What Is Cognition? A Reply to Some Critics

By Robert Pasnau

Abstract: In an earlier work, I proposed understanding Aquinas's theory of cognition in terms of the possession of information about the world. This proposal has seemed problematic in various ways. It has been said to include too much, and too little, and to be the wrong sort of account altogether. Nevertheless, I continue to think of it as the most plausible interpretation of Aquinas's theory.

Thomas Aquinas maintains something very interesting about the general nature of cognition, that it involves the capacity to take on the forms of other things. He remarks:

> *[C]ognoscentia a non cognoscentibus in hoc distinguuntur, quia non cognoscentia nihil habent nisi formam suam tantum; sed cognoscens natum est habere formam etiam rei alterius, nam species cogniti est in cognoscente.* (*ST* 1a 14.1c)
>
> (Cognizers are distinguished from noncognizers in this respect, that noncognizers have nothing but their own form alone, whereas a cognizer is suited by nature to have the form of another thing as well. For the species of what is cognized is in the cognizer.)

I have proposed that we should understand this as Aquinas's account of what it is to be cognitive.[1] So understood, this analysis faces a number of very serious objections. One objection was made by William Ockham, who quoted this passage verbatim just a few decades after Aquinas's death.

[1]Robert Pasnau, *Theories of Cognition in the Later Middle Ages* (New York: Cambridge University Press, 1997), 31–62.

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Drawing on the standard Aristotelian analysis of causation as the transfer of a form, Ockham argued that having the form of another thing is by no means distinctive of cognitive entities. Water, for instance, when it becomes hot, takes on the form of heat. The analysis thus seems to fail.[2]

Aquinas has a fairly clear reply to this objection. He thinks forms have a special mode of existence within cognitive powers, something he refers to as "intentional existence."[3] So water does not count as cognitive, despite being able to have or not have the form of heat, because heat does not exist intentionally within water. The senses are cognitive, however, because sensible forms (*species*) exist within the senses intentionally, and similarly for intellect. One obvious difficulty with this reply is that it threatens to plunge Aquinas's account into obscurity. For unless we can go on to provide an analysis of what intentional existence is, we will not have a theory of cognition. In effect, we would have been driven to embrace Ockham's view: he thought that "no general account can be given of why something is cognitive; instead, it stems from the thing's nature that it either is or is not cognitive."[4]

John O'Callaghan finds this kind of view attractive, and finds it in Aquinas.[5] He recommends that we "move away from the ideal of abstract theories of cognition that ignore the different natural characteristics of the beings under consideration" (480). This may or may not be good philosophical advice, in general, but it would seem to have the effect of making Aquinas rather uninteresting on this topic, since he does not have very much to say about the natural characteristics that distinguish one cognitive agent from another. My own approach was to make what I could out of Aquinas's high-level, abstract theory, and so I proposed an account of what it is for a form to have intentional existence. On my view, when Aquinas says that a form of a certain character exists intentionally within a thing, he means simply that the form exists there in such a way as not to cause the thing to have that character. For instance, the air and the eyes and the brain take on the visible form (*species*) of a

[2]See Ockham, *Ordinatio* 35.1 (*Opera Theologica* [St. Bonaventure, N.Y.: Franciscan Institute, 1967–1989], vol. 4, 425). For discussion, see *Theories*, 60–2, and Marilyn Adams, *William Ockham* (Notre Dame: Notre Dame University Press, 1987), 1014–21.

[3]See, for example, *ST* 1a 78.3c, 84.2c. Sometimes he speaks, equivalently, of spiritual or immaterial existence.

[4]*Ordinatio* 35.1 (IV, 427).

