

# Id Quo Cognoscimus

Robert Pasnau

In a book published eleven years ago, I defended a thesis about Thomas Aquinas's theory of cognition that has not been widely accepted. My claim was that, despite Aquinas's apparent statements to the contrary, he actually does conceive of sensible and intelligible species as in a way the objects of cognition. I acknowledged that Aquinas does believe it is the external world we perceive and think about, in normal cases, rather than our mental images or ideas. In this sense, Aquinas is a *realist* about cognition. Nevertheless, I maintained that he is a kind of *representational* realist, inasmuch as we come to apprehend external things – to perceive them and think about them – in virtue of grasping an internal representation of those things.

I said that this thesis has not been widely accepted. Alas, it has not even been *narrowly* accepted – unless one counts the sole, limiting case of myself. This is to say that, so far as I know, *no one else* has been persuaded that this reading of Aquinas is correct. A better man would at this point conclude he is wrong, but I (again alas) am not that man, and so I must confess to remaining persuaded of my original thesis. Still, I am not here going to offer further arguments for that thesis, or even recite the original arguments.<sup>1</sup> Instead, I want to step back from the case of Aquinas and consider more generally the philosophical issues at stake in the Aristotelian idea that forms – that is, *species* – can be used to explain mental representation. I believe it is not generally recognized just how perplexing and problematic an idea this is, and that the reason for our failure is that we do not have a very clear sense in general of what forms are and how they relate to their subject. The thesis of this paper is that, once we reach a clear sense of the different things a form might be, we are forced to make various hard choices about how to understand species in cognition.

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R. Pasnau  
University of Colorado

<sup>1</sup> I think the original arguments remain persuasive in R. Pasnau *Theories of Cognition in the Later Middle Ages* (Cambridge: Cambridge University Press, 1997), Ch. 6, despite criticisms from various sides, especially as found in D. Perler “Essentialism and Direct Realism. Some Late Medieval Perspectives”, *Topoi* 19 (2000), 111–122; idem, *Theorien der Intentionalität im Mittelalter* (Frankfurt: Klostermann, 2002) and J. O’Callaghan, *Thomist Realism and the Linguistic Turn: Toward a More Perfect Form of Existence* (Notre Dame: University of Notre Dame Press, 2003).

## 1 Three Models of Species in Cognition

I will begin by describing three theories about the relationship between a species and the cognitive power that it informs. A first view, which I will call the *adjectival model of species*, treats the species not as something wholly distinct from the cognitive power, but as something adjectival on that power. This means that, for instance, when sight goes from not seeing anything to seeing a red fire truck, the species is not something extrinsic that makes the power of sight see, but is instead that intrinsic feature of sight in virtue of which it is now seeing a red truck. On this view, as I will understand it, the species is not the *action* of seeing. Someone might want to treat species in that way, but I think it best to leave action as a distinct category to be either embraced as ontologically distinct or reduced to something else. The species is also not a characteristic of the action, as an *adverbial theory* would have it. Rather, the species is a modification of the cognitive power. It is, for instance, that state of the cognitive power that makes it be presently seeing a red fire truck. If reductive materialism is true for any cognitive power, then the species of that power will be what the neuroscientist discovers about what precise state the brain is in when  $\varphi$ -ing – those features of the brain that constitute being in a mental state such as to  $\varphi$ . More generally, whether or not materialism is true, the species will be that specific cognitive state that is responsible not only for the cognitive power's operating as opposed to not operating, but also for its apprehending  $x$  rather than something else – e.g., its seeing a red fire truck. In this sense, the species is what explains the intentionality of a mental state.<sup>2</sup>

The adjectival model raises puzzling questions of ontology. Is a species, so conceived, a universal or a particular? Is it something ontologically distinct from the cognitive power, and if so exactly how? For now, let us set aside questions of this sort and focus on the model's implications for cognition. As should be obvious, this conception of species is conducive to direct realism. When a species is conceived of as the intrinsic state of a cognitive power, it is not just implausible but downright incoherent to treat it as the immediate object of cognition. Although a state so conceived might in principle be the object of some other cognitive act – via first-person introspection, say, or the third-person investigation of a neuroscientist – it simply cannot be its own object. A species so described does not come into existence until the moment when the cognitive power is actualized. But the object must surely be something that contributes to the power's actualization, and so something prior to both the actualization and the species.

