

## Faith, Wisdom, and the Transmission of Knowledge through Testimony

### *Introduction*

It is virtually universally agreed that testimony is able to transmit knowledge. And it is also widely supposed that trust is important for the knowledge-transmitting character of testimony. Overtly or tacitly, a testifier can invite trust, and the person who accepts his invitation voluntarily gives him that trust. Somehow in consequence knowledge can be transmitted from the one testifying to the one receiving the testimony.<sup>1</sup> So, for example, in discussing the views held by those who privilege inter-personal relations in their account of testimony, Jennifer Lackey describes their position this way:

“Certain features of this interpersonal relationship – such as the speaker *offering her assurance* to the hearer that her testimony is true, or the speaker *inviting the hearer to trust* her – are (at least sometimes) actually *responsible for conferring epistemic value* on the testimonial beliefs acquired.”<sup>2</sup>

For those who take knowledge as a product of an epistemic virtue, the testimony accepted on trust in this way is a function not only of knowledge but also of intellectual virtue.

How are these claims to be understood? It is not easy to see why knowledge transmitted through testimony would count as the product of an epistemic virtue in the person who accepts the testimony. If an epistemic virtue is an excellence of intellect, or if knowledge is success through ability,<sup>3</sup> why would the acquisition of knowledge through testimony count as the product of excellence, or as success through ability, in a person whose contribution to acquiring the knowledge consists apparently just in accepting the testimony of someone else? Furthermore, what is it about trust in particular that contributes to transmitting knowledge through testimony? And what is it for one person to give trust to another?

Typical examples put forward to illustrate the transmission of knowledge through testimony in consequence of one person's giving trust to another involve such things as gaining scientific knowledge from the testimony of an expert in the field, or coming to know the directions to the museum from the testimony of a passerby on the street. But these kinds of cases are complicated. Whether one is willing to accept the testimony of an expert, for example, can depend, at least in part, on things other than trust. It can depend, for example, on perfectly pedestrian kinds of evidence related to the expert's credentials, rather than on anything grounded in interpersonal relationship with him. Similarly, whether one trusts a passerby for accurate directions can depend on ordinary and manifest indications of the likelihood that the passerby is credible.

For my purposes, therefore, it will help to have a simpler example in which one person's giving trust to another is the primary or even the sole basis for the acceptance of the testimony and the consequent acquisition of knowledge. So consider the first act of Giuseppe Verdi's *La Traviata*.<sup>4</sup> It contains a love scene of the kind that is a staple of opera and romantic literature generally. The fact that its romanticism is commonplace is evidence that, for very many people, the scene is plausible. And its plausibility, as well as its simplicity, make it useful for my purposes.

In the story of the opera, Violetta is a young, beautiful courtesan, who is the talk of her society. Alfredo has known about her for at least a year and has seen her from a distance on occasion. That small connection with her has been enough for him to come to love her deeply. In the love scene at the start of the first act, the two meet for the first time; and Alfredo takes the occasion to confess his love to Violetta. She responds with the skepticism borne of her life as a courtesan: she laughs at him. She is prepared to believe that a man might want something from her, but not that he might love her, at least not with the kind of love that includes real care for her, which is the kind of love that Alfredo is avowing for her. But Alfredo persists in claiming that he loves her in the caring kind of way. Are you really serious?, Violetta finally asks him. And he answers, "I wouldn't deceive you!" With this line, he is in effect asking for her trust.

The two have just met, and Violetta is in no position to evaluate Alfredo's testimony about his love and care for her on the basis of evidence about his character or his past behavior towards her. Furthermore, it is noteworthy that in the story Violetta's experience as a courtesan makes trust particularly difficult for her. As she explains to Alfredo's father later in the opera, in her view she has no friends; and she has no family still living either. She does have many acquaintances and admirers, but she sees them as without any care for her wellbeing. And so she has become skeptical about her chances of ever having real love and care from others. In fact, when Alfredo first expresses his love for her, she responds by explaining to him that she has become indifferent to love. In her world, as she describes it to Alfredo, there is no one who cares for her, and she doesn't care that there isn't. The patina of bravado in that defiantly nonchalant attitude is belied at every turn in the story. It is clear that, because she has learned to see other human beings as predatory or disdainful where she is concerned, Violetta rejects as not possible for her a kind of love and care she in fact does hunger for. She is hardened against trust.

Nonetheless, in response to Alfredo, on the basis of virtually nothing except Alfredo's urging her to trust him, and in the face of the contrary evidence about people that her experience as a courtesan has given her, Violetta yields to Alfredo's petitioning for her trust. She simply wills to give Alfredo her trust when he asks her for it. Trusting him, she accepts his testimony about himself and believes him. As a result, from the point of view of the spectators of the opera, it certainly seems that Violetta comes to know that Alfredo loves her. If we asked those watching the opera whether, at that point, Violetta knows that Alfredo loves her, virtually all of them would readily maintain that she does. In my view, it would take a philosopher worried about the transmission of knowledge through testimony to doubt this view of Violetta; and so I will accept it for all practical purposes in what follows.

The questions about the transmission of knowledge through testimony are all raised here. What is it for Violetta to give her trust to Alfredo? Why does Violetta's giving her trust to Alfredo result in the transmission of knowledge through testimony? Or, to put the same question in a different way, what is the connection between Violetta's willingness to trust Alfredo, which is a state of will in her, and her knowledge that he loves her, which is a state of intellect in her? Finally, why think that, acquired in this way, Violetta's knowledge of Alfredo's love for her counts as the product of an intellectual virtue in Violetta? Why wouldn't it, for example, simply constitute gullibility on her part? What gives epistemic value to the epistemic state that Violetta comes to be in as a result of receiving testimony from Alfredo?

These questions themselves have a noteworthy presupposition that should be made explicit. In the circumstances of the story, Violetta cannot fail to understand that giving her trust to Alfredo will have as an immediate consequence her forming the belief that Alfredo loves her. So for Violetta to will to give her trust to Alfredo is equivalent to Violetta's willing to believe that Alfredo loves her. The story therefore has as a presupposition that it is possible to will to believe something. This presupposition (or one similar to it) has to be understood to underlie all accounts of the transmission of knowledge through testimony that highlight the testifier's asking for trust on the part of the hearer and the hearer's being willing to give it.

But this presupposition is controversial. Is it really possible to will to believe? If Alfredo had said to Violetta, "Trust me! Two and two make five!" or "Trust me! Paris is the capital of Italy!", surely Violetta would not have been able to will to believe his testimony. Why think that Violetta can will to believe in some circumstances but not in others?

Furthermore, if Violetta cannot will to believe, then it also is not possible for her to will to trust. If there is no voluntary component to any believings, there will not be a voluntary component to the correlative trustings either. But if trust is always involuntary, then it makes no sense for a testifier to ask his audience for trust or to do anything else that invites his audience to give him trust. Unless at least some trust is voluntary, then trust is not the kind of thing a person can ever *give* (or be invited to give).<sup>5</sup>

And if a person cannot give trust voluntarily, then the role of trust in the transmission of knowledge through testimony in a case such as that of Violetta, where the testifier asks for trust, becomes harder to see, too. If in such circumstances trust is involuntary, then the trust generated in a person by the testimony of another in those circumstances does not seem much different from, say, belief generated by evidence, available to the recipient of the testimony, about the character or intentions of the testifier.

In this paper, for reasons that will become clear, I will look for help with all these issues to Aquinas's account of faith and the relation of faith to wisdom, in which there is also a process that starts with a state of will and culminates in an intellectual virtue.<sup>6</sup> In my view, a certain resolution of the puzzling issues raised in connection with the transmission of knowledge through testimony in fact underlies the Thomistic account of faith and wisdom, which itself relies on a Thomistic psychology according to which it is possible for a person to believe at will. In what follows, I will first briefly sketch that part of Thomistic psychology. Then I will give a short overview of the Thomistic account of faith and wisdom. It will not be any part of my purpose in this paper to expound these Thomistic views in scholarly detail or to defend them. (I have done what I could with those tasks elsewhere<sup>7</sup>.) Rather my purpose will be to show the way in which, on Aquinas's account of faith and wisdom, inter-personal trust functions to generate and sustain an intellectual virtue. Next, I will use some recent neurobiological research to elucidate the underpinnings of Aquinas's account. Finally, taking as a model Aquinas's account, understood in light of those neuroscientific findings, I will return to the case of Violetta and Alfredo and the role of trust in the transmission of knowledge through testimony. I will argue that interpreting the case of Violetta on the model of Aquinas's account gives promising answers to the questions with which I began.