[5]John O'Callaghan, "Aquinas, Cognitive Theory, and Analogy: A Propos of Robert Pasnau's *Theories of Cognition in the Later Middle Ages*," *ACPQ* 76 (2002), 451–82.

red apple, but without becoming red. They do not become red, because the form of red exists there intentionally rather than naturally.[6] On this interpretation, intentional existence is compatible with a materialist theory of cognition, and I coined the term "semimaterialist" to describe the view I take to be Aquinas's: that some but not all cognitive faculties can be wholly material. This understanding of intentional existence also explains its role in cognition. His account of cognition (as I understand it) rests on the idea that cognition is just a way of having information about the world, to have the forms of other things. Why must such forms exist intentionally? Because a thing that could have only naturally existent forms would be sharply constrained in the amount of information it receives. Each part of a thing can have just one color or shape or size at a time. If a thing is to maintain its own sensible forms, and have the forms of other things as well, then it will have to receive those forms intentionally. The possibility of intentional existence is what makes it possible for a thing to have massive amounts of information about the world around it.

I said at the start that this account faces a number of serious objections. Another objection—one that O'Callaghan discusses at length—stems from Aquinas's assertion that colors and other sensible forms (*species*) exist intentionally in the medium between object and percipient. This is to say that air and water receive intentionally existing forms, which would seem to imply that they are cognitive. This is a result that no one could accept, and I rejected it out of hand in my earlier work.[7] But how can we avoid that result, given the rest of Aquinas's claims? My own view is that we should understand the capacity for cognition as coming in degrees, so that some things have enormous amounts of information about the world and so are highly cognitive, whereas other things have lesser amounts of information about the world and so are less cognitive. Air and water can take on intentionally existing forms, but they do so in the most minimal way, and thus are not to be regarded as cognitive at all. This fits with Aquinas's view that the more immaterial a thing is, the more capable of cognition it is, since immateriality is connected to the capacity for having intentionally existing forms.[8]

[6]Aquinas often says this about intentional existence: see, for example, *ST* 1a 78.3c, IV *Sent.* 44.2.1.3c (= *ST* 3a supp. 82.3).

[7]See, for example, *Theories*, 50: "air and other media are obviously not cognitive."

[8]See, for example, *ST* 1a 14.1c, and 84.2c: "the more immaterially that something has the form of the thing cognized, the more perfectly it cognizes."

This proposal entails something that may seem rather startling: that the difference between air or water and the power of sight or hearing is merely quantitative rather than qualitative. Air and water lack the power for cognition because they are not well enough suited to take on intentionally existing forms. Animals count as cognitive not because they have something qualitatively different from what air has, such as consciousness or intentionality (in our modern sense), but only because they are better able to possess the forms of other things. My impression is that many students of Aquinas do not find this a congenial view, and hence are motivated to look for another solution. In this, it seems to me that they are motivated by post-Cartesian intuitions they would do well to resist. If one thinks of sensation as something found only in human beings and perhaps in other sufficiently complex mammals, then it is more reasonable to treat the phenomenon as something radically distinct from what occurs in the rest of nature. For Aquinas, however, genuine sensation occurs in all animals, even the very simplest. So consider a worm's capacity for cognition. Is it so different from what takes place in nonsentient creatures, such as plants? And are the manifestations of life in plants so different from what takes place in nonliving things, like a pond? It seems to me that an advantage of my reading is that it treats cognition in a way that highlights the continuity between different aspects of creation.

The criterion I describe appears in a number of texts.[9] Nevertheless, O'Callaghan thinks it a mistake to read Aquinas as putting forth any sort of criterion. On his view, my account does not apply to the case of God. This is a surprising claim, because the key passage from *ST* 1a 14.1c is part of an argument designed to show that God is cognitive. I would have thought, then, that God was the one case where I was on perfectly safe ground. According to O'Callaghan, however, "God neither receives nor has in an intentional but real way the intelligible forms of the creatures He knows" (469). My impression is that O'Callaghan is concerned with safeguarding divine simplicity. But Aquinas clearly thinks that divine simplicity is compatible with God's somehow having the forms of other things. At any rate, he says this: "Things that are other than God are understood by him insofar as his essence contains their *species*" (*ST* 1a 14.5 ad 2). No doubt, the way God has the *species* of other things is utterly different from the way creatures do. This gives us reason to be cautious in advancing a general criterion for cognition,[10] but it does not give us reason to reject the very project of formulating a criterion.