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<sup>2</sup> I describe this conception of species in Pasnau (1997), 189–194. This seems to be the view taken by O'Callaghan (2003), judging from these remarks: “The *species* as a form must be an intrinsic principle of cognition, and cannot, therefore, be an agent cause of cognition, an extrinsic principle of cognition” (180); “. . . what is lacking in an account like Ockham's that denies *species*, sensible or intelligible, is why diverse cognitive processes and acts have the character they do. Why this process of *mediated* cognition leads to an act of sight rather than an act of smell. Why this act of understanding is an act of understanding a tree rather than a dog” (181). O'Callaghan compares the relationship of cognitive faculty to species to the relationship between a ball and its shape (180–181), and to the relationship between a hand's grasping an object and the shape assumed by that hand (171).

The adjectival model is conducive to direct realism, but it by no means entails it, because even on this conception of species there are other available candidates for the immediate object of cognition, aside from the ultimate object about which we are led to form beliefs (e.g., the fire truck). For even if the sensible or intelligible species is conceived of as nothing other than a state of the cognitive power, this species is still – says the orthodox Aristotelian – just the last in a long line of forms proceeding from that ultimate object to the cognitive power. So, for all that we have said, one of these species *in medio* might be the immediate object of cognition. Now one way to avoid this issue is simply to deny the existence of species *in medio*, in favor of action at a distance. This was the strategy of William Ockham. If, however, forms are allowed as causal intermediaries between the ultimate object and the sensible or intelligible species, then something will need to be said about why a particular remote cause – the red fire truck, say – is the object of cognition rather than one of the more proximate causes in the direction of the cognizer. This was the notorious problem faced in modern times by the causal theory of perception.

In what follows, I will set aside the problem of species *in medio*, since it (or some non-Aristotelian analogue to it) is a problem for any theory of perception that does not accept action at a distance. This will allow us to focus exclusively on the sensible and intelligible species. If we do so focus, then it may seem as if this first view under discussion – the adjectival model – is clearly correct. After all, there was broad consensus among Aristotelians that species are accidental forms. Now to be a form just is to be the actuality of a thing, to be that in virtue of which a thing is what it is or does what it does. But the actuality of a thing seems to be an intrinsic state of that thing. Matters are, however, much more complicated than this. One quick way to see as much is to notice that if this is what species are, then it becomes very hard to see how anyone could deny their existence. To do that would be to deny that our cognitive powers engage in their cognitive acts in virtue of being in a certain cognitive state, a claim that looks positively indefensible. Yet there were many scholastic authors – including first Peter John Olivi, and then later and most prominently William Ockham – who denied both sensible and intelligible species. Moreover, in all the extensive scholastic debates on these topics, I have not found anyone asserting that the existence of species holds true trivially, as it would seem to do if the adjectival thesis is correct. Perhaps that fact was just missed. But this should at least give us cause to wonder about what other accounts of species are available.

A second view about species is the *actualizer model*. According to this account, the species is that which, by informing a cognitive power, makes it enter into a certain cognitive state. This is not to say that the species is the very actuality of the cognitive power – at least not in the sense intended above, according to which the actuality of the power is the cognitive state in virtue of which the power is cognizing in a certain determinate way. Still this model does maintain – as any Aristotelian account of species must – that the species is that in virtue of which the cognitive power operates as it does. Here, however, the “in virtue of” relationship holds at one remove, inasmuch as the species is not the cognitive state itself but that which immediately accounts for a power’s being in a certain state.

This second model is not a single determinate account but rather a family of accounts, inasmuch as there are various ways in which the actualization relationship might be understood. According to one strain, the relationship between the form and the cognitive power would be that of efficient cause to effect, meaning that the species' informing a cognitive power would be understood as its causing (in the ordinary, efficient sense) the cognitive power to enter into a certain state. On a second strain, the relationship would be a *sui generis* metaphysical one that obtains only between a form and its subject. This might be understood in various ways, as I will discuss later. What both of these possibilities have in common, though, and what characterizes the actualization account in general, is that the species is conceived of as (a) distinct from the cognitive power and its state of actualization, but (b) related to that power in some sort of noncognitive way, as actualizer to actualized (whatever that turns out to mean).

Models of this second sort seem conducive to direct realism more than to representationalism. For although the species is sharply distinguished from the cognitive power, the relationship between the two is a noncognitive one, giving little encouragement to the idea that the species could serve as an immediate object of cognition. Admittedly, there is on this approach some sort of causal relationship between species and causal power – either an ordinary efficient one, or some sort of special formal one – but that seems of little significance since for the Aristotelian there will *always* be intervening forms of this sort in the medium, unless (as already noted) one wishes to follow Ockham in embracing action at a distance.