### *Intellect and Will: Willing to Believe*

Aquinas takes the will to be not a neutral faculty, but an inclination or appetite for goodness, where goodness is broadly construed to encompass the pleasant and the useful as well as the ethical.<sup>8</sup> By itself, the will makes no determinations of goodness. Apprehending or judging things as good is the business of the intellect. The intellect presents to the will as good certain things or actions under certain descriptions in particular circumstances, and the will wills them because it is an appetite for the good and they are presented to it as good. For this reason, the intellect is said to move the will not as an efficient cause but as a final cause, because its presenting something as good moves the will as an end moves an appetite.<sup>9</sup> (Although this account of the will is plausible, in my view, it is possible to preserve the basic lineaments of Aquinas's position as regards willing to believe even if one takes the will to be only the mind's executive function.)

Understood as rational appetite for the good, the will is the primary mover of all the powers of the soul (including itself),<sup>10</sup> and it is also the efficient cause of motion in the body.<sup>11</sup> Most important for my purposes, Aquinas maintains that the will exercises some degree of efficient causality over the intellect.<sup>12</sup> It can move the intellect indirectly by asking it to attend to some things and to neglect others,<sup>13</sup> or even to stop thinking about something altogether.<sup>14</sup> By this means, the will can move the intellect indirectly to adopt or reject a particular belief. But, Aquinas thinks, in some circumstances, the will can also command the intellect directly to adopt or to reject a particular belief.<sup>15</sup>

Aquinas not only holds that the will can command the intellect directly to adopt or reject a belief, but he also makes some helpful remarks about the manner in which the will commands all the powers under its control. On his view, the will is ordered to the good taken universally, while all the other powers of the soul are ordered to particular goods. For this reason, the will moves the other powers of the soul with efficient causation in order to help them achieve the particular goods at which they are directed, in the service of the good in general. Aquinas explains this power of the will by analogy with the ordered hierarchy of command in an army. Just as the general who intends the common good of the whole army moves by his command the captains of individual companies, each of whom aims at the good of his own company, in the same kind of way the will moves all the powers under its command towards their own goods in the service of the good in general.<sup>16</sup> For example, the power of sight has a good towards which it is directed, namely, the apprehension of what is visible; and the intellect has a good towards which it is directed, namely, the cognition of truth. Because the will is directed to the good in general, it can function to govern these other powers in order to help them advance towards their particular goods.<sup>17</sup> When it functions in this way, the will can command even the operation of the intellect.

Aquinas's idea, then, is that the will works in accordance with the nature of the power of the soul it is commanding in order to help that power achieve the good it was created to achieve. Put in more familiar words, Aquinas's idea is that the will works in accordance with the design plan<sup>18</sup> of the faculties it governs, not against them, for the good of the whole. In this respect, the will's control over the intellect is like the will's control over the leg. The will can successfully command the leg to move only in case the will works with the design plan of the leg. The will could not successfully command the

leg to move in such a way that, for example, the foot folds frontwards over the knee to let the toes touch the top front part of the thigh.

It is worth noting here that when the will commands the intellect in accordance with the design plan of the intellect, then both the will and the intellect are functioning properly. If they are also functioning in the circumstances in which they were designed to function, and so on,<sup>19</sup> then the belief produced in the intellect through the operation of the will can count as knowledge, on accounts of knowledge that make knowledge a result of a certain kind of proper functioning of cognitive powers. And this will be so even if the belief is a product of the will's operating on the intellect, as long as the will's operation on the intellect is working with the design plan of the intellect, which is aimed at truth.<sup>20</sup>

As Aquinas see it, then, a veridical state of intellect can be brought about in two different ways.

In the first way, assent on the part of the intellect is brought about entirely by the object of the intellect. In this kind of case, the object of the intellect's act (that is, the information available to the intellect) moves the intellect by itself and produces assent in the intellect without the will's acting on the intellect. Aquinas describes such cases by saying that the object of the intellectual act is itself sufficient to move the intellect to assent. By this expression, he means that, as a result of a particular person's cognitive relation to what is being cognized, the cognizer is at that time in an epistemic state in which it is natural and easy for him to assent to a certain proposition and difficult or even impossible for him not to assent. Since by design the intellect is aimed at truth, a belief formed in this way will be true. A simple mathematical truth, such as '2+2=4', is an object of the intellect of this sort.

In the second way, for one reason or another, the object of the intellect is not sufficient to move the intellect. Nonetheless, when the will is working with the design plan of the intellect, the intellect can be successfully moved to assent by the will, which can command the intellect to adopt or reject a belief.<sup>21</sup> Cases in which a person's will is working together with the design plan of the intellect to get the intellect to accept a true belief or reject a false one, for the sake of some overarching good that person wants, are like this.

Consequently, for Aquinas, the will does not have control over belief in cases where the cognitive capacities, acting according to their design plan, have been abundantly or sufficiently moved by their objects.<sup>22</sup> For this reason, Aquinas can accept certain arguments in favor of the view that it is not possible to will to believe while at the same time rejecting that view.

Consider, for example, the kind of case William Alston makes against the view that one can will to believe. He asks rhetorically: "Can you, at this moment, start to believe that the United States is still a colony of Great Britain, just by deciding to do so?"<sup>23</sup> Since we in fact know that the United States is not still a colony of Great Britain, to ask whether we can adopt the opposite belief just by deciding to do so is to ask whether the will can successfully command the intellect to act contrary to its design plan. But this is the sort of thing that, on Aquinas's view, the will cannot do.<sup>24</sup>

Once we see the problem with examples such as Alston's, however, it is not difficult to generate different examples that do, in fact, support the intuition that we sometimes have voluntary control over beliefs. For example, consider a person determined to eradicate racist beliefs in himself. When he catches himself with a racist

belief, he says to himself, "Stop it! Don't think such a thing!". And it can be that, as a result of this command on the part of his will,<sup>25</sup> his intellect rejects the racist belief in question, at least at the moment. Or consider someone who finds himself believing, compulsively, that he must wash his hands yet again; or a person who notices that he is depressed and finds himself believing that he is worthless and would be better off dead; or a person who becomes furious with a colleague and finds himself believing that nothing he could do to her would be bad enough. In each case, for the sake of some good the willer desires, when his will is working with the design plan of the intellect, it can intervene and command his intellect to reject the false belief in question (or to adopt a true belief contrary to it).

Here the acquisition or rejection of a belief in consequence of the directives of the will is the direct result of the will's commands to the intellect.<sup>26</sup> Cases of this sort can be part of fierce and ongoing internal battles. Sometimes in such battles the will is not strong enough to be successful, and then a person may seek external help from friends or religious counselors or therapists. Then the will is exercising indirect control over the intellect. It exercises its control over the intellect by willing the help of others in bringing about the desired intellectual state. But other times the will *is* successful, and the willer wins her battles by herself because her will has been effective in commanding her intellect to abandon the compulsive or depressive or vengeful beliefs she wills not to have. In those cases, the will is successful in commanding the intellect to adopt or reject a belief because the will is working together with the design plan of the intellect, to correct some malfunction on the part of the intellect.<sup>27</sup>

In cases where the will successfully commands the intellect, Aquinas thinks that, for the agent, there are considerations sufficient to move the will even if they are not sufficient to move the intellect. Considerations are sufficient to move the will when it is natural and easy for a particular willer to form a desire or volition for something and more difficult or even impossible for him not to form it. Since the will is a hunger for the good (broadly understood), what can move the will in this way are apprehensions of the good. In the examples above, the agent wants not to be a racist or compulsive or suicidal or vengeful person, because he rejects as not good being a person with such benighted and lamentable views. Because of his desires to be the kind of person he accepts as good, his will commands his intellect to reject the false beliefs that are characteristic of the kind of person he does not want to be. And the will is successful because it is in fact working with the design plan of the intellect, which is aimed at truth.

### *Faith and Wisdom*

The preceding examples of believing at will involve only intra-personal interactions between intellect and will within a person, when his will is commanding his intellect. But, for Aquinas, the most notable case in which the will can successfully command the intellect occurs in circumstances that are interpersonal. That case involves a person's coming to faith in God and thereby gaining wisdom.<sup>28</sup> In what follows, I will only sketch the lineaments of Aquinas's account; elsewhere I have given a detailed presentation and defense of them.<sup>29</sup> For my purposes here, a sketch of them is sufficient, because they highlight an element in the relation of will to intellect in the transmission of knowledge through testimony by means of trust that might otherwise go unnoticed.

