locations in the brain and specific biophysical processes for memory, our capacity for intellectual thought could be largely curtailed.

**b) Biological perfections.**

In summary, prudence and justice utilise biophysical processes and pathways (associated with reasoning, memory, imagination, etc) that themselves are identified with localised regions and processes in the brain.

Human action is rational action. Prudence and justice dispose our rational responses. They dispose the intellect to act with habitual sound judgment and the rational will to act with habitual respect for the rights of others. The rational operations of truth and love require the assistance of biological part-constituents in two senses:

- i. The very operation of reason requires the assistance of imagination, memory, and other cortical systems and sensitive faculties.
- ii. Because, as it is proposed, the virtues all operate in harmonious integration in support of rationality, it would appear that the part-constituents of the virtues disposing the sensitive appetites may also be understood, to the extent that they offer necessary assistance, as part-constituents of the rational operations.

In conclusion, it is proposed at the neurobiological level, prudence and justice are perfections of specific biological structures that are necessarily associated with rationality in the embodied life. These perfections of bodily structures are essentially neuronal facilitations of counsel, deliberation, judgement, command, and disposition to accommodate the good of others, as required by the virtues of prudence and justice.<sup>1208</sup>

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<sup>1208</sup> Counsel may be understood as a having a sound grasp of reality and duty in both physical and ethical dimensions. Judgement implies the capacity to evaluate the intrinsic and extrinsic benefits

#### 4.2.5 Fortitude

As we have seen, the moral virtues of justice, fortitude and temperance reside in the appetites.

Courage, as we have seen, is not about having the loudest war cry, but rather about having a particular quality of self management. This latter notion of courage is shown in the life of Nagai: risking his life to treat enemy soldiers with care and dignity, overcoming his pain, discouragement and disorientation to push himself to the limit in helping the victims of the bomb. Courage denotes a reflective bravery... not simply the bold actions of an impulsive person under pressure. Virtues are inner states. Aquinas says simply: "Endurance is more the essence of fortitude than attack."<sup>1209</sup>

An Aristotelian understanding of courage presents the virtue as:

The habitual choice of the golden mean that resides between cowardice and recklessness in situations of danger that really merit some fear.<sup>1210</sup>

The right management of one's fear and its concomitant sorrow is at the heart of the virtue. The essence of the virtue of courage is mastery of one's emotions of fear, to put one's life knowingly and calmly on the line. Joseph Pieper writes that "the man of fortitude relinquishes, in self forgetfulness, his own possessions and his life."<sup>1211</sup> Pieper, following Aristotle, argues that courage always contains an element of a preparedness to risk one's neck for a good cause<sup>1212</sup>.

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of an action taking into account the good of others. Command implies the executive capacity to carry decisions into action.

<sup>1209</sup> ST, IIa-IIae, Q.123, Art.6.

<sup>1210</sup> NE, III, focusses on courage and temperance and their corresponding vices.

<sup>1211</sup> Josef Pieper, *Fortitude and Temperance* (London: Faber and Faber, 1955), 54.

<sup>1212</sup> "... all fortitude has reference to death... readiness to fall, to die, in battle. ... Fortitude that does not reach down into the depths of the willingness to die is spoiled at its root and devoid of effective power. Readiness proves itself in taking a risk, and the culminating point of fortitude is the witness of blood. ... Without this readiness there is no Christian fortitude." Pieper argues "the cornerstone of the Christian ethical teaching is the concept of the bonum arduum." Pieper, *Fortitude and Temperance*, 14-16.

Acts of fortitude are exercised in concert with acts of prudence and the other virtues. Hence courage is exercised in making habitual choices, good choices put forward by the virtue of sound judgement. Aquinas explains, in overcoming danger, fortitude seeks not danger itself, but the realization of a “rational good”<sup>1213</sup>, a rational good proposed by prudence. Without sound judgement there can be no effective fortitude. St Ambrose, a man of both action and learning, said simply, that fortitude must not trust itself.<sup>1214</sup>

