



CHAPTER 26

**PHILOSOPHY OF MIND
AND HUMAN NATURE**

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BIOLOGICAL OR THEOLOGICAL

A theory of human nature must consider from the start whether it sees human beings in fundamentally biological terms, as animals like other animals, or else in fundamentally supernatural terms, as creatures of God who are like God in some special way, and so importantly unlike other animals. Many of the perennial philosophical disputes have proved so intractable in part because their adherents divide along these lines. The friends of materialism, seeing human beings as just a particularly complex example of the sort of complex organic structure found everywhere on Earth, suppose that we are ultimately constituted out of just the same material from which squirrels and rabbits are made. The friends of dualism, instead, think that such a story can hardly do justice to what is special about human nature. Likewise, the friends of a libertarian, robustly nondeterministic conception of free will see something special in human spontaneity and moral responsibility. To their opponents, human beings operate on the same principles, albeit more complex, as do squid and plankton.

These and other such disputes need not divide along religious lines. One may oppose naturalism without embracing a supernatural theistic perspective; one might, for instance, think it simply a matter of fact that human beings are fundamentally unlike other biological organisms, but yet not suppose we are made that way by any higher power. Conversely, the theist may think it part of the divine plan to have made human beings as nothing more than the most complex of biological organisms, constituted out of the same stuff and constrained by the same laws. So although the choice I have described between two perspectives—biological and



naturalistic versus theological and supernatural—captures an important fault line that runs through the debate over human nature, it by no means determines all of one's subsequent philosophical choices.

The philosophy of Thomas Aquinas exemplifies the sorts of tensions that arise from these two perspectives. For while the overall orientation of Aquinas's work is, of course, profoundly theistic, he nevertheless harbors a certain sympathy for a naturalistic, biological understanding of human nature. In some cases, as in his account of the human intellect, the supernaturalist slant clearly wins out. In other cases, as in his conception of human beings as a soul–body union, it is equally clear that biological considerations are paramount. In still other cases, as for instance his views on free will, it is very difficult to say which line of thought holds sway, and the preference of interpreters for one reading or another seems largely governed by their own predilections.

The traditional way of making this point about Aquinas is to describe him as mediating between the theological teachings of the Church and the philosophical writings of Aristotle. Historically, this is an apt place to begin thinking about Aquinas's philosophy, because there is no doubt that the central philosophical challenge Aquinas faced over the course of his career was to find a place for the newly recovered work of Aristotle within the overriding framework of Christian belief.¹ To find a place for Aristotle, however, means finding a place for a conception of human nature that is decidedly biological in its overall orientation. This is clear from the fundamental Aristotelian text on human nature, the *De anima*, which as it happens was the subject of the first and most careful of Aquinas's many Aristotelian commentaries. For us, the notion of a soul (*anima*) has become firmly associated with a supernatural perspective on human nature. But for Aristotle the term “soul” has not the slightest of nonnaturalistic implications. On the contrary, a soul is something that all living things possess, from human beings down to the simplest of life forms, and indeed the *De anima* is not so much a study of human nature as it is the foundational treatise in Aristotle's long sequence of biological works.

The project of reconciling Aristotle and Christianity, however, important as it is to understanding Aquinas's historical situation, does not fit the natural–supernatural distinction as neatly as one might expect. For even if the Aristotelian notion of soul is fundamentally biological, the *De anima* nevertheless seems to treat the capacity for thought—the intellect—as quite a special feature of human nature and, indeed, as “immortal and eternal.”² As we will see, these few brief, notoriously obscure remarks supply a bridgehead from Aristotle's naturalistic biology to Christian soteriology. There is movement in the other direction as well. For even while there are tendencies in Christian thought toward treating the body in Platonic fashion, as a temporary prison of the soul, there is also the doctrine of the resurrection, according to which the separation of body and soul at death is a temporary state of affairs, to be remedied by the body's ultimate restoration, for all of eternity, at the time of the Final Judgment. As we will see, Aquinas understands the resurrection as pointing toward the fundamentally biological character of human nature, in the sense that human beings are, essentially, not just souls but



incarnate souls. Although it is certainly the case that Aquinas regards the most important human attributes—our intellectual and volitional powers—as arising from the side of the soul rather than body, he is nevertheless adamant that a full understanding of human nature requires understanding our bodily nature as well. God did create purely spiritual beings, the angels, who are nothing more than disembodied minds, but that is not what we are. We are, essentially, mind–body composites. So to understand human nature, one must study not just our mental capacities, intellect and will, but also the human body. Hence, the task is partly biological, but not wholly so.

THE HUMAN SOUL

The most concise and authoritative statement of Aquinas's theory of human nature comes in questions 75–89 of the first part of the *Summa theologiae*, known as the Treatise on Human Nature.³ That discussion begins with a very quick argument for the twin theses that human beings have a soul, and that this soul is not a body. These look like giant, contentious claims to come so quickly at the start, but Aquinas is quick here for a reason: one of the claims is simply a matter of terminological stipulation, and the other is such a large question that it can scarcely be adjudicated within the context of a discussion of human nature. What is supposed to be true by stipulation is that human beings have a soul. Following Aristotle, Aquinas holds that “the soul is said to be the first principle of life in the things that are alive around us.”⁴ This means that “soul” is simply a convenient catchphrase for the sort of thing that biologists investigate to this day—the fundamental (“first”) explanation (“principle”) of life in the natural world. If Aquinas were here assuming that there is just one kind of explanation shared by all living things, or even that within a single thing there is just one fundamental explanatory principle, then he would be saying something controversial. But these are further issues that, as we will see, he takes up later. For now we have just the stipulation that “soul” will be used not in any sort of speculative, supernatural sense, but in the down-to-earth biological sense recommended by Aristotle.

Too large to be treated adequately within a theory of human nature is the further thesis that the human soul is not a body. This is not the claim it is likely to seem at first glance. Aquinas is not supposing from the start the truth of dualism in its popular, bastardized form—the idea that the soul is not made of material, corporeal stuff, and so must be made of some other, more ethereal stuff. This is a thesis that medieval authors entertained, but they did so with regard to the celestial realm. Like all of his contemporaries, Aquinas took the heavens to be made of an imperishable sort of stuff utterly unlike the stuff in our familiar material realm—not composed of any of the four elements, then, but of some kind of quintessence. This is an idea that has tempted cosmologists ever since Aristotle, holding sway until



Galileo in the seventeenth century, then going out of fashion, and now coming back into fashion with our modern talk of dark matter. As far as our own natures are concerned, however, it has never seemed very credible on serious reflection to suppose that we are composed of some sort of dark stuff of our own, imperceptible but yet constituting our essence. This way of understanding dualism, indeed, is one that only an opponent of the theory is likely to find very appealing. Historically, the advocate of dualism has generally wanted to say that what makes human beings special is not that we contain some special, ghostly stuff, but that our nature is partially constituted by something that is not stuff at all, but is an entirely different kind of explanatory principle. In the Aristotelian tradition, this principle is known as a *form*.