According to Aquinas, in faith, the intellect assents to certain propositions about God (these are the propositions of faith); but that assent is generated by the will's acting on the intellect. Even taken together with whatever else is known or believed by a person, the propositions of faith are not sufficient to move the intellect of a person to assent. So when it assents to the propositions of faith, a human person's intellect does so under the causal influence of the will, which *is* sufficiently moved by considerations having to do with God, the object of the will in question, to act on the intellect to bring about its assent.

Aquinas thinks that the object is sufficient to move the will in this case because God is the ultimate good for a person. What any person wants as the greatest of goods is his own happiness, and, on Aquinas's views, that greatest happiness is union with God. The propositions of faith present this greatest good for a person both as happiness and as union with God.

For a person coming to faith, the will is drawn to God because of the great goodness of God and of the happiness of union with God. In consequence of the will's desire for this good, the will commands the intellect to assent to the propositions of faith. When the will is successful in this command, the intellect assents and cleaves to the propositions of faith with maximum conviction.<sup>30</sup>

It is important to see in this connection that the interaction of intellect and will in the generation of faith includes as well the generation of charity, that is, the love of God and God's goodness.<sup>31</sup> That is because, in the process of the generation of faith, when the will moves the intellect, the will is drawn by its desire for God and God's goodness; and this desire is at least a nascent love of God. The resulting faith is sometimes called 'formed faith' because in it the intellect's assent to the propositions of faith takes its form from this incipient love of God that animates the will.<sup>32</sup> In a person who comes to faith, before the generation of faith in him, his intellect considers the goodness of God and union with God, and his will desires that goodness. Because of the will's desire for this goodness, the will moves the intellect to assent to the propositions of faith.

In this case, on Aquinas's views, the will is working with the design plan of the intellect; because the propositions of faith are in fact true, on Aquinas's view, the operation of the will on the intellect helps the intellect to truth. Furthermore, because these truths are important and have far-reaching epistemic impact on a person's intellect, for Aquinas faith contributes to the perfection of the intellect; and so faith is an intellectual virtue. (And because in faith the will desires what is in fact its ultimate good, faith contributes to the perfection of the will as well; it is therefore also a moral virtue.)

It is noteworthy that, as Aquinas sees the generation of faith, an intellectual virtue is generated by the state and actions of the will, rather than by acts of the intellect itself. For my purposes, however, the most significant thing about this part of Aquinas's account is that faith results from what is in effect, on Aquinas's views, an interpersonal interaction between a human person and God, in virtue of the fact that the person coming to faith is attracted to God and God's goodness.

On Aquinas's account, the generation of faith is followed by the next step in the process of faith's leading to wisdom. When the intellect of a person Paula assents to the propositions of faith under the influence of her will's desire for God and God's goodness, the resulting faith, informed by love of God's goodness, brings about a mutual second-personal relation between Paula and God. In this relationship, personal interaction

characterized by trust in God and openness to God grows in Paula. In consequence, Paula develops some degree of what Aquinas calls 'connaturality' or 'sympathy' with God. When Paula is in a mutual second-personal relation with God, then Paula's mind is attuned to God's, to one degree or another; and so there is a resonance, a sympathy, between Paula and God. This sympathy enables the development of certain dispositions of intellect in Paula. Because she is attuned to God as she is, she sees things through God's eyes, as it were; that is, she understands things and has insight into things in ways she otherwise would not have. And so in the mutual loving relationship between God and Paula resulting from Paula's faith, Paula develops certain intellectual dispositions in virtue of her being open to the mind of God. In Aquinas's view, these dispositions are the real or most important of the intellectual virtues.

Wisdom is one example of such intellectual virtues. On Aquinas's account, wisdom is the intellectual virtue that enables a person to form excellent judgments about what is good, both in theory and in practical judgments. In explaining wisdom as an intellectual virtue,<sup>33</sup> Aquinas connects it with the will, as distinct from the exercise of reason. He says,

"wisdom denotes a certain rectitude of judgment according to the eternal law. Now rectitude of judgment is twofold: first, on account of perfect use of reason, secondly, on account of a certain connaturality with the matter about which one has to judge. ... Now sympathy or connaturality for divine things is the result of love, which unites us to God... Consequently wisdom ... [in its highest form] has its cause in the will, and this cause is love..."<sup>34</sup>

So, as Aquinas sees it, in the connaturality resulting from Paula's second-personal relation with God, one of the dispositions that will develop in Paula is the intellectual virtue of wisdom, which results not from some activity on the part of her intellect but rather from the sympathetic connection between her and God. Possessed of the virtue of wisdom, Paula will not need to try to reason things out as regards what is good. She will be disposed to understand intuitively what is good, in theory and in practice, in excellent and insightful ways because of her connaturality with God. In this condition, her judgments will harmonize with God's judgments. And so she will have the intellectual virtue of wisdom, but it will be a result of her sympathy with God, rather than of the independent exercise of her intellectual abilities. This virtue will manifest itself in Paula's intuitively knowing things she would not otherwise have known by the exercise of reason or would not have known as readily or as well.

For Aquinas, then, there are two sequences of interacting states of will and intellect in which the will exercises its influence over the intellect. These sequences establish a trusting second-personal connection between a human person and God, and that connection carries with it first sympathy and then wisdom. The first puts a person in a position to form a connatural connection with God, and the second sequence results in a person's acquiring from God an intellectual disposition for a certain kind of knowledge. The will's desire for God and the goodness of God is sufficient for the will to move the intellect to accept the propositions of faith. When the intellect does so, it generates faith, informed by love of God. In consequence, a mutual second-personal relationship of trust develops between the person of faith and God. This relationship brings with it a kind of



sympathy, or connaturality, as Aquinas calls it, between the human person and God. And this connection of sympathy or connaturality, in which a person is willing to give trust to God, results in the excellent intellectual disposition of wisdom.<sup>35</sup>

Although there is controversy over the nature of testimony, one widely accepted suggestion is that testimony is a matter of one person's voluntarily conveying to another information of one sort or another.<sup>36</sup> On this notion of testimony, God's voluntarily sharing some part of his mind with a human person counts as testimony too. So insofar God wants to open his mind to a human person who is connected to God in faith and who gains knowledge from being open to the mind of God then, in this process knowledge is transmitted to the human person through testimony because of trust.

And so the relationship generated by faith has the effect of transmitting knowledge from God to the human person in the relationship through testimony in virtue of trust; and by this means, intellectual virtue is generated in that person through a process that begins with an act of will.

### *Mind-reading and Empathy*

In my view, this account of Aquinas's regarding faith and wisdom is helpful for thinking about the general problem of the role of trust in the transmission of knowledge through testimony. The heart of Aquinas's account, and the most suggestive part of it, is the notion of sympathy or connaturality and the part played by trust in establishing that sympathy. But his account is also undeveloped at this point. For example, it is not clear what mental capacities are involved in establishing and maintaining sympathy between a person of faith and God. Neither intellect alone nor the combination of will and intellect seems sufficient for the task.

The sympathy in Aquinas's account has at least a strong resemblance to the kind of empathy currently thought to be ingredient in mind-reading. In human beings, mind-reading is the knowledge of persons and their mental states.<sup>37</sup> Because of recent work in neuroscience and child development, especially the impairments of development among autistic children, we now know a lot about the neurological systems that make empathy and mind-reading possible. We will be in a better position to understand Aquinas's account of faith and wisdom if we look more closely at these neurological systems and the interpersonal connections of empathy they enable.

Whatever ties together the different clinical signs of all the degrees of autism spectrum disorder, the most salient feature of the disorder is a severe impairment in the cognitive capacities necessary for mindreading.<sup>38</sup> The knowledge which is impaired for an autistic child, however, cannot be taken as knowledge *that* something or other is the case. A pre-linguistic infant is not capable of knowledge *that* a particular person is her mother; but she can know her mother, and to one extent or another she can also know some of her mother's mental states. Conversely, an autistic child can know *that* a particular macroscopic object is her mother or *that* the person who is her mother has a certain mental state. But the autistic child can know such things without the knowledge that comes with mind-reading.