O'Callaghan also argues that my problem with air and water is based on a false assumption: the assumption that such forms (*species in medio*) exist intentionally. Although aware of what the texts explicitly say, he argues that we should treat such claims as instances of analogical predication. This is to say that forms do not have genuinely intentional existence in air and water. But since such *species in medio* give rise to intentionally existing sensible *species*, Aquinas extends the language of intentional existence out into the thin air, as it were. To me this interpretation looks unmotivated. It is hard to know how one might refute O'Callaghan's claim, however, since he is not willing to accept as evidence Aquinas's explicit and unqualified statement that "the form of a color in the wall has natural existence, whereas out in the medium it has only intentional existence" (*ST* 1a 56.2 ad 3).[11]

One might expect that I would embrace O'Callaghan's suggestion, since this would make it easier for me to defend my reading of Aquinas on cognition, by removing the problematic case of air. But I am very reluctant to do so, not just because it flies in the face of so many texts, but because it makes a mystery out of the notion of intentional existence. The very reason Aquinas's account struck me as worth discussing, initially, was that it seemed to offer a genuine explanation of what cognition consists in. If forms do not genuinely exist intentionally in air, then it would be good to know why not. What distinguishes genuine intentional existence from something merely analogous? It is hard to see how that question might be answered other than by appealing to the fact that air lacks the power for cognition. That should satisfy no one.

Yet, satisfying or not, this is how a number of recent commentators have proposed understanding Aquinas's conception of cognition. Here O'Callaghan is joined by some distinguished company, Dominik Perler and Myles Burnyeat, both of whom think that the mere capacity to receive forms—even intentionally existing forms—is insufficient to account for cognition. Perler argues that my proposed criterion needs

[9] In addition to *ST* 1a 14.1c, see *ST* 1a 80.1c, 84.2c; *Sentencia libri De anima* II.24.13–95, 116–25. For discussion of these passages, see *Theories*, 49.

[10] O'Callaghan rightly points out that I was often not cautious enough in this regard, in that I described the criterion in terms of *receptivity* of forms. God, of course, does not receive forms.

[11] Aquinas says this repeatedly, without any qualification. See, for example, *ST* 1a 67.3c, *De veritate* 27.4 ad 4, *Sentencia libri De anima* II.20.44–88, II.21.93–7.

to be supplemented by a further clause, to the effect that a cognitive entity must have "a natural power to grasp the form."[12] O'Callaghan similarly remarks that air lacks cognition not just because it does not receive intentionally existing forms, but also because "it does not have sense faculties" (478). In other words, the reason why some things are cognitive, and other things are not, is that some things have cognitive powers, whereas other things do not. If either Perler or O'Callaghan had an account of how Aquinas distinguishes cognitive powers from noncognitive powers, then we would have a reason to keep listening. But neither does.

In suggesting that these theories are not worth listening to, I do not mean to insist that they get Aquinas wrong. My point is that on this account Aquinas would not have a substantive theory of what cognition is. But, of course, that could be right—there is no reason to think that even the greatest of philosophers will have great things to say about everything we now find philosophically interesting. And both Perler and O'Callaghan point to a passage that supports their interpretation, from Aquinas's *De anima* commentary. As part of his description of what Aristotle is saying at 424b16–18, Aquinas remarks that "air is not affected in such a way as to sense, because it does not have a sensory power."[13] If, despite its context as a bit of Aristotelian exegesis, we take this passage seriously as Aquinas's considered view, then we would clearly have to abandon what I take to be Aquinas's criterion for cognition, as stated at *ST* 1a 14.1c and elsewhere. Indeed, according to Burnyeat, we would have to abandon much more than that. He too quotes this passage and then remarks:

> What a very simple answer! I have the power of perception, the air around me does not. A modern reader could be forgiven for thinking it no answer at all. But within the framework of Aristotelian physics it is complete and conclusive.[14]

[12]". . . und (ii) wenn sie ein natürliches Vermögen hat, die Form zu erfassen" (*Theorien der Intentionalität im Mittelalter* [Frankfurt: Klostermann, 2002], 40).