Aquinas's fundamental thesis about human nature, then, is that we are not just bodies, but bodies animated by a certain kind of form, a soul. This is, however, not a result that is specific to human beings; it is instead an instance of Aquinas's general embrace of Aristotle's hylomorphic metaphysics—that is, the thesis that corporeal substances in general are form–matter composites. Matter by itself—“prime matter”—cannot exist at all without form: “in itself it can never exist, because given that by its nature it has no form, it has no actual existence, since actual existence comes only through form, whereas it is solely in potentiality.”⁵ On this understanding of the hylomorphic framework, everything that exists has form. So the fact that human nature consists not just of a body, but of an *informed* body, is just an application of a broader metaphysical thesis. And, as we have seen, to call this form a soul is simply an application of the stipulative point that, in the case of living things, that which fundamentally makes them be alive is what will get called their soul. Hence, all things have forms. And all living things have souls.

Nothing could be more important to an overall evaluation of Aquinas's theory of human nature than a just appraisal of its background hylomorphism. Considered most broadly, the appeal to form represents a rejection of the reductive approach of much of early ancient philosophy. The main line of pre-Socratic thought, culminating in the atomism of Democritus, approached philosophical explanation as an exercise in finding the right sort of material stuff to serve as the building blocks of nature. According to Aquinas, “the first of those who philosophized about the natures of things held that only bodies exist. They claimed that the first principles of things are certain corporeal elements, either one or many.”⁶ On the more refined line of thought pursued by Plato and then, in a different way, by Aristotle, explanation requires appeal not just to matter but to form. This idea, in one shape or another, would hold sway throughout late antiquity and the Middle Ages, first dominating Islamic philosophy and then Christian, all the way until the seventeenth century, when Descartes and others suddenly shook it off and turned back to the reductive approaches of old. Famously, Descartes drew a line between the human case and others, treating the rest of the natural world as simply bodies in motion, while ascribing to human beings alone an explanatory principle of another kind, an immortal soul. This is an instance—indeed the exemplary instance—of the supernatural approach that Aquinas only partly embraces. On his view, instead, human

beings have a form just as all things have a form and have a soul just as all living things have a soul. Descartes, however, sees things quite differently. From his perspective, Aquinas and others are best seen not as applying their overarching naturalism to the human case, but as overgeneralizing from the human case to the rest of nature. That is, Descartes regards the appeal to form as inherently supernatural in character, and so treats talk of forms and souls throughout nature as a sort of misguided obscurantism that makes it impossible to give a naturalistic explanation of anything.⁷

However much we may regard hylomorphic explanation as appropriate for the natural world in general, Aquinas thinks that its application to human beings must be handled carefully, inasmuch as we are indeed a special case. For even while he begins the *Treatise on Human Nature* by situating human beings within the rest of nature, as creatures composed of matter and form, he immediately turns to show that human beings are special, in virtue of having a form that can exist apart from matter. Here is where, as he sees it, the naturalistic approach runs out. Obviously, this is a result that Aquinas needs as a Christian, since if human beings are to survive death it is minimally required that their souls survive death, which means that these souls must survive the destruction of their bodies. Over the course of his career, Aquinas makes various attempts to prove that the human soul can exist apart from its body, and something should be said about these arguments. The first thing to consider, however, is whether it is even *coherent* to treat the human soul both as a form and as independent from matter.

One bad reason for suspicion is an overly crude conception of what a form is. To be sure, if one thinks of a form on the model of a shape, then it will look just preposterous to suppose that the human soul can exist apart from its body. It is indeed hard to see how anyone could think that a shape can exist apart from some sort of stuff that has that shape. Aquinas, however, as will become progressively more clear, does not think of souls as anything like shapes. A moment's reflection will make this obvious. For even if it is natural to motivate the hylomorphic framework by appealing to a case like a statue, where the matter is the bronze and the form is the shape, the human case must clearly be quite different. A statue, perhaps, can be roughly understood as nothing more than a certain sort of stuff having a certain sort of shape—though even here the clever student will see the potential for difficulties. But a human being is more than a certain sort of stuff so shaped. That will not take account, most obviously, of what distinguishes a living body from a corpse. The reductive materialist must disagree. If human beings are just so many molecules organized in such and such a way, then the difference between a living human being and a corpse just will consist in either a difference in molecules or a difference in how those molecules are arranged. But from Aquinas's perspective one can have all the right material and still not have a human being, not because the materials have the wrong spatial alignment—the wrong shape—but because they are lacking some further explanatory principle, a soul. Forms, for Aquinas, are not mere shapes, but are causal principles in the natural world. They are indeed the primary causal principles in nature, actualizing matter that would otherwise be

characterless and inert, if it could exist at all.⁸ A soul without a body is therefore not to be conceived on the model of a free-floating shape. Souls are causal agents, powers.

A soul is a form of a special kind, a substantial rather than an accidental form, which is to say that it is the kind of form that defines a substance as what it is. Setting aside until later the precise role of a substantial form, and considering forms in general as causal powers in nature, it may look as if all such forms should be able to exist apart from matter. This is precisely the sort of result one finds mocked in Descartes and other seventeenth-century critics of scholasticism. Aquinas, however, thinks the human soul is a special case—the only case where it is naturally possible for a form to exist without the matter it informs.⁹ Only our substantial forms are such that “they do not exist in matter in such a way that their existence depends on matter.”¹⁰ This is certainly a good reason to be suspicious about the human soul’s alleged separability. Why should it be a special case, in a way so nicely calibrated to accommodate the Church’s teachings on human immortality? The key idea, for Aquinas, is that the human soul is the sort of causal agent that can operate independently of the matter it inheres in. Whereas every other form in the natural world can act only in virtue of informing a body of the proper sort, the human soul does not require a body. More specifically, the human soul can think without a body. This is the fundamental premise on which the whole of Aquinas’s theory of human nature rests. Let us call it the Independent Operation Premise (IOP) and state it in Aquinas’s own words:

IOP: “The intellectual principle, which we call mind or intellect, has an operation of its own, which the body has no share in.”¹¹