So, for example, an autistic child might know that his mother is sad, but in virtue of the impairment of autism he is unlikely to have this knowledge *that* because he knows the sadness of his mother. An autistic child might know that his mother is sad because he

has learned as a rule of thumb that any face with tears on it is sad, and he discerns tears on his mother's face. This is clearly not the same as the child's directly knowing the mental state of his mother.<sup>39</sup> What is impaired in an autistic child's ability to mind-read is the capacity for a non-propositional knowledge of persons and their mental states.<sup>40</sup>

New research in neuroscience has shown that the capacity for this kind of knowledge of persons is subserved at least in part by what is now called 'the mirror neuron system'. The mirror neuron system makes it possible for one person to have knowledge of the mental states of another person when that knowledge shares something of the phenomenology of perception. Like the perception of color, for example, the knowledge of persons in mind-reading is direct, intuitive, and hard to translate without remainder into knowledge *that* (but very useful as a basis for knowledge *that* of one sort or another).

Neurons in the mirror neuron system make this sort of knowledge in mind-reading possible because they fire both when one does some action oneself *and also* when one sees that same action being performed by someone else. As Shaun Gallagher puts it, mirror neurons "constitute an intermodal link between the... perception of action or dynamic expression, and the first-person, *intrasubjective*... sense of one's own capabilities."<sup>41</sup>

The point is easier to appreciate if we think of empathy, which is currently also thought to be a result of the cognitive capacity subserved by the mirror neuron system.<sup>42</sup> One person Paula *sees* an emotion in another person Jerome because the mirror neuron system produces in Paula an emotional state like the emotion Jerome is experiencing, but taken off-line, as it were.<sup>43</sup> In empathy with Jerome's suffering physical pain, for example, Paula will feel something of Jerome's pain, but she will feel it as his pain, not as hers. She does not actually suffer physical pain herself; but, in her empathy with him, the feeling she has is a feeling that is at least like the suffering of physical pain. In consequence, she knows Jerome's pain.<sup>44</sup>

And, in general, in mind-reading Jerome, Paula will know what it feels like to do the action Jerome is doing, what it feels like to have the intention Jerome has in doing this action, and what it feels like to have the emotion Jerome has while doing this action. In all these cases, Paula will know these things in Jerome through having herself some simulacrum of the mental state in Jerome. Something of Jerome's mental state will be in Paula, but in a different way.

Another way to think about the nature of mind-reading is to reflect on the reasons evolution would favor it. One eminent researcher in this area, Vittorio Gallese, explains the evolutionary point of mind-reading and its empathic character this way:

"at the basis of all social species and all social cultures, ... is the capacity for identification with the individuals within those species and culture. ... [By 'identification', ] I mean the identification of the self with another individual as 'like me' in some way.... Identity is so important within a group of social individuals because it enables them to predict more accurately the consequences of other's future behavior. ... [T]he identity-based capacity to predict others' behavior is a very early endowment of human beings."<sup>45</sup>

Human beings are a highly social species; and, as Gallese and others see it, the ability to mind-read is part of what enables human beings to function as the social animals they are. Mind-reading connects people into smaller or larger social groups which can function as one because the mind-reading unites people psychically, to one extent or another.

Gallese tries to explain the empathic mind-reading capacities of human beings this way. Research on infants has shown that there is an innate mechanism that allows them to map observed behavior on the part of others to their own behavior. The action of this mechanism has been called 'active intermodal mapping', because it enables the brain to translate from visually observed behavior to motor information.<sup>46</sup> That is, visual observation of another's action or facial expression is translated by this neurosystem into motor programs that the observer would use if he were doing the same action or making the same facial expression. By this means, the observer feels from the inside what the observed person is doing and is able to run the motor programs needed to do that action, with more or less successful mimicry. That is why this mechanism enables a newborn to mimic facial expression on the part of an adult caretaker.

In adult human beings, Gallese argues, "a mirror matching neural mechanism can represent content *independently of the self-other distinction...*"<sup>47</sup> That is, the mirror neuron system takes incoming data, from vision but also from other perceptual or non-perceptual<sup>48</sup> sources, and processes it in such a way that, at least as one step in the processing, the content of what is observed is available to the observer but from the inside, rather than externally.

Trying to explain the idea of a system that takes in all different kinds of sensory modalities and turns them into subjectively available inner states, Gallese says,

"[mirror neurons] map this multimodal representation across different spaces inhabited by different actors. These spaces are blended within a unified common intersubjective space, which paradoxically does not segregate any subject. This space is "*we*"centric... The shared intentional space underpinned by the mirror matching mechanism is not meant to distinguish the agent from the observer. As organisms, we are equipped with plenty of systems, from proprioception to the expectancy created by the inception of any activity, that are able to distinguish the self from the other. Rather, the shared space instantiated by mirror neurons blends the interacting individuals within a shared implicit semantic content."<sup>49</sup>

And he goes on to explain empathy in this way:

"Self-other identity goes beyond the domain of action. It incorporates sensations, affect, and emotions. ... The shared intersubjective space in which we live from birth continues long afterward to constitute a substantial part of our semantic space. When we observe other individuals acting, facing their full range of expressive power (the way they act, the emotions and feelings they display), a meaningful embodied link among individuals is automatically established. ... [W]e have a subpersonally instantiated common space. ... [S]ensation and emotions displayed by others can also be empathized with, and therefore implicitly understood, through a mirror matching mechanism."<sup>50</sup>

In fact, he says,

“it is just because of this shared manifold [subserved by the mirror neuron system] that intersubjective communication, social imitation, and mind reading become possible.”<sup>51</sup>

### *Empathy: A Suggestion*

With this very brief explanation of the neuroscientific research results on mind-reading and empathy, only one other thing is lacking to connect empathic mind-reading with the Thomistic idea of connaturality or sympathy. Empathy is most frequently thought of as the ability to feel another's emotion, and especially when that emotion is characterized by pain of one sort or another. But lived experience strongly suggests that, in fact, the empathic mind-reading capacities are capable of a more far-reaching interpersonal connection that can be responsive even to moral characteristics in another person.<sup>52</sup>

It is evident that when a person Jerome is engaged in doing an action that is morally repulsive in some way, and Paula mind-reads Jerome as he acts, then Paula's mind-reading of Jerome will connect her also to the moral characteristics of Jerome as he acts. Graphic videos showing one person's seriously abusing another prompt mind-reading in the viewer too, and the mirror neuron system gives the viewer some no doubt limited awareness of the moral state of the abuser, some sense of what it feels like to do such morally reprehensible things.

That awareness can be troubling if the things in question are revulsive to one's sensibilities. Mind-reading of someone engaged in serious evil is as disturbing as it is because the mind-reader feels at the same time the morally deplorable mental states of the other and her own distress at such mental states. In viewing Jerome's evil act or evil thoughts and feelings, Paula gains something like a simulacrum of Jerome's evil state even while she lacks those states of intellect and will that enable Jerome actually to engage in the evil act or to adopt the evil thoughts and feelings he does. That there is mind-reading of this kind too is one explanation<sup>53</sup> of why watching graphic scenes depicting evil acts or evil people is so upsetting to most people.

By the same token, however, it is also possible for one person to mind-read goodness in another. We recognize directly and intuitively some acts of generosity, compassion, and kindness, for example, without needing to reflect much or reason it out. When the goodness takes us by surprise, we are sometimes moved to tears by it. Philip Hallie describes his first acquaintance with the acts of the Chambonnais, who risked their lives to rescue Jews during the Nazi occupation in France, this way:

"I came across a short article about a little village in the mountains of southern France. ...I was reading the pages with an attempt at objectivity...trying to sort out the forms and elements of cruelty and of resistance to it.... About halfway down the third page of the account of this village, I was annoyed by a strange sensation on my cheeks. The story was so simple and so factual that I had found it easy to concentrate upon *it*, not upon my own feelings. And so, still following the story, ... I reached up to my cheek to wipe away a bit of dust, and I felt tears upon my fingertips. Not one or two drops; my whole cheek was wet."<sup>54</sup>

Those tears, Hallie says, were "an expression of moral praise"<sup>55</sup>; and that seems right. Through the story he was reading about the people of Le Chambon, Hallie was engaged in mind-reading those people, in the ways a narrative makes possible,<sup>56</sup> and the empathic capacities of his mind-reading system were discerning the moral goodness of the Chambonnais and moving him to tears in consequence.

It seems, then, that the empathic capacities of the mind-reading system can give some intuitive knowledge of the moral state of a person and the moral character of an observed act of his. It can discern evil with pain, and it can also intuit moral goodness in second-personal connection with another person, or even through stories, as in the case of Hallie and the Chambonnais.