[13]*Sentencia libri De anima* II.24.191–3.

[14]Miles Burnyeat, "Aquinas on 'Spiritual Change' in Perception," in *Ancient and Medieval Theories of Intentionality*, ed. Dominik Perler (Leiden: Brill, 2001), 129–53, at 150.

A reader unfamiliar with Burnyeat's larger project could likewise be forgiven for reading this passage as an expression of enthusiasm for Aquinas's claim. But what Burnyeat is out to show is that Aristotelian physics—and with it Aristotelian philosophy of mind—is (in his notorious words) "no longer credible." More exactly, Aristotle's theory of soul is based on assumptions "of such a kind that we can scarcely even imagine what it would be like to take them seriously."[15] Burnyeat finds these same assumptions at work in Aquinas's theory of cognition. His Aquinas, like his Aristotle, appeals to forms and powers as principles of explanation involving no material change, or even reference to the level of matter. Thus, "a true Aristotelian is one who is content with this appeal to a power or potency, who resists the demand for underlying material processes to activate the power or a categorical (non-dispositional) base to explain it."[16] Aquinas is in this respect a true Aristotelian, whereas my account of cognition "fails this test."[17]

If Burnyeat is right about what it takes to be a good Aristotelian, then I must confess myself glad to have failed the test. His Aquinas, like his Aristotle, would account for sensation in terms of brute powers that cannot be given any sort of material explanation. As an account of intellect, that would of course be just right for Aquinas. But Burnyeat makes this claim at the level of sensation as well, and indeed seems to think it will hold up and down any truly Aristotelian account of the natural world. What is at issue therefore goes well beyond the question of what cognition is. For Burnyeat, the forms of material objects are more than just abstract properties, grounded in the material constitution of things. To refer to the power of sight is not just to refer to, say, the function of a certain group of material organs. Rather, there are these organs for sight, and then there is *also* the power of sight, which has a function it can exercise quite independently of whatever state the material organs happen to be in.

It seems to me that this account must be rejected because it makes the sensory powers immaterial in just the way that Aquinas thinks the

[15]Miles Burnyeat, "Is an Aristotelian Philosophy of Mind Still Credible? A Draft," in *Essays on Aristotle's De anima*, ed. M. Nussbaum and A. Rorty (Oxford: Oxford University Press, 1992), 15–26, at 16.

[16]Burnyeat, "Aquinas on 'Spiritual Change,'" 150.

[17]Ibid., 150n.

intellect is immaterial.[18] More generally, and just as Burnyeat expects, I find this conception of form unacceptable, even unintelligible. It seems unintelligible, however, not by modern standards but by reflection on the matter-form relationship. For matter to take on a form is for something to happen *to the matter*. When the air takes on the form of red, something happens to the air; when the eye takes on the form of red, something happens to the eye—even if neither one turns red. It is unintelligible to speak of a change to the form of a body without a change to that body—if the two were not connected in that way, we would not speak of one as the form of the other. Aquinas certainly thinks it possible for there to be bodies that have immaterial powers—this is how he thinks of the human intellect. But the intellect, considered as a power, is not a form of the body, precisely because its operation does not involve any sort of material change. The sensory parts of the soul, in contrast, are forms of the body—they are forms of material organs, and it is in virtue of the sensory soul that those organs have a certain function. Burnyeat's decoupling of form from matter strikes me as something that true Aristotelians, more than anyone, should find unintelligible.

Of course, Burnyeat is free to reject these claims. I have simply sketched a view, without arguing for it. Likewise, I have not shown that Perler and O'Callaghan are wrong to introduce the bare notion of a cognitive power. Still, I continue to think that my own reading of Aquinas is defensible on both textual and philosophical grounds. And when one sees what the alternatives are, I think my own approach begins to look downright compelling.

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[18]For extended discussion of this point, see R. Pasnau, *Thomas Aquinas on Human Nature: A Philosophical Study of Summa theologiae 1a 75-89* (New York: Cambridge University Press, 2002), 57–65.