Before turning to the arguments for IOP, we should be clear about what it entails. By itself, clearly, IOP does not show that the “intellectual principle” (the soul that is ultimately responsible for intellectual cognition) is immortal. Moreover, IOP does not even show that the soul has the possibility of existing apart from the body. To get those further results, Aquinas argues, first, that a thing’s manner of operation tracks its manner of existence, so that whether or not a thing can operate apart from other things shows whether or not it can exist apart from other things. This shows, as Aquinas thinks of it, that the human soul is a substance, because to be a substance just is to be the sort of thing that can exist without inhering in something else.¹² Of course, not all substances are incorruptible, so to get the further result that the human soul will naturally continue to exist even apart from its body, Aquinas further argues that whereas form–matter composites are always corruptible, substances that are pure forms are by nature such that, once created, it is impossible for them naturally to cease to exist.¹³

The supplementary principles just mentioned are perhaps just as doubtful as is IOP itself, but even so it seems right to keep our focus on that fundamental premise. For if Aquinas can establish that the human soul has an operation of its own, independent of the body, then he will have dealt a fatal blow to the sort of reductive materialism that, then as now, looms as the main adversary to a view like Aquinas’s. For we would then know that “human soul” is not just a convenient catchphrase for

whatever it is that explains human life, but that it in fact picks out an independent causal principle within us, irreducible to any material description. Admittedly, that alone does not show that the soul can exist apart from the body, but it takes the decisive first step.

THE SOUL'S INDEPENDENCE FROM BODY

When historians of philosophy attend to the arguments of their heroes—if in fact they ever do attend to the arguments themselves, rather than simply gaze in admiration at the unfolding tapestry of doctrines—they often do so with a certain sinking feeling, because the arguments invariably fail. What? Has no one ever proved anything in the history of philosophy? Well, perhaps Newton did in his *Principia*, or Lavoisier in his *Traité élémentaire de chimie*. But precisely because these works were so successful, we no longer read them as part of the history of philosophy. Successful philosophical proofs, as a general rule, form the foundation of a new science. So far, the efforts of the psychologists notwithstanding, we have no science of the soul. Accordingly, when we turn our attention to the arguments that Aquinas gives for one or another of his more substantive conclusions regarding the human soul, we should expect these arguments to fail. If Aquinas had really *proved* anything in this all-important domain, we might expect the world to have noticed, and to have commenced to build upon those foundations.

Even so, an argument may fail to count as a genuine proof and yet still be worthy of attention, either because it strikes many readers as being persuasive to some degree or another, even if not decisive, or because it seems to point, however elusively, in the direction of an argument that might really be decisive. I am not sure whether either of these scenarios obtain in the present case, but here I will simply make the best case I can for several of Aquinas's arguments, and let the reader judge. The *Treatise on Human Nature* makes two distinct arguments for IOP, each of which focuses on a different aspect of the intellectual operation—thought—that is crucially at issue. The first of these arguments runs as follows, with numbers supplied to mark the main premises and conclusions.

It is necessary to say that the principle of intellectual operation, which we call the soul of a human being, is a nonbodily and subsistent principle. [1] For it is clear that through the intellect a human being can cognize the natures of all bodies. [2a] But that which can cognize certain things must have none of those things in its own nature, because that which exists in it naturally would impede its cognition of other things. In this way we see that a sick person's tongue, infected with a jaundiced and bitter humor, cannot perceive anything sweet; rather, all things seem bitter to that person. Therefore if the intellectual principle were to contain within itself the nature of any body, it could not cognize all bodies. But every body has some determinate nature. Therefore [3a] it is impossible for the intellectual

principle to be a body. [3b] It is likewise impossible for it to operate *through* a bodily organ, because [2b] the determinate nature even of that bodily organ would prevent the cognition of all bodies. Analogously, a determinate color not just in the pupil, but even in a glass vase, makes liquid poured into that vase seem to be of the same color. [IOP] Therefore this intellectual principle, which is called mind or intellect, has an operation of its own that the body does not share in.¹⁴

What drives this argument is the idea that the intellect displays a startling plasticity in its cognitive range. Our other cognitive capacities—sight, hearing, and so on—are each rigidly limited to a certain domain, that of color, sound, and so forth. But the intellect, according to the first premise of the argument, can think about anything (or at any rate anything in the material realm, which is as strong a claim as Aquinas takes himself to need). The second premise of the argument then asserts that such plasticity would be impossible if the intellect either (a) were a body or (b) were to operate through a body. From these two premises, the subconclusions of (3a) and (3b) immediately follow, and they together yield IOP.

It hardly needs saying that this falls short of being a demonstrative proof. Although the logical form of the argument is valid, none of the premises are self-evident in the way they would have to be to carry complete conviction. It is not perfectly clear, for instance, that the intellect *can* “cognize the natures of all bodies.” Even more doubtful is the second premise (2a, 2b). Although the comparisons to taste and sight point toward the kind of point Aquinas wishes to make, these are merely illustrative examples, and hardly show that the intellect, if it relied on the brain, would similarly be limited in the scope of what it could grasp.

Still, there is undoubtedly something suggestive about the argument. For it really is a remarkable feature of the mind that it can range so widely—in a seemingly unlimited fashion—over the whole of the world around us, readily grasping entirely new concepts of all kinds. Such plasticity is strikingly different, Aquinas thinks, not just from what one finds in the case of the senses, which are so obviously tied down to a single sort of object, but also from what we observe of the higher-level cognitive abilities of other animals, which Aquinas regards as similarly bound to a certain predetermined range of objects. Swallows make judgments of a certain sort about nests, and bees about honeycombs,¹⁵ but they have no capacity to expand beyond their limited horizons. The bee could not form the idea of opening a retail outlet to market its product. And once one gets squarely in focus this remarkable feature of the human mind, it can begin to seem at least worth taking seriously the idea that our soul is not just a larger, more complex version of what swallows and bees have, but that it is something qualitatively different. What exactly that difference might be is again not a claim that Aquinas can establish decisively, but his suggestion is that the soul acts independently of the material conditions that lock other souls into a narrow framework of operation.

A second line of argument for IOP rests on the intellect’s capacity to form universal concepts. Aquinas’s overarching cognitive theory rests on the empiricist principle that all information arises from the senses.¹⁶ At the sensory level, however,

that information is always represented as here and now—a particular sensible quality in the world at a particular place and time. The intellect represents information differently, in abstraction from any such particular conditions, and Aquinas takes such facts to form the basis of an argument for IOP:

[1] It is clear that everything received in something is received in it according to the mode of the recipient. [2] But any given thing is cognized in keeping with how its form exists in the one cognizing. [3] Now the intellective soul cognizes a thing in that thing's unconditioned (*absoluta*) nature—for instance, it cognizes a stone as it is a stone, without [material] conditions. [4] Therefore the form of the stone exists in the intellective soul without conditions, in terms of the stone's own formal character. [5] Therefore the intellective soul is an unconditioned form, not something composed of form and matter.¹⁷

The conclusion of (5) is equivalent to (3a) from the previous argument—that is, it is tantamount to the claim that the human soul is not a body. This is a claim that, in some sense, holds of every soul, and every form, as we saw in the previous section. But here Aquinas means to assert the stronger thesis, distinctive of the human soul, that it operates independently of the body. That is, he means to assert IOP. Thus, he immediately goes on to contrast the operations of intellect with the operations of the senses: “For if the intellective soul were composed of matter and form, then the forms of things would be received in it as individuals; then it would cognize only singular things. This is what happens in the sensory capacities, which receive the forms of things in a corporeal organ.”