Aquinas's account of the way in which faith leads to wisdom relies in two places on such an empathic intuitive recognition of goodness, one gained through stories and descriptions of God and the other exercised in second-personal experience with God.<sup>57</sup>

In the first place, a person Jerome who is coming to faith begins by having some feel for the goodness of God as found in stories and descriptions of God; and he has a desire for that goodness. In this empathic state, mediated by the mirror neuron system, with a God who is still (as it were) a narrative character for Jerome, Jerome may be willing to assent to the propositions of faith. That is, his will, drawn by an empathic feel for the goodness of God and desire for it, may move his intellect to assent to the claim that God exists and is good (as well as to other propositions about faith).<sup>58</sup> If his intellect does assent, then, on Aquinas's account, Jerome will be open to second-personal experience of God; and in the trust of that connection, mind-reading will be established between Jerome and God.

Then, in the second place, in consequence of this second-personal experience of God and the openness ingredient in it, Jerome will be even more empathically connected to God and God's goodness. In this trusting personal connection, Jerome will have sympathy or connaturality with God. In empathic mind-reading, Jerome will share something (no doubt very limited) of the mind of God. When he does, he will come to know things he apprehends in the mind of God. And, of course, for his part, God wills to share a certain part of his mind with Jerome, so that what Jerome comes to know, he knows as voluntarily conveyed to him by God through the empathic connection.

And so, on Aquinas's account of faith and wisdom, knowledge is transmitted from God to Jerome through testimony in consequence of trust. Jerome's trust in God's goodness, which he discerns first in coming to faith and then in connaturality with God, is the basis for the transmission of knowledge through trust from God's mind to his.

What the scientific story of mind-reading adds to Aquinas's account is the introduction of a new cognitive capacity, not part of Aquinas's philosophical psychology, namely, the capacity for mind-reading. The postulation of this cognitive capacity is in fact crucial for explaining the transmission of knowledge through testimony on Aquinas's account of faith and wisdom. Insofar as this cognitive capacity is reliable, then its operation can result in knowledge, on any theory that privileges the reliability of cognitive capacities in its account of knowledge. And so, although on Aquinas's account of faith and wisdom, the process of acquiring knowledge bypasses the usual operations of the intellect in acquiring evidence and assessing reasons, the result of the operation of will on intellect nonetheless results in knowledge, because it depends on the mind-

reading capacity, which is itself reliable and which connects a person with a highly reliable source of information, namely, the mind of God.

Furthermore, as Gallese's remarks quoted above indicate, the mind-reading capacity is part of the evolutionary story of the success of a social species such as human beings. At least in some respects and some circumstances, however, the mind-reading capacity is under voluntary control. And so there is also a design plan for the system involving the dynamic interactions of the will, the intellect, and the mind-reading capacity. When that system is employed in the appropriate circumstances in accordance with its design plan, it is also a reliable cognitive system even though the final state of the intellect is generated at least in part through the exercise of the will.

### *The ordinary, non-theological case of Violetta*

In my view, illuminated by contemporary research on the mind-reading capacities, Aquinas's account of faith and wisdom offers a promising way to think about the case of Violetta. If we explain Violetta's case analogously, then the sequence of events regarding Violetta and Alfredo looks like this.

Violetta begins with a certain resistance to trust in Alfredo and a certain skepticism about the veracity of his testimony to her that he loves her. But as Violetta is face to face with Alfredo, she has some second-person experience of him. In this experience, her mind-reading capacities give her some limited empathic, mind-reading awareness of Alfredo, and the result on her part is some small empathic feeling for Alfredo's goodness, at least relative to a certain context, which includes her especially. Although Violetta does not have propositional evidence sufficient to support the claim that, at least where she is concerned, Alfredo is good, her mind-reading of him gives her some awareness of that goodness in him and some desire for it. (This stage in Violetta's case is thus analogous to the stage of the process in Aquinas's account right before a person's acquisition of faith.)

Next, in the grip of a desire for that goodness in Alfredo which is directed towards her, Violetta's will moves her intellect to assent to the belief that, with regard to her, Alfredo is good.<sup>59</sup> (This belief may be tacit or below the level of conscious awareness; nothing requires that it be fully conscious.) (Mutatis mutandis, this stage in Violetta's case is analogous to the stage of the process in which a person has come to faith, in Aquinas's account.)

Then, when Violetta's intellect, moved by her will, has assented to the belief that Alfredo is good, Violetta lets go of some of her previous resistance to trust in him. In consequence, there is a deepening of her second-personal experience of him; she becomes more trusting of him and so more open to him. In this voluntarily accepted condition of increased receptivity, her empathic mind-reading capacities also become more attuned to him. The result is increased empathic awareness of him. (This stage of Violetta's case is thus something like the stage of the process in which a person acquires connaturality with God, in Aquinas's account.)

In this condition, the output of Violetta's mind-reading capacity gives her some empathic awareness of Alfredo's love for her. She does not have propositional evidence sufficient to support the claim that Alfredo loves her. Nonetheless, when she hears him express his love for her, she believes him because in the intersubjective space of the

mind-reading capacity, she feels his love for her. And so she believes that he loves her. This belief is the result of a reliable cognitive capacity, the mind-reading capacity, being employed in the circumstances in which it was designed to be employed (which include the operations of intellect and will), in a context in which there are no undefeated defeaters, and so on. For these reasons, when Violetta accepts the belief that Alfredo loves her, she acquires the knowledge that Alfredo loves her.

At this point, knowledge has been transmitted through testimony from Alfredo to Violetta at least in part by means of Violetta's mind-reading of Alfredo in the trusting second-personal relationship established shortly before through the previous use of her mind-reading capacity, which in turn mediates the operations of her will on her intellect. (This end-point of Violetta's case has some similarity to the stage in the process in Aquinas's account in which a person has gained theoretical and practical knowledge of the good through connaturality with God. At this point, a person of faith has the intellectual virtue of wisdom, because the connatural connection to the mind of God produces in the person of faith a disposition that is a channel for understanding goodness in practical and theoretical ways. Given the smallness of Alfredo by comparison with God, what Violetta gains from an analogous empathy is not wisdom but only knowledge. But insofar as knowledge is the product of an intellectual virtue, then in consequence of trust, like a person of faith, Violetta does have success through ability.)

Violetta's giving Alfredo her trust, then, begins with some mind-reading sufficient to move the will but not the intellect with respect to Alfredo's testimony that he loves her. The subsequent interaction of will and intellect results in a belief on Violetta's part that Alfredo is good. With this belief in place, in consequence of some minimal trust in Alfredo, Violetta's empathic receptivity to him increases; and so does her trust of him. As a result, her empathic mind-reading capacities give her an awareness of Alfredo's love for her. The end result is that when Alfredo then tells her that he loves her, she believes him. And in this way, through her trust in him, his testimony brings it about that she knows that he loves her.

### *The moral of the story*

This is the way the case of Violetta looks when it is interpreted on the model of Aquinas's account of the generation of wisdom through the acquisition of faith. Seen in this way, Violetta's case provides some suggestive answers to the questions with which I began. What is it for Violetta to give Alfredo her trust? What is it about Violetta's giving Alfredo her trust that contributes to her acquiring knowledge through testimony? And why would the knowledge that Alfredo loves her, which Violetta acquires on the basis of Alfredo's testimony that he loves her, count as the product of an intellectual virtue in Violetta?

On the model of Aquinas's account, developed in light of contemporary neurobiology, Violetta's giving her trust to Alfredo consists in a sequence of events in which the interaction of will and intellect, mediated by the mind-reading system, results in a belief on Violetta's part that Alfredo is good, at least where she is concerned. A second iteration of a similar sequence, mediated by a deeper empathic mind-reading, results in a belief on her part that Alfredo loves her. There is therefore a promising answer to the first question.

The interaction of will and intellect shows the role of the will in Violetta's belief-forming process. And the empathic mind-reading capacities help to explain why, even with this role for the will, the process can yield knowledge. The mind-reading system is a cognitive capacity that is as reliable as any other, and beliefs grounded in its exercise are as likely to be true as beliefs grounded in the perceptual faculties, which are also generally reliable, even if not infallible. Furthermore, as the analysis of Violetta's case above makes clear, trust is an essential element in the transmission of knowledge through testimony, because trust is required for the exercise of the empathic, mind-reading capacities which gives the grounding for Violetta's coming to know that Alfredo loves her. And so the second question also has an interesting answer here.