Aquinas held that reason ought to be the ruler of the passions. He held that since the passions can be controlled by reason they should be controlled by reason<sup>1215</sup>. This is not semantics... he held that all those activities of man that can be guided by reason must be guided by reason, or else man acts below himself; he acts in a sub-human way. Hence, “fortitude without prudence is not fortitude”.<sup>1216</sup> Rash action not guided by prudence, even if wearing a Victoria Cross, would not qualify. The Athenian admiral Thucydides has Pericles proclaim this very doctrine:

For this too is our way: to dare most liberally where we have reflected best. With others, only ignorance begets fortitude; and reflection but begets hesitation.<sup>1217</sup>

Once the necessary link between true fortitude and reason is accepted, the link between fortitude and freedom follows; it is man’s spiritual powers, the will making rational choices, that allow him freedom. In his saying, “Those who are brave are free,” Seneca reminds us not only of the link between fortitude and reason, but also that it is in the exercise of virtues, (viz. sound, habitual, rationally guided choices) that man finds his freedom.

#### 4.2.6 Temperance

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<sup>1213</sup> Aquinas, *Virt Card*, 4 ad 5.

<sup>1214</sup> Ambrose, *De Officiis*, ([http://www.documentacatholicaomnia.eu/03d/0339-0397,\\_Ambrosius,\\_De\\_Officiis\\_Ministrorum\\_Libri\\_Tres\\_\[Schaff\],\\_EN.pdf](http://www.documentacatholicaomnia.eu/03d/0339-0397,_Ambrosius,_De_Officiis_Ministrorum_Libri_Tres_[Schaff],_EN.pdf) accessed 22.11.12.) 1 35.

<sup>1215</sup> *ST*, Ia-IIae, Q.24, Art.3.

<sup>1216</sup> Pieper, *Fortitude and Temperance*, 23.

<sup>1217</sup> Thucydides, *Peloponnesian War*, Bk 2, quoted in Pieper, *Fortitude and Temperance*, 26.

Temperance is “the virtue whose particular function is to restrain and check passion,”<sup>1218</sup> “a virtue of the appetitive part, by which men cease to desire bad sensual pleasures.”<sup>1219</sup> Strictly speaking, as we have seen, it is “a mean with regard to the bodily pleasures of touch.”<sup>1220</sup>

To temperance belongs absence of admiration for the enjoyment of bodily pleasures, absence of desire for all base sensual enjoyment, fear of just ill repute, an ordered course of life, alike in small things and in great. And temperance is accompanied by discipline, orderliness, shame, caution.<sup>1221 1222</sup>

Lack of self mastery in these areas carries serious implications, because as Aristotle argues, self indulgence is a more voluntary state than cowardice. Unlike pain, pleasure does not “upset and destroy the nature of the person who feels it.”<sup>1223</sup> We are more responsible for our actions when we are seeking pleasure than when we are fleeing fear and therefore failings in this area is all more blameworthy. We will be seeking for reasons, at the neural level, of this greater domination of the person, this greater obliteration of reason, caused by fear in comparison with intemperance.

Temperance is a *sine qua non* for the truly rational life, for a life that is able to show love for others effectively and with constancy. Aquinas writes of the inner peace, the tranquillity of right order, which is the fruit of temperance. Order is a mark of rationality; temperance as we have seen is “of the soul”. Aquinas says that a meaning of temperance is “serenity of spirit”.<sup>1224</sup>

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<sup>1218</sup> Gilson, *The Christian Philosophy of St Thomas Aquinas*, 263.

<sup>1219</sup> Aristotle, *De Virtutibus et Vitiis*, 1250a30-37.

<sup>1220</sup> *NE*, 1117b24ff. Note that Aristotle includes taste as a form of touch.

<sup>1221</sup> Aristotle, *De Virtutibus et Vitiis*, 1250b7-11.

<sup>1222</sup> *NE*, II 8-9. “The habit of choosing the best course of action between the two extremes of overindulgence and impulsivity on the one hand, and of failure or inability to integrate one’s passions and emotions into one’s actions; it is the golden mean between self indulgence and insensibility.”

<sup>1223</sup> *NE*, 1119a25.

<sup>1224</sup> *ST*, IIa-IIae, Q.141, Art.2.2.