Beyond the fundamental datum of the argument, that the intellect grasps the universal, and the senses the particular, Aquinas is relying on a metaphysical principle that he immediately goes on to make explicit: that “matter is the principle of individuation for forms.” So the idea is that the senses, inasmuch as they represent particulars, represent the material conditions of those individuals. If they did not, they would not be representing particulars at all. The intellect, in order to grasp the universal, must strip away the material, to get at the thing's “unconditioned” or “absolute” nature (as premise 3 puts it). This already requires us to embrace a rather robust set of metaphysical assumptions, which would themselves take extended argument to establish, and almost certainly could not themselves be proved.¹⁸ But supposing we do embrace that metaphysics, as well as the fundamental datum that drives the argument, we still need to accept a further and very large claim: that an inference can be made from the representational content of the mind to the mind's intrinsic character. It is the burden of the first two premises of the argument to license this move. Aquinas seeks to show that for the intellect to *represent* the nature of a stone, apart from the individuating material conditions, the intellect must *itself* lack matter. On his picture, that immaterial “mode of the recipient” (premise 1) is what will account for how “the thing is cognized” (premise 2), and so ultimately for the fact that “the form of the stone exists in the intellective soul without [material, individuating] conditions” (premise 4). It is far from clear that this pattern of inference is valid. One might instead think that there is no straightforward connection to be drawn from the content of what a cognitive system represents to the intrinsic

character of that system. One can represent visual images using numbers, and represent numbers using visual images; one can use shapes to represent sounds, and use sounds to represent abstract ideas. The sort of argument Aquinas wants to make depends, minimally, on a more elaborate theory of mental representation than he here offers us.¹⁹

Again, however, one may feel this argument to have a sort of elusive power to it. For there can easily seem to be something quite special and distinctive about the human capacity to think abstractly and universally. What distinguishes us from swallows and bees, it seems, is not just the scope of our cognitive abilities, but our ability to think abstractly. Swallows and bees seem limited to the here and now, whereas we can think not only about the past and future, but more generally about food and shelter in the abstract. This in turn gives rise to the complex linguistic and economic systems that distinguish our species from every other. Are these simply more complex manifestations of the same sorts of biological processes found throughout the rest of nature, or are they evidence of cognitive capacities of a fundamentally different kind?

This second argument displays the same general pattern as the previous one. In each case, there is an initial datum, a cognitive capacity allegedly distinctive of human beings that allegedly points toward the mind's immateriality. Many modern arguments in this domain have a similar sort of structure, but with a different emphasis. What strikes philosophers today about the mind tends to be the phenomenon of consciousness—the way in which to have a thought or a perception involves a certain experience, a vivid “what it is like” that is presumably absent from, say, a computer's representation of reality. Aquinas is strikingly silent about this aspect of the mind, attending instead to features that seem more distinctively characteristic of human beings. In all of these cases, however, what drives the argument is a phenomenon of our cognitive capacities for which we have—to this day—no clear explanation in terms of physical mechanisms. In such cases, it must remain an open question whether or not a thoroughly naturalistic model of explanation will capture what is characteristic of human nature.

THE SOUL'S POWERS

The arguments of the previous section seek to open up a divide between human beings and other animals. One way to express this divide is by saying that, among all the souls of all the animals, only the human soul is immaterial. This, however, is liable to mislead. For it is not the case that Aquinas thinks the souls of nonrational animals are corporeal, as if he were resorting to the pre-Socratic notion that the soul of a camel might be some subtle blend of fire, air, or some other kind of stuff. As stressed already, souls are always forms. They are, accordingly, never bodies, and so never material, even in part. The special sense in which the human soul is immaterial

is articulated by IOP: the human soul, unlike other souls, has an operation of its own, independent of the body it informs. Other souls are material just insofar as they *need* matter in order to operate, and so in order to exist. This shows that, in a sense, the human soul is not a special kind of entity—it is a form just like other forms, up and down the great chain of being. And although it is unusual, in the context of other animals, for the human soul to have an independent operation, this too, in the greater scheme of things, is by no means unprecedented. The created order, as Aquinas thinks of it, contains many animal species, each bound to a certain kind of body. But, says Aquinas, this world contains an even greater number of angelic species. Indeed, the number of angels “exceeds every material multitude,”²⁰ which seems to mean that there are more angels than there are physical particles in the universe. (And why not? Angels are God’s greatest creation. Does it not stand to reason that God would have created more of what is greater than of what is lesser?) Each angel is an immaterial form of the same general kind as the human soul—an intellectual substance, which is to say a causal power capable of a certain sort of abstract cognition and volition, requiring no body in order to operate. From this point of view, the place of human beings is quite natural and intuitive. We are the animals with minds so advanced as to be like the angels. Or, looked at from the other end round, we are the intellectual creatures with minds so crude that we benefit from union with an animal body.²¹

This sort of big-picture perspective helps one escape the sense that there is something unhappily ad hoc about Aquinas’s theory of human nature. Viewed in another way, however, it highlights our unique position. Like other animals, our animating principle is a form, naturally suited to actualize matter. Yet, like other intellectual creatures, that form is capable of operating apart from matter, and so capable of existing apart from matter. We are, then, uniquely positioned between angels and animals, sharing metaphysical principles with each. This raises various hard questions about human nature. One question concerns why human beings have this sort of oddly hybrid status. Why we have immaterial souls, according to Aquinas, has been explained already, by the arguments for IOP. But why then do we, unlike the angels, have bodies at all? Why is this part of our nature? A second sort of question concerns the character of the soul–body union. Granted that there is some sort of advantage to our soul’s being joined to matter, what sort of conjunction is this? Given our soul’s independence, can we really count as organic unities in the way that other animals are? A third sort of question concerns whether it is even coherent to suppose that our souls are, at the same time, both bodily forms and independently operating minds. Granted that Aquinas has reasons to *want* to say both of these things, how *can* he say both of these things at once?