But, in my view, the most interesting result of the application of the neurobiologically interpreted Thomistic account to the case of Violetta is the answer that the application gives to the third question.<sup>60</sup> What is puzzling, at least initially, about the transmission of intellectual excellence through testimony has to do with the fact that in acquiring knowledge through testimony a person such as Violetta seems to be doing no intellectual work of her own. We are inclined to suppose that the acquisition of an intellectual virtue or the achievement of success through ability<sup>61</sup> requires some work on the part of the possessor of that excellence or success. But when Violetta acquires knowledge through testimony from Alfredo, it seems that all the work, or all the success through ability, is on Alfredo's part. It seems that Violetta simply receives information from Alfredo. It is hard, then, to see any success or intellectual virtue in Violetta in her acquiring knowledge through Alfredo's testimony.

But recent neurobiological research on mind-reading calls in question this highly individualistic understanding of knowledge and the processes leading to it.<sup>62</sup> On the contrary, this research shows that there are cognitive systems which are, as Gallese puts it, "we-centric". Because human beings are a social species, some human cognitive capacities are designed to operate excellently only in communion with another person. The mind-reading cognitive system is such a cognitive system. When it operates successfully or excellently, it does so precisely because it manages to connect two disparate minds into some kind of unity. And that unity then provides the basis for the transmission of knowledge.

The intellectual excellence in Violetta is really hers, not because she worked hard, in an individualistic way, to examine evidence or assess reasons with regard to whether or not Alfredo loves her. Rather, the knowledge that Violetta has results in part from the successful exercise and the excellence of the mind-reading cognitive capacity *in her*,<sup>63</sup> which connects her to another human person in knowledge-transmitting ways. This is a social or communal expertise, in the sense that Violetta cannot exercise it individually, on her own, without Alfredo. But it is nonetheless Violetta's excellence. If she were impaired in this capacity, she would not succeed in gaining knowledge through testimony by means of trust. The knowledge that results from her mind-reading of Alfredo is therefore a success through ability on Violetta's part.

### *Conclusion*

We can understand Violetta's belief that Alfredo loves her as knowledge acquired through testimony, then, because it is a kind of success through ability, even though the



cognitive capacity being used successfully is the mind-reading capacity, which can be exercised only in communion with another person.

Of course, the mind-reading capacity is not infallible, any more than any other reliable human cognitive capacity is. Like the perceptual faculties, for example, it can be used in circumstances in which it was not designed to be used, so that it yields not perceptual illusions but delusions about other people. And it can give false results in other ways, too. Like the reasoning ability, it can be used in epistemically slovenly ways, it can be natively dull, or it can simply be untrained. So the use of the mind-reading capacity in the kind of process exemplified by the case of Violetta does not guarantee that its output will be knowledge. Obviously, a person in Violetta's position might be gullible and deceived.

But, *mutatis mutandis*, similar things can be said about any human cognitive capacity. The general reliability of a human cognitive capacity is sufficient for it to yield knowledge in its exemplary uses, even if it is fallible and can be used to give non-veridical results too. If we accept some version of an externalist, reliabilist account of knowledge, then that account will explain why what is transmitted through testimony is sometimes knowledge, on the assumption that the process employs the mind-reading cognitive capacity successfully. When that cognitive capacity is functioning as it was designed to function in the circumstances in which it was designed to function and there are no undefeated defeaters, and the other cognitive capacities working together with the mind-reading ability are also functioning properly, and so on -- then the result of the operation of this cognitive capacity in the process of forming beliefs on the basis of testimony will be knowledge.

So Violetta might be deceived; but, as it happens, she isn't, because her mind-reading cognitive capacity functions very well in the circumstances, which are appropriate for its use. And that is why she knows that Alfredo loves her, on the basis of his testimony that he does.

This analysis also makes it clear that the case of Violetta is a special subset of cases in which knowledge is acquired through testimony. That is because what Alfredo is testifying to is a state in himself, to which Violetta also has access through the mind-reading capacity. That is why there is an iterated use of the mind-reading capacity in the example. The first use puts Violetta in a position to assess Alfredo's trustworthiness where she is concerned, and the second lets her mind-read Alfredo's emotion towards her. In cases where the testifier is testifying to something that the mind-reading capacity cannot be used on -- the directions to the museum, for example -- then there will be only one use of the mind-reading capacity, not two. And its use will function largely to assess the character and occurrent mental state of the testifier.

So the special case of Violetta leaves many questions unanswered, and much more needs to be said to see how (or even whether) to apply this account to other cases of knowledge transmitted through testimony. Furthermore, in both Aquinas's account of faith and in the special case of Violetta, there is a point in the process of acquiring knowledge where a mind-reading of the goodness of the testifier has an important role to play. It is not clear whether all cases of the transmission of knowledge through testimony rely on a similar mind-reading of the goodness of the testifier, or whether this part of the process is something peculiar to the examples I have chosen.<sup>64</sup> Finally, it is not clear that this account can be applied to cases in which knowledge is acquired from but not

transmitted though testimony. Consider the case of the fundamentalist biology teacher who does not believe the theory of evolution that she is teaching her students, who do learn it from her. In this case, knowledge is generated by testimony but not transmitted since the biology teacher does not believe and so does not know the theory of evolution. Is there a role for the mind-reading capacity in the generation of knowledge here? My own inclination is to suppose that there is. The mind-reading capacities of the students is likely to give them an awareness of the dissonance between the teacher's beliefs and her teaching of evolution, and further use of the same capacity will guide the students in their willingness to accept or reject what she is teaching. Or so it seems to me. But these are complicated issues, and I have left them to one side in this paper.

Nonetheless, the example of Violetta is paradigmatic in its simplicity and plausibility, and so an understanding of it is suggestive for further reflection on other cases. And, for cases sufficiently like this paradigmatic example, applying the neurobiologically interpreted Thomistic model yields helpful answers to some of the perplexing puzzles about the transmission of knowledge through testimony.<sup>65</sup>

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<sup>1</sup> There are also cases in which knowledge is generated through the testimony, rather than being transmitted through testimony; that is, the one receiving testimony gains knowledge that the one testifying does not have. I am leaving cases of this sort to one side here, for the sake of simplicity. In my view, the conclusions I reach here apply to cases in which knowledge is transmitted through testimony. If they do not apply to cases in which knowledge is gained through testimony without being transmitted, then it may be that not every case of knowledge gained through testimony can be explained with the same account.

<sup>2</sup> Jennifer Lackey, "Testimony. Acquiring Knowledge from Others", in *Social Epistemology. Essential Readings*, ed. Alvin I. Goldman and Dennis Whitcomb, (Oxford: Oxford University Press, 2011), p.78. Lackey goes on to raise serious questions for this view. The account that follows in this paper gives a basis for a resolution of at least some of these questions.

<sup>3</sup> For this view of epistemic virtue, see John Greco, *Achieving Knowledge*, (Cambridge: Cambridge University Press, 2010).

<sup>4</sup> The opera is based on a story by Alexandre Dumas, which was itself popular. And the character of Violetta is based on the character of the protagonist in Dumas's story, who was in turn modeled on a famous courtesan with whom Dumas had a short-lived affair. Like Violetta in the opera, Dumas's lover died very young, at the age of 23.

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<sup>5</sup> There appear to be cases in which one person trusts another person and on the basis of that trust accepts testimony but in which the one receiving the testimony does not will to give trust in the way Violetta does in the story. A child who believes in Santa Claus because his mother tells him there is a Santa Claus does not will to trust his mother in the way in which Violetta wills to trust Alfredo. Nonetheless, in my view, even in such cases, there is a voluntary component to the trust, as can be seen from the fact that the child can will to withdraw his trust. A child who discovers that his mother was lying about Santa Claus will withdraw his trust from her on the score of Santa Claus, and maybe on other things as well. The difference between the child and Violetta is that because the child is so deeply trusting of his mother, he does not have to will to give trust against resistance to it. But the child's trust is nonetheless voluntary and in the control of the child, who can withdraw it if he chooses to do so.

<sup>6</sup> I appreciate that the normal order of explanation in these matters is that an ordinary human case is examined in order to shed light on the extraordinary case involving God and faith. But Aquinas's account of the generation of faith is clear and detailed and highlights just those part of the process of the transmission of knowledge through testimony that might be missed in an ordinary case. So, for propaedeutic purposes only, I want to let Aquinas's account of faith guide reflection on the ordinary human case.

<sup>7</sup> See Chapters 11 and 12 of my *Aquinas*, (London and New York: Routledge, 2003).

<sup>8</sup> *ST* IaIIae.10.1 and Ia.82.1. By 'goodness' in this connection Aquinas means goodness in general, not this or that specific good thing; that is, the will is an inclination for what is good, where the phrase 'what is good' is used attributively and not referentially.