In the examples we have seen from the life of Nagai, these fruits of temperance are clearly seen. Pieper refers to inner order, a quality that shines through in Nagai's calm, self control:

The purpose and goal of *temperantia* is man's inner order, from which alone ... "serenity of spirit" can flow forth.<sup>1225</sup>

In other words, it is through the virtue of temperance that man is able to discover unity of life<sup>1226</sup>.

...The primary and essential meaning of *temperare*, therefore is this: to dispose various parts into one unified and ordered whole.<sup>1227</sup>

Temperance enables rationality to shine through, manifesting the order and serenity of soul. Without temperance these qualities will not surface; they require a bodily docility, a capacity of the organism to obey the judgements of reason.

#### **4.2.7 Biophysical aspects of fortitude and temperance.**

(Read in conjunction with 4.2.1 c and d.)

##### **a) Subordination to reason.**

Moral virtue assists the sensitive aspect to "obey" reason.<sup>1228</sup> As we have already touched upon, Aristotle explains that the essence of this conformity of the sensitive aspect is the "royal" and voluntarily accepted obedience to the reason, as a king governs his subjects and as a man

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<sup>1225</sup> Pieper, *Fortitude and Temperance*, 53.

<sup>1226</sup> Pieper writes, "Temperance is conceivable only on the basis of the fact that man has lost, together with his original sanctity, his integritas, his 'intactness', the self evident inner order of his nature." Pieper, *Fortitude and Temperance*, 12-13.

<sup>1227</sup> Pieper, *Fortitude and Temperance*, 53. Pieper writes, "Wherever forces of self preservation, self assertion, self fulfillment, destroy the structure of man's inner being, the discipline of temperance and the licence of intemperance come into play. The natural urge toward sensual enjoyment, manifested in delight in food and drink and sexual pleasure, is the echo and mirror of man's strongest natural forces of self preservation."

<sup>1228</sup> Sarah Broadie poses the question whether practice leads to expertise or addiction, and concludes that the answer is expertise, given the rationality inherent in the exercise of virtue bringing freedom of action. Broadie, *Ethics with Aristotle*, 71.

governs his children. Broadie elaborates at some length on this analogy of royal governance.<sup>1229</sup> It is “a hierarchical relationship but one between free people”.<sup>1230</sup> The will speaking, on all matters, “with the same voice as reason,”<sup>1231</sup> obeys reason “as one does one’s father”.<sup>1232</sup> It is a mistake, however, to think that an obedient child is only imperfectly or potentially in harmony with its parent.<sup>1233</sup>

Rather, the non rational part in the virtuous state is fully integrated with reason, including physically (the very point of this study), through part-constituents: “There is in human beings something capable of heeding reason even though not itself the rational source.”<sup>1234</sup>

While fortitude and temperance, in themselves, are essentially biophysical bodily qualities, they are ordered by reason and to reason. The “royal” governance of reason is facilitated by virtue.

The irrational element ... appears to be two-fold. For the vegetative element in no way shares in a rational principle, but the appetitive and in general the desiring element in a sense shares in it, in so far as it listens to and obeys it.... that the irrational element is in some sense persuaded by a rational principle is indicated also by the giving of advice and by all reproof and exhortation.<sup>1235</sup>

It is clear that Aristotle views temperance and fortitude as irrational, and therefore, material in constitution. Nevertheless he emphasises their docility to reason and the role that reason has in their formation as habits.

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<sup>1229</sup> Broadie, *Ethics with Aristotle*.

<sup>1230</sup> Aristotle, *Politics*, 1259a 37-41, and 10-17.

<sup>1231</sup> *NE*, 1102b28.

<sup>1232</sup> *NE*, 1103a1-4.

<sup>1233</sup> Broadie, *Ethics with Aristotle*, 65.

<sup>1234</sup> Broadie, *Ethics with Aristotle*, 65.

<sup>1235</sup> *NE*, 1102b28-34.

**b) Biological perfections.**

Fortitude and temperance are modifications at the biological level of our emotional circuitry; they level the playing field, so to speak, so that right reason is in the game. This will not involve a dampening of pain or of pleasure. Aristotle and Aquinas are intent on bringing the passions into right order with respect to reason, not with destroying them. Aquinas insists that a brave man is not who does not feel fear, but who, without losing his equanimity, can master that fear.