I will begin by answering the first two questions very briefly, then answering the third in more detail, and finally circling back for the remainder of this chapter to the first two questions. To the first question, then, of why the human soul is joined to a body at all, the quick answer is that our soul benefits from such a body because our mind works best when united to an animal sensory system. Even though, as IOP insists, the mind does not *need* the senses to operate, still the mind does work best

that way, for reasons we will consider in more detail in the section on “The Essential Bodily Component.” That leads to the second question, of how the soul and body are united. Aquinas’s answer is that they are united in the same way that any hylomorphic composite—that is, any material substance—is united. The soul stands to the body as substantial form to prime matter. The details of this union will occupy the section on “The Human Substance.” But even this short answer helps to make vivid the problem raised by the final question above: how can the soul be both an independently operating power and the form of the body?

One kind of difficulty here concerns whether the soul can both be a form and be subsistent—that is, be a genuine substance. Aquinas’s response is that there is no obstacle to a substance’s being itself composed of further substances. The human body, for instance, is composed of integral parts—hands, arms, and so on—each of which is itself an incomplete substance making up the whole. The human soul is, to be sure, not an integral part, inasmuch as it is not a body at all, but it is a kind of substantial constituent of the complete substance that is a human being.²² Another kind of problem concerns how the soul can be said both to operate independently of the body (IOP) and to be the form of the body. Aquinas acknowledges that these are quite different characterizations of the soul, but he thinks both can be true inasmuch as the soul is multifaceted. Rather than treat the soul as something simple, Aquinas postulates a real distinction between the soul itself and its powers. Considered in its own right, the soul essentially is the form of a body. As such, the soul is the ultimate intrinsic explanatory principle for the existence of the composite substance that is a human being. To make a human being exist, however, is not to be understood as bestowing on a heap of matter some sort of generic property of *existing*. Rather, for a human being to exist is for that matter to become capable of the various operations that characterize human beings, including nutritive, sensory, and intellectual operations. This is to say, however, that the human soul, as the first internal principle of life for a human being, is the source for the various *powers* that a human being requires in order to carry out the operations distinctive of such life. Thus “all the soul’s capacities, whether their subject is the soul alone or the composite, flow from the essence of the soul as their source.”²³

Aquinas distinguishes among these powers in various ways. Most fundamental is a distinction between (a) the nutritive or vegetative powers, (b) the sensory powers, and (c) the intellectual or rational powers. The last two categories further divide into those powers that are cognitive and those that are appetitive. The cognitive sensory powers divide into the familiar five external senses and the four internal senses, which is Aquinas’s term for those cognitive powers that are lodged in the brain: common sense, imagination (also known as *phantasia*), the estimative or cogitative power, and memory. The appetitive sensory powers divide into the irascible and concupiscible. At the intellectual level there is just one appetitive power, the will, and two cognitive powers, the agent intellect and the possible intellect.²⁴

An investigation of these powers would take us into a much wider domain of issues concerning perception, desire, free will, and rationality, all of which are discussed elsewhere in this volume. For present purposes, the point that needs stressing



is the way a distinction between the soul and its powers makes it easier for Aquinas to treat the human soul as the form of the body even while he stresses that it operates independently of the body. In discussing these issues, he is always very careful to distinguish between what holds of soul itself, essentially, and what holds of it insofar as it contains one or another power. The soul, considered in its own right, is the form of the body, and its defining function is to actualize that body. But this is consistent with that soul's having powers—intellectual powers—that are not the actuality of the body, and do not even require the body for their operation. Thus, “we do not say that the human soul is the form of the body with respect to its intellectual power, which ... is not the actuality of any organ.”²⁵ The great appeal of this strategy is that it lets Aquinas have it both ways. Viewed from one angle, Aquinas treats the human soul in broadly naturalistic terms, as a soul like other souls, inhering in a body and giving rise to the various powers—nutritive and sensory—that other animals possess. But some of those powers that the human soul gives rise to are intellectual, and although these are just some of its powers among many, they makes a fundamental difference. For because we have a mind that operates apart from the body, it is possible for our soul to exist apart from the body. Thus we are, ultimately, quite different from other animals.

THE HUMAN SUBSTANCE

In wanting to have it both ways—a biologically grounded account of human nature that leaves room for our distinctively immaterial character—Aquinas wants above all to preserve the organic unity of the human being, as a soul–body composite. This is not something that theories of human nature have always made much effort to accommodate. Plato seems, at least in some dialogues, to have thought that our bodies are not a part of us at all, and Descartes tends in that direction as well. Aquinas's contemporaries generally rejected this Platonic line, supposing instead that human beings are the union of body and soul, but they were hard pressed to explain what that unity consists in. Aquinas, by contrast, has an impressive theory to offer. It is, indeed, the most impressive—and influential and contentious—aspect of his whole theory of human nature.

To understand Aquinas's view, it is helpful to begin with some foundational metaphysical distinctions. Most fundamentally, there is the distinction between genuine beings and mere aggregates. Heaps, for instance, are aggregates, as are artificial constructions like houses.²⁶ Living things, and substances of all kinds (water, stones, etc.) are beings, as are the accidental properties of substances, which get divided along the lines of Aristotle's category scheme into qualities, quantities, relations, and so on. The problem of accounting for the unity of the soul–body composite, for Aquinas, just is the problem of how to ensure the place of human beings among substances, as genuine entities, rather than as mere heaps, which do



not themselves have any proper existence beyond the existence of their parts. Aquinas's solution is to insist on treating the human soul naturalistically, as simply a form like the forms of other living things. That this soul has intellectual powers that are independent of the body does not matter, because Aquinas distinguishes the soul from its powers. It also does not matter that this soul is itself subsistent, since as we saw it is normal for substances to be composed of other substances. All that does matter, then, is that the human soul functions within the human being in the same sort of way that other forms function within other substances.

The theory that Aquinas has to offer at this juncture is his theory of substantial form. Aquinas, like other medieval Aristotelians, distinguishes between two kinds of form, substantial and accidental. Accidental forms are those forms that can come and go while a substance remains; they are the entities that populate the nine accidental Aristotelian categories. The substantial form of a substance defines the substance as the kind of thing it is, which is to say that the substantial form comprises the essence of a thing.²⁷ Essences, however, at least for the medieval Aristotelian, are not abstract descriptions, but rather a particular sort of causal power within a substance. This, of course, must be so for Aquinas, since we have seen already that souls are causally efficacious in various ways. But what exactly does the soul do as the substantial form? One way in which Aquinas likes to answer this question is by saying that whereas an accidental form makes a thing be thus and so, a substantial form makes a thing be *simpliciter*.²⁸ But this is liable to suggest a misleadingly obscurantist notion of what a substantial form does, as if there is some sort of abstract property of being, *simpliciter*, for which the rational soul is responsible. Instead, the substantial form is the most basic internal causal explanation for the substance's various intrinsic features. As we have seen already, for instance, a soul gives rise to the various powers associated with life: nutritive, sensory, and rational. More generally, the substantial form organizes the matter of a substance into one chemical structure or another, and consequently is responsible for whether a substance will be hard or soft, shiny or dull, red or green. Of course, whether or not the sun shines on a given day on a given leaf is not something a plant's substantial form controls. In general the substantial form is responsible only for the intrinsic features of a substance—not whether it is well illuminated, or well nourished, or well loved. Still, in general, a certain substantial form, inhering in prime matter, will give rise to a certain kind of substance with certain kinds of properties: "Every natural body has some determinate substantial form. Therefore, since the accidents follow from the substantial form, it is necessary that determinate accidents follow from a determinate form."²⁹

The principal advantage of this conception of substantial form is that it yields a highly unified conception of substance. The complex chunk of matter that we think of as a single thing, displaying a consistent pattern of properties over time, but sometimes changing in those properties, can be understood to derive its unity—both at a time and over time—from the substantial form that explains those properties. As long as the same substantial form continues to structure a suitable chunk of

matter, we have the same substance, and the chunk itself is unified by being so structured.