<sup>9</sup> *ST* Ia.82.4.

<sup>10</sup> Aquinas excepts the nutritive powers from this claim. For his view of the way in which the will governs other powers, see *ST* IaIIae.9.1, *ST* Ia.82.4, and *ST* IaIIae.17.1.

<sup>11</sup> To say that the will is an efficient cause of bodily motion is not to say that an act of will is sufficient by itself in any and all circumstances to produce bodily motion. Any true generalization that A's are the efficient causes of B's must include a description of a set of conditions, difficult to spell out in its entirety, which needs to hold in order for an A to bring about a B. (For an interesting recent account of causation which helps make this point clear, see Nancy Cartwright, *Nature's Capacities and Their Measurement*, [Oxford: Clarendon Press, 1989].) So, for example, blocked coronary arteries cause heart attacks, unless the heart is being artificially supplied with blood, or the collateral arteries are enlarged through exercise and can supply the heart's needs, and so on. Although the will is the efficient cause of bodily motion, then, an act of will can fail to produce bodily motion if the movement of the body is impeded by some external cause or by some defect in the body itself.

<sup>12</sup> It should be apparent, then, that on Aquinas's account of intellect and will, the will is part of a dynamic feedback system. Any willing is influenced in important ways, but not caused or compelled, by previous willings and is the result of an often complicated interaction of the intellect and the will.

<sup>13</sup> See *ST* IaIIae.17.1 and IaIIae.17.6. For further discussion of Aquinas's account of the will's control over the intellect, see Chapter 11 of Stump 2003.

<sup>14</sup> *ST* Ia.82.4. The will does so only in case the intellect represents doing so at that time, under some description, as good. Every act of willing is thus preceded by some

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apprehension on the part of the intellect, although not every apprehension on the part of the intellect need be preceded by an act of will.

<sup>15</sup> Although Aquinas supposes that faith results from such an action of the will on the intellect, he also thinks that faith is divinely infused. See, for example, Aquinas's *QDV* where Aquinas talks of the will's commanding intellect to produce faith; *QDV* 14.3 reply, ad 2, and ad 10. For discussion of this issue and an attempt to resolve the paradox evident in it, see Chapter 13 of Stump 2003.

<sup>16</sup> *ST IaIIae.9.1*. The relation between the will and the sensory powers of the soul is outside the scope of this paper, but it is not hard to see that the will has at least some indirect control over the sensory powers since, for example, one can will to direct one's gaze or will to close one's eyes and thereby control what one sees.

<sup>17</sup> *ST Ia.82.4*. See also *ST IaIIae.9.1*. There is no suggestion that the direction of the will toward the good in general somehow naturally results in the will's governance of the other powers; this line of Aquinas's may just be intended to explain why God gave the will the governance it has.

<sup>18</sup> I take the notion of a design plan of cognitive faculties, and associated notions, from Alvin Plantinga's *Warrant and Proper Function*, (Oxford: Oxford University Press, 1993).

<sup>19</sup> That there are also other necessary conditions is highlighted by Alvin Plantinga in *Warrant and Proper Function*, (Oxford: Oxford University Press, 1993).

<sup>20</sup> Here I am relying on Alvin Plantinga's account of warrant; see Plantinga 1993.

<sup>21</sup> . For some discussion of the ways in which will can influence intellect, see Chapters 9 and 12 of Stump 2003.

<sup>22</sup> *ST IaIIae.17.6*.

<sup>23</sup> William Alston, *Epistemic Justification. Essays in the Theory of Knowledge*, (Ithaca, NY: Cornell University Press, 1989), p.122.

<sup>24</sup> There are, of course, cases in which a person's desires result in his having false beliefs. For an account of this kind of process and the ways in which this kind of process can be distinguished from the acts of will on intellect that result in veridical intellectual states, see Stump 2003, Chapter 11. Basically, in cases in which the will brings about non-veridical states in the intellect, the will is working with a secondary design plan of the intellect, which is not aimed at truth, to bring about malfunction in the intellect. What is at issue here is something like Plantinga's distinction between a snapshot design plan, which specifies how the thing works now, and a maximum design plan, which specifies how the thing will change its workings over time in different circumstances. See Plantinga 1993, pp.22ff. The maximum design plan of a thing may include the thing's malfunctioning if it is used in accordance with the snapshot design plan but in circumstances in which the thing was not designed to be used. The use of the hands in typing, which is in accordance with the snapshot design plan of the hands, can lead to carpal tunnel syndrome and so to malfunction in the hands, if the typing takes place in wrong ways or on ill-designed keyboards; and it will be part of the maximum design plan of the hands that they malfunction in such a case.

<sup>25</sup> That is, in such a case a person is not reviewing the evidence for or against racism and coming, yet again, to the conclusion that racist views are false. He is bypassing a review

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of the evidence and going directly for a rejection of a racist belief in himself just by means of his will's commanding of his intellect.

<sup>26</sup> Someone might suppose that the control of the will over belief in these cases is only indirect. Perhaps in some cases this view is correct, but surely not in all. When the person afflicted with the belief that he must wash his hands wills to reject that belief, he doesn't do so by reviewing the evidence available to him about whether or not his hands need washing. He recognizes the compulsive hand-washing belief as an old enemy and, without any intervening cognitive calculations, wills straightway to reject it.

<sup>27</sup> In such cases, the intellect itself recognizes that it is malfunctioning, and so it presents to the will the good of correcting the intellect. In such cases, the intellect is divided against itself. For discussion of such cases, see Chapter 9 of Stump 2003.

<sup>28</sup> The wisdom Aquinas has in mind here is a matter of understanding the nature of the good, both in theory and in practical judgments. On Aquinas's account, this kind of wisdom is present in a greater or lesser degree in all those who have faith in God in consequence of their relationship to God, as will become clear in what follows. So even the uneducated or those of limited intellectual ability have this sort of wisdom if they have faith, according to Aquinas. For a detailed discussion of Aquinas's account of such virtues arising in consequence of faith, see my "The Non-Aristotelian Character of Aquinas's Ethics: Aquinas on the Passions", *Faith and Philosophy* 28.1 (2011), pp. 29-43.

<sup>29</sup> See Stump 2003, Chapter 10.

<sup>30</sup> Aquinas maintains that the state of the intellect in the condition of faith is not *scientia*. *Scientia* is often translated 'knowledge'; and so scholars explain that for Aquinas the state of the intellect in faith is not knowledge. But this is to confuse the medieval notion of *scientia* with the contemporary notion of knowledge. (For an argument that this is a confusion, see Stump 2003, Chapter 7.) When the intellect cleaves to the propositions of faith, the intellect is in a state characteristic of knowledge, in our sense: it believes with great conviction, through the exercise of a reliable system which is aimed at truth and which is being used in appropriate circumstances, things that are (on Aquinas's view) in fact true.

<sup>31</sup> For further discussion of these issues, see Chapter 12 of Stump 2003.

<sup>32</sup> Someone might wonder why faith and charity are accounted virtues or excellences of will and intellect respectively, given the way in which these dispositions are generated. For detailed discussion of this issue, see Chapter 12 of Stump 2003.

<sup>33</sup> The question of ST at issue is on wisdom as a gift. The first article asks whether wisdom should be numbered among the gifts of the Holy Spirit, and Aquinas, of course, answers in the affirmative.

<sup>34</sup> ST II-II q.45 a.2.

<sup>35</sup> The others include understanding, counsel, and *scientia* (generally but misleadingly translated as 'knowledge').

<sup>36</sup> For an argument that testimony is better understood in this way than as a matter of one person telling something to another, see Lackey 2011, pp.71-73.

<sup>37</sup> Mind-reading or some analogue of it can be found in species other than human beings and also between members of different species, including between human beings and other animals; and so the qualification 'in human beings' is necessary here.

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38. Among philosophers, there is not one universally accepted understanding of the notion of mind-reading. It seems to me to be taken ambiguously, in a way analogous to the ambiguity in the notion of perception. The notion of perception can be taken as (i) perception, (ii) perception as, and (iii) perceptual belief. To say that Max has a perception of a cup can be understood to mean

- (i) the cup is an object of perception for Max,
- (ii) Max perceives the cup as a cup,
- (iii) Max perceives that that is a cup.