Aquinas explains that,

The patient man is not the one who does not flee from evil, but the one who does not allow himself to be made inordinately sorrowful.<sup>1236</sup>

Similarly, temperance has not the aim of diminishing the intensity of sexual pleasure or of eating fine food, but of managing the pursuit of those activities according to reason.

Within the neural bases of fortitude and temperance we will be looking for evidence of cortical inhibition of emotional signalling, as well as pathways for cortical enrichment by emotional centres, and cortical executive function enriched by emotional input.

As there is no courage without prudence, at the neural level, we will be looking for forms of inhibition of emotional signalling from between regions and along pathways associated with fear, pathways and regions having rich connectivity to cortical regions identified as implicated in deliberation, memory, goal election, consideration of consequences, etc.

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<sup>1236</sup> ST, IIa-IIae, Q.136, Art.4.2.

Teddy Roosevelt (1858-1919) captures this same admiration for the perseverance inherent in fortitude and courage: "It is not the critic who counts, nor the man who points how the strong man stumbled or where the doer of deeds could have done them better. The credit belongs to the man who is actually in the arena; whose face is marred by dust and sweat and blood; who strives valiantly."

In conclusion, it is proposed at the neurobiological level, fortitude and temperance are perfections of specific biological structures that are necessarily associated with rationality in the embodied life. They are predispositions for rationally consistent responses to pain and to pleasure. In the first place they are habitual responses, which when established, allow a person more easily to manage fear of bodily danger and pain, and inappropriate attraction to sense pleasures of touch.

### 4.3 Unity of the virtues.

Aquinas explains that the four cardinal virtues cannot be isolated from each other; they form a unity. He asks whether the four (cardinal) virtues differ from one another, and goes on to explain, quoting Gregory the Great:<sup>1237</sup>

There is no true prudence unless it be just temperate and brave; no perfect temperance that is not brave just and prudent; no sound fortitude that is not prudent, temperate and just; no real justice, without prudence, fortitude and temperance.<sup>1238</sup>

In the preceding section, in the light of an examination of virtue taking into account Aristotle's doctrine of pain and pleasure as primary motivations of action, I have argued for this unity of the virtues. I have suggested that fortitude and temperance, as habitual dispositions to pleasure and pain developed and guided in their activity by reason, contribute to every good human act. Further I have argued that justice, the habitual facility for assessing one's actions by their impact on others, is also necessarily integrated into every good human act. And of course, as sound judgement is required for an act to be good, prudence must also be

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<sup>1237</sup> Gregory. *Moralia*, xxii 1.

<sup>1238</sup> *ST*, Ia-IIae, Q.61, Art.4.

integral. All four cardinal virtues perform different roles, and each is needed for the completion of a good action.<sup>1239</sup>

Only if the cardinal virtues act in concert can we account for fulfilment of the human person, as a unity of soul and body living in a community with others. Any view which deprives acts of individual virtue of the benefits of mutual enrichment by the other virtues cannot satisfy these three conditions for the flourishing of the human person:

- the interdependence of rationality and personal fulfilment (most associated with prudence)
- the interdependence of relationships, responsibility and personal fulfilment (most associated with justice)
- the interdependence of our bodily states and personal fulfilment (most associated with fortitude and temperance).

Further, we have seen that Aquinas insisted that each operation or faculty requires its appropriate disposing habit: for moral agency, a habit for the practical intellect, a habit for the rational intellect, and habits of the irascible and concupiscible appetites. Some who prefer not to take this text at its literal value ascribe a non-materiality to the habits of the sensitive appetites. I suggest that such an approach seems to question the role of the body in human fulfilment, and deprives the body itself of necessary habits.<sup>1240</sup>

#### **4.3.1 The virtues are “integrated distinct elements”<sup>1241</sup> united in the person.**

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<sup>1239</sup> Should someone object to this position by arguing the possibility, for example, of man, unjust but endowed with the virtue of courage, I would answer that without the dispositions of justice his rationality is necessarily defective, and his courage therefore directionless and incapable of acting for a good end.

<sup>1240</sup> Of course, recent neuroscientific contributions to the biological understandings of passion, attention and learning, memory and habit formation all appear to emphasise the distinction between as well as the linkages between habits of mind and habits of body.