Critical to Aquinas's theory, however, and the most contentious part of it, is his claim that each substance has just a single substantial form. This is not the view that most of Aquinas's contemporaries held. They took the distinctively immaterial character of the intellect to require a distinction between it and the substantial form of the body—not a distinction between the soul and a power, as Aquinas has it, but a distinction between the body's substantial form and a further substantial form, the rational soul, that inheres in the prior body–form composite.³⁰ Such a view, however, wrecks Aquinas's account of substantial unity, and so he complains:

Everything that gets added to something after its complete existence gets added to it accidentally, since it lies outside its essence. But every substantial form yields a complete being in the genus of substance, since it yields an actual, particular being. Therefore whatever gets added to a thing after its first substantial form gets added to it accidentally. So, since a nutritive soul is a substantial form, inasmuch as *living* is predicated substantially both of human beings and of other animals, it would follow that a [further] sensory soul would get added accidentally, and likewise for a [further] intellective soul. And thus neither “animal” nor “human being” would signify a thing that is unconditionally one, nor would these terms signify any genus or species in the category of substance.³¹

The advocate of a plurality of substantial forms thus loses any ability to treat human beings and other animals as substances. The body would be a substance, in virtue of the first substantial form that inheres in it, but any further form added after that point could not possibly perform the role of a *substantial* form, because that role is already taken. Accordingly, for a living thing to possess a rational soul would be like a tree's taking on a new color—the additional feature would be a mere accidental addition, and rational animal would no more pick out a distinct category of substance than does maple-tree-with-orange-leaves. The cost of failing to explain the substantial unity of a human being, then, is quite dire: human beings fail to be substances at all, which is to say that they fail to count as entities in any proper sense.

The key to the argument is Aquinas's robust conception of substantial forms as causal principles. In effect, Aquinas is advancing a physical, proto-scientific hypothesis about what distinguishes substances from nonsubstances. This is exactly what one should expect from Aquinas's commitment to a biological approach to human nature. Human beings are material substances like other substances, which is to say that we have a unifying intrinsic principle like other substances, explained not by a priori metaphysical considerations, but by the substantial form's concrete causal role within substances. If we were to decide that human beings, and perhaps living things in general, lack any such organizing principle, then we would have to conclude that human beings, viewed as mind–body composites, are not substances at all. Either that, or we would have to formulate an entirely new theory of substance.

THE ESSENTIAL BODILY COMPONENT

We have now considered two of the three questions raised earlier: how the human soul can be at the same time a form and an immaterial intellect, and how it can forge a genuine substantial unity with its body. That leaves one final question: why is it so important for the human soul to be united to a body at all?

That such union is important—indeed, that it is essential—Aquinas leaves no room to doubt. As noted already, he regards the body as part of the essence of a human being. We do not need to have any particular corpuscles, of course, since these are constantly changing, but we need to have the kind of body that is distinctively human. Aquinas even relies on this fact in attempting to provide some philosophical justification for the theological doctrine of the resurrection. For it is obvious that, at death, the human body is corrupted. The human soul remains, for reasons that we have seen, but according to Aquinas the survival of the human soul is not sufficient for the survival of the human being: “The soul, since it is part of the human body, is not the whole human being. My soul is not I. So even if the soul were to achieve salvation in another life, it would not be I or any human being.”³² Accordingly, Aquinas’s argument for the human soul’s subsistence, via IOP, shows less than one would naturally suppose. It shows that some part of me will survive, but it does not show that I myself will survive. In fact, Aquinas thinks that no philosophical argument can establish human immortality—yours or mine—because that is possible only if our souls are reunited with bodies of the right sort to be informed by our souls. Although Aquinas offers various considerations for why God might perform this sort of miracle, the fact that he will do it can be accepted only on faith.³³

This is a remarkable doctrine. It is one thing to reject the Platonizing denigration of the human body as some kind of punishment imposed on the soul. It takes only a modicum of sympathy for biological naturalism to think that our bodies are not *all* bad. But Aquinas goes much farther than that, insisting not only that our bodies play a positive role in our lives, but that they are in fact essential to our continued existence. This is perhaps the most impressive manifestation of the biological side of Aquinas’s theory of human nature. Even in the midst of his commitment to the supernatural doctrine of the resurrection, he insists that what God will preserve is an *animal*—an animal with a mind.

In part, Aquinas holds this view because he regards the order of life in our current state as the natural order. True, it is of only finite duration, dwarfed on either side by the eternity that came prior to creation and the eternity to come after the Final Judgment. Still, our present state is our natural state, one in which there is hope of supernatural aid in the form of grace, but which nevertheless shows us as we essentially are, as created by God.³⁴ Our having a body, then, for Aquinas, is not a temporary aberration; rather, it defines what we are. And given the hylomorphic conception of unity described in the previous section, according to which our soul is responsible for the kind of body that we have, it is not surprising that Aquinas

thinks we not only essentially have a body, but that we essentially have a body of just this familiar sort.

These remarks still leave open the question, however, of why we were created this way—of why a mind such as ours, immaterial and therefore incorruptible, should be attached to a body such as ours, weak and perishable. Aquinas has a good deal of interest to say about this question, much of which turns on the details of how our minds and bodies interact. In referring to mind–body interaction, I do not mean to invoke the much-discussed “problem” of mind–body interaction. That we still think of this as a problem is rather curious, since it is a historical artifact of a few decades in the seventeenth century when philosophers like Descartes formed the conviction that all causation at the material level occurs through mechanical impact, and at the same time wanted to treat the mind as immaterial and still interacting with bodies. Once Cartesian mechanism was abandoned in favor of a broader conception of forces as the causal agents in nature, the mind can be seen as just one among many forces in the natural world. And this is the older Aristotelian perspective as well, inasmuch as our intellectual powers are just forms—powers of the soul—that can act in nature just as other forms, accidental and substantial, act in nature.