The notion of mind-reading seems to me ambiguous in the same way. Alfredo can be an object of Violetta's cognitive capacity for mind-reading, or Violetta can use that capacity to mind-read Alfredo or his mental states as —, or in virtue of using her cognitive capacity for mind-reading Violetta can believe that — (where the blanks are to be filled in appropriately for the mind-reading capacity). The reason for the ambiguity is that, in ordinary cases in which the cognitive capacity is operating normally, it operates as part of a whole system to give information available to consciousness, connected with other information stored in the system, and formulable in beliefs. For reasons I have given elsewhere, it seems to me better to take perception in sense (ii) than in sense (i) or sense (iii). (See Stump 2003, Chapter 8, especially the section on perception.) In this paper, I will understand mind-reading analogously, in sense (ii), rather than sense (i) or sense (iii). In this respect, I dissent from Alvin Goldman's use of the term 'mind-reading'. His use of the term is a variant on (iii). He says: "By 'mindreading' I mean the attribution of a mental state to self or other. In other words, to mindread is to form a judgment, belief, or representation that a designate person occupies or undergoes (in the past, present, or future) a specified mental state or experience" (Alvin Goldman, "Mirroring, Mindreading, and Simulation," in Jamie Pineda (ed.), *Mirror Neuron Systems: The Role of Mirroring Processes in Social Cognition* (New York: Springer, 2009), 312). On Goldman's usage, it would not be true to say that autistic children are impaired with respect to mind-reading, since it is possible for them to form judgments about the mental states of others. But in order to explain what is impaired in autism, we need a term like 'mind-reading' in sense (ii). Since 'mind-reading' is the term already employed for this purpose by many philosophers and researchers on autism, it seems to me better to continue to use the term in that way rather than in Goldman's way. Goldman's goal is to interpret mind-reading in such a way as to make the new results in neurobiology compatible with his own attempts to understand mind-reading in terms of simulation theory. For arguments against Goldman's position, see Shaun Gallagher's article in the same volume, "Neural Simulation and Social Cognition," pp. 355–71.

39. See Derek Moore et al., "Components of Person Perception: An Investigation with Autistic, Non-Autistic Retarded and Typically Developing Children and Adolescents," *British Journal of Developmental Psychology*, 15 (1997), 401–23.
40. For an article arguing to a similar conclusion with an extensive review of the scientific and philosophical literature, see Shaun Gallagher, "The Practice of Mind,"

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in Evan Thompson (ed.), *Between Ourselves: Second-Person Issues in the Study of Consciousness* (Charlottesville, VA: Imprint Academic, 2001), 83–108.

<sup>41</sup> Gallagher 2005, p.220.

<sup>42</sup> There is a considerable literature on empathy. For a good introduction to some of the issues involved, see Alvin Goldman, “Two Routes to Empathy: Insights from Cognitive Neuroscience”, in *Empathy. Philosophical and Psychological Perspectives*, ed. Amy Coplan and Peter Goldie, (Oxford: Oxford University Press, 2011), pp.31-44. It is clear that there are at least two different kinds of empathy or levels of empathy. One is more nearly involuntary and also more coarse-grained. The other is under more voluntary control, more fine-grained, and more dependent on past experience and training. The first is in play when a person winces as he sees someone else get hurt. The second is engaged when someone is deeply involved in reading a novel. It seems clear that there is no sharp demarcation between these kinds, but rather a kind of continuum. The first kind of empathy, and any kind of empathy closer to that end of the continuum, is what is at issue in this paper. But, in my view, it would be possible to preserve the general point of this paper even if it turned out that the cognitive processes at issue required empathy of the second kind.

<sup>43</sup> It is not easy to say precisely what it is for a system to run off-line, but the general idea is this. In the case of dreamed motion, the brain’s motor programs for actual physical running are off-line in that while these motor programs are firing, they are disconnected from the muscles in the legs and so do not produce running in the legs. In the case of mind-reading, the brain’s mirror neuron system runs the programs it would run if one person were apprehending what the other, observed person is doing; but it runs these programs disconnected from those states of will and intellect the observer would have if she herself were doing those acts. In this way, she shares in the observed person’s mental states but without having them as he has them, in virtue of having her own states of intellect and will, not his, even while she feels what she would feel if she were doing what he is doing.

<sup>44</sup> And, of course, on this basis she is also knows *that* Jerome is in pain. Empathic feeling of his pain is a reliable ground for knowledge that he is in pain.

<sup>45</sup> Vittorio Gallese, “ ‘Being Like Me’ : Self-Other Identity, Mirror Neurons, and Empathy“, in *Perspectives on Imitation: From Neuroscience to Social Science*, ed. Susan Hurley and Nick Chater, (Cambridge, Mass.: MIT Press, 2005), p.103.

<sup>46</sup> Gallese 2005, p.105.

<sup>47</sup> Gallese 2005, p. 110.

<sup>48</sup> The mirror neuron system is used also for such things as the appropriation of narratives, when one mind-reads the characters in stories. In that case, the persons who are being mind-read are not actual and therefore, a fortiori, not available for perceptual inspection. How it is possible to use a system designed to translate from perception to motor programs without incoming perception is too complicated to deal with in passing here. But in this respect the mirror neuron system is like some other neurological systems. The visual system can be used to inspect the rotation of an object in space when that object is totally imaginary. For further discussion of these issues, see Chapter 4 of *Wandering in Darkness: Narrative and the Problem of Suffering*, (Oxford: Oxford University Press, 2010),

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<sup>49</sup> Gallese 2005, p.111.

<sup>50</sup> Gallese 2005, p.111 and p.114.

<sup>51</sup> Gallese 2005, p.115.

<sup>52</sup> Of the two kinds of empathy mentioned in footnote 40, empathy for moral states can be more nearly like the second kind, the kind used in a reader's mind-reading of the characters in a novel. But the lower-level kind of empathy can also be responsible for giving knowledge of the moral state of another. What is at issue for my purposes is the lower-level empathy, although the kind of empathy at issue in the case of the Chambonnais discussed below is the higher-level sort.

<sup>53</sup> Of course, it is not the only reason. Another and weightier reason is compassion and care for the victim.

<sup>54</sup> Philip Hallie, *Lest Innocent Blood Be Shed*, (Philadelphia: Harper and Row, 1979), p.3.

<sup>55</sup> Hallie 1979, p.4.

<sup>56</sup> For detailed discussion of mind-reading mediated through narratives, see Chapter 4 of my *Wandering in Darkness. Narrative and the Problem of Suffering*, (Oxford: Oxford University Press, 2012).

<sup>57</sup> Of course, in neither case is God being perceived by a person's senses. But since the mirror neuron system can be used even in the mind-reading involved in the appropriation of stories, it is clear that the mirror neuron system can be used to mind-read in the absence of incoming sensory data of the person being mind-read.

<sup>58</sup> Someone may wonder how a belief acquired in this way could be justified. For a detailed examination of this and related questions, see Stump 2003, Chapter 12.

<sup>59</sup> This belief need not be explicit or even conscious, of course; it can be tacit or below the level of Violetta's awareness. It will nonetheless be part of the information in her cognitive system. For a case of information in the cognitive system but not available to consciousness at all, consider blindsight. A good study of blindsight can be found in Lawrence Weiskrantz, *Blindsight*, (Oxford: Oxford University Press, 2009).

<sup>60</sup> This way of thinking about the relation between trust and the transmission of knowledge through testimony in effect provides an answer to some of the questions raised by Jennifer Lackey about trust-based accounts of the role of testimony (see footnote 2 above.)

<sup>61</sup> Cf. Greco 2010.

<sup>62</sup> For a good discussion of the importance of a social dimension to knowledge, see, for example, Sanford Goldberg, *Relying on Others*, (Oxford: Oxford University Press, 2012).

<sup>63</sup> In my view, the excellence of the mind-reading cognitive capacity is not itself an intellectual virtue. That is because, in my view, that capacity lies a level below the place in the neurological functioning where intellectual virtues reside. By comparison, a person might have an excellent cognitive capacity for comparative visual processing of orientations in space, with the result that he has perceptual excellences characteristic of artists. But only the perceptual excellences are at the level of virtues; the excellent capacity for comparative visual processing is somehow too subpersonal to be considered a virtue.

<sup>64</sup> In both Aquinas's account of faith and the case of Violetta, a willingness to be open to the testifier in a way needed for the exercise of the mind-reading capacity is an important part of the process. That willingness is itself a result of a dynamic interaction on the part



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of the intellect and will, in which the will exercise causal control over the intellect, as I explained above. But whether something similar needs to be said about all cases of knowledge transmitted through testimony is a large question still.

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