<sup>1241</sup> Broadie, *Ethics with Aristotle*, 65.

Freedom clearly resides in the rationality of the person himself, but truly rational decisions can be undermined if the cognitive power errs in preferring a lesser good, or if the appetitive power is not obedient to reason. Habitual dispositions are needed in both the cogitative and appetitive powers.<sup>1242</sup> Sarah Broadie reflects on the dilemma of applying a matter-form analysis of rational substance. She points out that without a clear Aristotelian understanding one can very easily confuse what are “integrated distinct elements, with mere uniform unity.”<sup>1243</sup> The key lies in the understanding of “person” as the subject of action and of rationality.

In considering rationality, one can easily fall into one of diametrically opposed views: that either matter itself, or the mind, be the ultimate cause of rationality. Both are wide of the mark as discussed in **Chapter 1**. Nor is it a question of uniting in the person what is material with what is non-material: rather rational existence is a seamless integration of the material and the non-material. Rationality, by its nature, requires a whole new way of looking at substance. Aquinas writes, “Everything has unity in the same way that it has being.”<sup>1244</sup>

#### **4.4 Conclusions.**

Section **4.1** and **4.2** have sought to separate biophysical qualities of virtue from that which is more directly in the rational domain. I have argued, within the hylomorphic understandings provided in **Chapter 1**, that prudence and justice, to the extent that they are dispositions of the rational powers, have only a contributory corporeal aspect, while fortitude and temperance are exclusively corporeal, though rational in cause. I have further argued, in **4.3**, for the unity of the virtues, that the cardinal virtues are all integral to good human acts.

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<sup>1242</sup> *ST*, Ia, Q.83, Art.3.

“We must consider the nature of free will by considering the nature of choice. Now two things concur in choice: one on the part of the cognitive power, the other on the part of the appetitive power. On the part of the cognitive power, counsel is required, by which we judge one thing to be preferred to another; and on the part of the appetitive power, it is required that that the appetite should accept the judgement of counsel.”

<sup>1243</sup> Broadie, *Ethics with Aristotle*, 65.

<sup>1244</sup> *ST*, Ia, Q.76, Art.2.2.

Some observations are pertinent.

- i. A “restricted reading” view of the term “rational by participation”<sup>1245</sup> appears perfectly compatible with argument that virtues act in concert respecting the unity of the virtues. The view that fortitude and temperance are exclusively biophysical, though rational in cause, appears to significantly strengthen the case for the unity of the virtues.
- ii. An understanding of the nature of, and the degree of, biological contribution to the particular virtues,<sup>1246</sup> accords adequate recognition to the hylomorphic constitution of the human person. Such recognition is essential if one is not to underestimate the importance of the contribution of the body and the biological to human activity, and ultimately if one is not to misrepresent human nature.
- iii. There is a grandly satisfying logic evident if one links the unity of the virtues with the need for a notion of virtue which respects the composite view of human nature. This composite view will be, not only with respect to the composite nature of virtue in itself (having both rational and material aspects), but also in the way in which those virtues disposing rationality, operate in concert with the virtues disposing the sensitive appetites.
- iv. A neurobiology of virtue appears to offer insights into fulfilment at the rational, the interrelational, and the biophysical levels. (See discussion in **6.2.**)
- v. There are important conclusions at the level of parenting and self education. For example, the importance of training infants in behaviours reflecting temperance and fortitude and the need to emphasise to children the need for consideration of the needs and rights of others in every action, are noted.

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<sup>1245</sup> *ST*, Ia-IIae, Q.50, Art.4. See also Q.59, Art.4 and Q.61, Art.2.

<sup>1246</sup> As has been constantly emphasized according to the hylomorphic understanding, discussion of the “material” or the “biological” in the human constitution must be understood an integral contributor to higher operations.

It has been argued that the distinct tasks of the specific cardinal virtues and their integrated role in each human act are necessary consequences of our hylomorphic constitution. These conclusions inform the tabulation of characteristics of virtue in following section and in turn will guide the neurobiological analysis in the next chapter.