Aquinas sees so little difficulty in mind–body interaction that he puts their interlocking roles at the center of his theories of our cognitive and volitional systems. If we focus on the cognitive side, the bodily role is most obvious right at the start of the process, in the mind’s need to acquire information through the senses:

Inasmuch as the human soul has an operation transcending matter, its existence is elevated above the body and does not depend on it. But inasmuch as it is naturally suited to acquire its immaterial cognition from a material cognition, it is clear that the fulfillment of its species can occur only when united to a body.³⁵

The senses, relying on the familiar bodily organs of the eyes, ears, and so on, acquire information about the world, and the mind works on that information, abstracting it to form the sorts of universal concepts described earlier. Aquinas does not think that the intellect *must* have such sensory information in order to operate, but this, as he puts it here, is how the intellect is “naturally suited” (*nata*) to operate.

More interesting than this familiar empiricism is Aquinas’s insistence on the intellect’s need to “turn toward phantasms” every time we think. The term “phantasm” is Aquinas’s general label for sensory information as it gets processed in the four inner senses listed earlier. For other animals, this is where the highest level of cognitive processing occurs. The inner senses are important in human beings, too, not just in their own right but also because these images (visual, auditory, etc.) get put at the service of intellectual cognition. They are not just the data by which we initially form abstract thoughts; beyond that, they crucially accompany all of our ongoing thoughts, so that when the intellect is thinking about, for instance, the nature of a triangle, or the nature of a camel, the inner senses are at the same time framing sensory images of triangles or camels. (When one tries to think about things one has never perceived, one may form images that are likely to be a close

approximation. When one tries to think about imperceptible things, like the human soul or an angel, still one forms images, but to little advantage, which is precisely why it is so hard for us to think about such things.) Thus, as with the initial gathering of information through the senses, “turning toward phantasms is, for the soul, its natural mode of thinking.”³⁶ In this process, the intellect and the senses run in tandem, with the result that what does the thinking is not the intellect alone or the senses alone, but the human being as a whole, using all of its cognitive faculties.³⁷

These remarks threaten to bring us around in a circle, back to the idea that using the senses is simply the soul’s nature. What we sought, instead, was an account of *why* it is its nature. Aquinas’s view is that the mind not only naturally does work in tandem with the senses, but that it works best that way. This point is made with particular vividness in his discussions of how the soul will operate for the period of time between its death and the resurrection of the body, at the Final Judgment. Apart from the body, the soul will operate as the angels do, by directly grasping intelligible truths conveyed to it by other intellectual substances. (The idea seems to be that our souls will, during this time, communicate telepathically with the angels, and perhaps with other separated souls.) One might suppose that this mode of thought will be better than our earthly mode, thereby making the eventual resurrection of the body undesirable. Not so, according to Aquinas, because although this mode of cognition is better for the angels, it is not better for us. Just as people who are less intelligent need many concrete examples to bring them to an understanding of something abstract, so our minds are such that we work best through the senses: “in order for human souls to be able to have a complete and distinctive cognition of things, they are constituted by nature so as to be united to bodies; in this way they acquire a distinct cognition of sensible things from the things themselves.”³⁸

Again, and now at a deeper level, we can see the essentially biological orientation of Aquinas’s thinking about human nature, even in a highly theological context. The soul will exist apart from the body and will during this time communicate with the angels. But it is not our nature to exist that way, and reflection on our cognitive processes shows why it is not. Even though the mind itself does not use the body when it thinks, nevertheless our minds work best when attached to a body. We are, essentially, rational animals.

NOTES

1. See James Doig’s contribution to this volume.
2. Aristotle, *De an.* III.5, 430a23.
3. The *Treatise on Human Nature* was written ca. 1267. At roughly the same time, Aquinas composed his lengthier *Disputed Question on the Soul (QDA)*, and his commentary on Aristotle’s *De anima (In DA)*. Readers interested in exploring Aquinas’s views should begin with the *Treatise*, which contains the most concise and elementary account, and then look to *QDA* for a more developed statement, and to *In DA* for a fuller

understanding of the Aristotelian background. Also particularly important is the treatment in *SCG* II.56–90 dating from the early 1260s. My translation of the *Treatise* (Hackett, 2002) contains extensive notes intended for non-experts.

4. *ST I* q.75 a.1; cf. *De an.* II.1, 412a28.

5. *DPN* 2 (Leonine lines 112–18; Marietti §349).

6. *De substantiis separatis* 1 (Leonine lines 1–5; Marietti §43).

7. This debate over the status of Aristotelian hylomorphism obviously runs too deep and wide to be pursued here. The main task of my *Metaphysical Themes 1274–1671* (Oxford: Clarendon Press, 2010) is to assess the rise and fall of hylomorphic metaphysics in the years from Aquinas to Descartes and Locke.

8. The paradox of a stuff, matter, that is intrinsically characterless is one of the principal difficulties of the hylomorphic approach, and is handled very differently by different scholastic authors. For Aquinas's approach, see Jeffrey Brower's contribution to this volume and also, for an extensive textual analysis, John F. Wippel, *The Metaphysical Thought of Thomas Aquinas: From Finite Being to Uncreated Being* (Washington, D.C.: Catholic University of America Press, 2000).

9. Supernaturally, Aquinas thinks it is possible for any form to exist apart from matter, a doctrine that looms largest in discussions of the Eucharist. Hereafter, however, I will generally ignore such absolute, supernatural possibilities. When I speak without qualification of what is possible or necessary, the modality at issue will generally be natural or physical, rather than metaphysical or logical.

10. *SCG* II.51.1268.

11. *ST I* q.75 a.2.

12. Aquinas often couches this thesis regarding the human soul as the thesis that the human soul is "subsistent" (e.g., *ST I* q.75 a.2; *QDA* 1). This is his label for the precise characteristic of substances that they are the sorts of beings that can exist without inhering in other things (see my discussion in *Thomas Aquinas on Human Nature* §2.2). To understand scholastic theories of substance, such as Aquinas's, it is important to frame the theory more precisely than is usually done. The theory does not require that substances be (naturally) capable of existing apart from everything else. That criterion immediately admits of obvious counterexamples. Rather, the theory requires that substances be able to exist without *inhering* in any subject. This rules out all accidental forms, which (naturally) require a subject, and rules out all substantial forms other than the human soul, since they require matter for their operation, and so cannot exist apart from matter. (This last inference again presupposes a connection between operating and existing. For that principle, see, e.g., *ST I* q.75 a.3: "all things have existence and operation in a similar way.") The subsistence criterion does not rule out accidental unities such as a heap of stones. A heap is not a substance, however, because it is not a being at all, and so is not even a candidate for the subsistence criterion, which applies only to things or beings. A heap is not a being because it lacks a substantial form, for reasons that will be clearer below.