#### 4.4.1 Characteristics pertaining to the state of virtue.

In **Table 4.1** I refine the qualities identified in **Chapter 3**, in the light of the findings of **Chapter 4**, into distinct characteristics pertaining to the state of virtue and to the acquisition of virtue. Note that Nos 1 and 2 pertain to specific virtues.

<b>Table 4.1</b>			
<b>Characteristics pertaining to the state of virtue</b>			
As proposed by Aristotle and Aquinas (3.2 & 3.3) and cross referenced to qualities evident in Nagai's actions (3.1.2).			
	<b>Characteristics pertaining to the state of virtue</b>	<b>See 3.1.2</b>	<b>See 3.2 &amp; 3.3</b>
1	The virtues of prudence and justice dispose the practical reason and the intellectual appetite facilitating rationality and appropriate choices.	iii, iv, vi	3.2.1
2	The virtues of fortitude and temperance dispose the irascible and sensitive appetites to endure appropriate difficulties and to seek appropriate pleasure.	i, iv, v	3.2.1 3.2.1.1 3.3.7
3	A capacity for rational goal election is evident.	ii	3.2.1.2 3.2.2
4	"Virtues change us." The acquisition of virtue creates a state of character, a way of being, that tends to be permanent.	vii	3.2.4
5	The virtuous state is in keeping with our human nature.	iii, iv, v	3.2.5
6	In the exercise of virtue intrinsic motivation takes priority over extrinsic motivation. Virtue is motivated by that which is worthy to man's nature.	vii	3.3.9 3.2.5.1
7	Virtue facilitates effective action.	ii, viii	3.2.1.2 3.2.5.3
8	Virtue brings about ease of action.	viii	3.2.1.1 3.2.5.3

9	Virtue facilitates the flourishing of the person. Virtue brings about a state of excellence: an excellence of the person, inclusive necessarily of both neurobiological flourishing and the exercise of rationality. It is a state whereby reason and rationality are empowered to manage activity. It is a capacity for rationality that is reflective and emotionally enriched and able to be carried through into noble humane behaviours.	i, v, ix	3.2.5.2 3.2.5.3
<b>Characteristics of virtue in its acquisition</b> Essential features pertaining to virtue in its acquisition.			
10	The virtuous state results from habituation and education.		3.3.1
11	Repetition, understood as critical practice, plays an essential role in the acquisition of virtue: repetition in appetitive responses, in responses manifesting noble sentiment and attentiveness to others, and in reasoning, deliberation and sound decision making.		3.3.4
12	Education specifically in wisdom and beauty is necessary in the formation of virtue.	vii	3.2.3 3.3.8
13	Effortful attention plays a significant role.		3.3.10
<b>Characteristics of virtue in its acquisition</b> Features that may not necessarily be present in every case.			
14	Advantage must be taken of the early years both for training and provision of appropriate example.		3.3.2
15	Imitation of example is a key means for acquisition of behaviours.		3.3.3
16	Explicit teaching and guidance as to right and wrong, are needed.		3.3.6
17	Affection facilitates learning particularly in the family environment.		3.3.6

The aim in **Chapter 5** will be to propose for these characteristics, on the basis of current neuroscientific knowledge, neural part-constituents, biological elements that are integral to the exercise of virtue in the state of embodied soul.

Bearing in mind, as seen in **Chapter 2**, that neural processing in the brain is extremely complex, it would be simplistic to suggest that virtuous activity is localized and restricted to specific pathways and regions. Virtuous action, by definition, potentially embraces the whole range of human activity, and so it is clearly beyond the scope of any study to catalogue all the pathways and regions with *some* involvement in virtuous activity. We must seek to distil the essential

neural components of virtuous action. In **Chapter 5** I will seek to identify the neural basis for these *essential* material components of virtuous activity.

Notwithstanding the caution with which one should nominate particular brain pathways and regions as implicated in activity of any moral type, to do so is consistent with a vast and expanding literature that implicates involvement of brain pathways and regions in the full range of human activities.

Although experimental verification of the neural substrates of virtue proposed in this study is beyond the scope of the work, it should be noted that the various sub-components of a neural “solution”, have already been verified experimentally in the many studies to which I refer. The approach of this study is to align these established jig saw pieces into a coherent and highly plausible view consistent with the proposed notion of virtue.