13. For this stage of the argument, going from IOP to immortality, see, e.g., *ST I* q.75 a.6 and *QDA* 14.

14. *ST I* q.75 a.2. For another version of this argument, see *In DA* III.7 (Leonine lines 131–59; Marietti §680), which elaborates on a sketch along these lines that Aristotle had put forth at *De an.* III.4, 429a18–24.

15. For these examples, see *QDV* 24.1c. The focus there is on free will, but Aquinas takes the distinctive character of human freedom to be the direct result of our greater cognitive capacities. For discussion of this issue, see Thomas Williams's chapter in this volume.

16. Aquinas only once utters the famous principle often associated with his name—“*nihil est in intellectu quod non sit prius in sensu*”—and he does so only as an initial objection to his position (*QDV* 2.3 obj. 19). In his response to that objection he signals, however, that he accepts the principle, reworded as the thesis that “what exists in our intellect must first have existed in the senses” (*QDV* 2.3 ad 19). Does this make Aquinas an empiricist? As the later history of philosophy demonstrates, one’s commitment to empiricism must be judged not so much by abstract principles such as this, but by the rigor with which they are applied.

17. *ST I* q.75 a.5.

18. For Aquinas’s theory of individuation, see again Jeffrey Brower’s contribution to this volume.

19. On Aquinas’s theory of mental representation, see Claude Panaccio, “Aquinas on Intellectual Representation,” in D. Perler, ed., *Ancient and Medieval Theories of Intentionality* (Leiden: Brill, 2001), 185–201, as well as Jeffrey Brower and Susan Brower-Toland, “Aquinas on Mental Representation,” *Philosophical Review* 117 (2008): 193–243.

20. *ST I* q.50 a.3.

21. For the place of human beings in the larger context of intellectual substances, including the angels, see *SCG* II.46–55, as well as *Disputed Question on Spiritual Creatures* and the treatise *De substantiis separatis*.

22. The first article of Aquinas’s *Disputed Question on the Soul* take up this issue in careful detail, asking whether the human soul can be both a form and a *hoc aliquid*, a particular thing, which he goes on to explain as tantamount to the soul’s being a subsistent entity. For a thorough discussion of Aquinas’s views in this area, see Bernardo Carlos Bazán, “The Human Soul: Form and Substance? Thomas Aquinas’ Critique of Eclectic Aristotelianism,” *Archives d’histoire doctrinale et littéraire du Moyen Age* 64 (1997): 95–126. For a more general evaluation of Aquinas’s position as a version of dualism, see Eleonore Stump, *Aquinas* (London: Routledge, 2003), ch. 6.

23. *ST I* q.77 a.6.

24. For a brief overview of this division, see *ST I* q.78 a.1. For a fuller account of many of the details, see *In DA*. I discuss all of these powers at some length in *Thomas Aquinas on Human Nature*, chs. 5–10. For a recent summary of the broader medieval background regarding the soul’s powers, see Dag Nikolaus Hasse, “The Soul’s Faculties,” in R. Pasnau, ed., *The Cambridge History of Medieval Philosophy* (Cambridge: Cambridge University Press, 2010), 305–19.

25. *DUI* ch. 3 (Leonine lines 378–81; Marietti §233).

26. On the status of artifacts for Aquinas, see, recently, Michael Rota, “Substance and Artifact in Thomas Aquinas,” *History of Philosophy Quarterly* 21 (2004): 241–59. It is unclear whether Aquinas wants to recognize aggregates of nonliving substances—e.g., a pool of water or a stone—as a substance over and above the minimal-sized water and stone particles that make up the aggregate. I argue that he does not in *Thomas Aquinas on Human Nature*, ch. 3.

27. This is “essence” in the strict Aristotelian sense of what defines the thing, rather than in the weaker modern sense of merely being necessary. A thing has many necessary properties, but one defining essence. Strictly speaking, for Aquinas, the essence is not simply the substantial form, but rather the substantial form together with the common matter (see *ST I* q.29 a.2 ad 3; *I* q.75 a.4), a detail that helps safeguard the essentially bodily aspect of human beings.

28. e.g., *ST I* q.76 a.4.

29. *ST I* q.7 a.3. I discuss Aquinas's theory of substantial form in more detail, in its broader historical context into the seventeenth century, in "Form, Substance, and Mechanism" *Philosophical Review* 113 (2004): 31–88. For a still broader and more detailed look at scholastic views in this domain, focusing on the later Middle Ages, see my *Metaphysical Themes 1274–1671*, chs. 24–26.

30. For views prior to Aquinas, see Anton C. Pegis, *St. Thomas and the Problem of the Soul in the Thirteenth Century* (Toronto: Pontifical Institute of Mediaeval Studies, 1934), and Richard Dales, *The Problem of the Rational Soul in the Thirteenth Century* (Leiden: E. J. Brill, 1995). For the later debate, see Marilyn Adams, *William Ockham* (Notre Dame, Ind.: University of Notre Dame Press, 1987), ch. 15; Richard Cross, *The Physics of Duns Scotus: The Scientific Context of a Theological Vision* (Oxford: Clarendon Press, 1998), ch. 4; Pasnau, *Metaphysical Themes*, ch. 25.

31. *SCG II*.58.6.

32. *In I C* 15.2.924.

33. An important further detail here is that, for Aquinas, a particular soul can be joined only to a body of exactly the right sort—my soul needs my body, or at any rate a body just exactly like it, and could not be joined to anyone else's body. "Just as specifically the same matter is needed for specifically the same form, so numerically the same matter is needed for numerically the same form. For just as a cow's soul cannot be the soul of a horse's body, so one cow's soul cannot be another cow's soul. Therefore, since numerically the same rational soul remains, it must be united again at the resurrection with numerically the same body" (*CT I*.153 [Marietti §305]). For further discussion of these issues, from a somewhat different perspective, see Eleonore Stump's chapter in this volume on "Resurrection and the Separated Soul." I myself discuss these issues further in *Thomas Aquinas on Human Nature*, ch. 12.

34. Even the punishment of Original Sin is simply the abrogation of a gift given to Adam and Eve; our punishment is having to live in our natural state, infirm and unwise (see *ST I* q.100 a.1). On grace, see the chapter in the present volume by Andrew Pinsent.

35. *QDA* 1c.

36. *ST I* q.89 a.1.

37. On the need for phantasms, see *ST I* q.84 a.7 and *In DMR* 2. I discuss this doctrine in detail in *Thomas Aquinas on Human Nature*, §9.4.

38. *ST I* q.89 a.1.