This brings us finally to a third account of the relationship between species and cognitive power, the *object model*. On this approach, as with the second, the species is something distinct from the cognitive power and related to it. But now the relationship is in some way cognitive, inasmuch as the cognitive power is actualized and informed by a species in virtue of its somehow *apprehending* the species. The object model is obviously conducive to representationalism, but the proponent of this view need not fall into a full-blown version of that theory on which a species is “whatever the Mind perceives in itself, or is the immediate object of Perception, Thought, or Understanding” (Locke, *Essay* II.8). One way to avoid this outcome is to insist that although our cognitive powers do have some kind of cognitive relationship to species, nevertheless it is things in the world that we ordinarily perceive and think about. Since that is what our thoughts and perceptions are immediately about, those external things are the immediate objects of cognition.<sup>3</sup> A second way to avoid full-blown representationalism is to invoke the formal identity of species and object. On this account, although our cognitive powers do in a sense apprehend species, direct realism can nevertheless be maintained, because to apprehend a species is to apprehend a certain form, and that very form is the form of the external object. Hence to apprehend the species just is to apprehend the forms of external things, directly.<sup>4</sup>

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<sup>3</sup> This is the line I ascribe to Aquinas in Pasnau (1997), Ch. 6.

<sup>4</sup> Perler (2000) expressly defends this approach, remarking: “For what is immediately present to the intellect when it apprehends a species *qua* similitude, is the form of a thing – the very same form that is also present in the material thing” (115b). Later (118a), he distinguishes between two senses

We now have three ways of understanding the role of species in cognition, or rather three families of views, each coming in various strains. These are all ways of filling out Aquinas's famous claim that the species is *id quo cognoscimus*<sup>5</sup> – “that by which we cognize” – where the *quo* is an ablative of means that leaves entirely wide open the issue of exactly what role the species plays. However exactly we are to understand the ablative in this phrase, it is clear that it is intended to connect the theory of species to the more general theory of accidental forms. Here is Aquinas's clearest account of how we are to understand the role of species as the *quo* of cognition:

And so it should be said that an intelligible species is related to the intellect as that by which the intellect thinks (*ut quo intelligit*). This is clear as follows. Action is of two kinds (as is said in *Metaphysics* IX [1050a23–b2]):

- one that remains in the agent, like seeing and thinking;
- one that passes into external things, like heating and cutting.

Each occurs in virtue of (*secundum*) some form. An action reaching toward an external thing occurs in virtue of a form that is a likeness of the action's object. The heat of the thing heating, for instance, is a likeness of the thing heated. Likewise, an action remaining in the agent occurs in virtue of a form that is a likeness of its object. So the likeness of a visible thing is that in virtue of which sight sees, and the likeness of the thing being thought about, an intelligible species, is the form in virtue of which the intellect thinks. (*ST* 1.85.2c)

Several things are clear from this passage. First, Aquinas does not want to treat species in an entirely *sui generis* way – rather, he thinks we can understand the place of species in cognition by looking at other, perfectly ordinary kinds of action. Second, more specifically, the role of species in cognition is just one case of the broader phenomenon of forms bringing about action. Third, Aquinas holds quite generally that the form in virtue of which an action occurs is a likeness of the object of that action. So the fact that Aquinas stresses the status of species as likenesses should not, all by itself, be taken as evidence for the object model of species. Heat is a likeness of the thing heated, but of course the hot thing does not *apprehend* the heat that is its form.

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of “apprehend,” one with a “very strong cognitive connotation” (which he rejects) and another with a “weaker cognitive connotation” (which he accepts). The first treats the species as the immediate object of cognition, but even on the second reading the species is “grasped” in order to cognize something else. Thus Perler's Aquinas is a proponent of the object model. This is an unsurprising result, given Perler's focus on the formal identity of species and external object. As I wrote in my (1997), “the most obvious motive for emphasizing the identity between species and object would seem to be that this allows one to admit that the species is itself apprehended but nevertheless deny that this entails representationalism” (pp. 299–300). In Appendix A of that work I argued against appealing to formal identity as a response to skepticism. I likewise think it a mistake to treat formal identity as yielding direct realism. But I suspect nevertheless that Perler and I are in fairly substantial agreement on how to read Aquinas in this area: we agree that he treats species as a kind of cognitive object, and we agree that the formal identity of species and object is what makes it the case that an apprehension of a certain species yields the perception or thought of an external object with that same form.

<sup>5</sup> See, e.g., *ST* 1.85.2, *SCG* II.75.1550, *In De anima* III.8.239–279, *Quaestio de anima* 2 ad 5, *QDSC* 9 ad 6.

I propose in what follows to take seriously the idea that species are just one kind of accidental form. This suggests that we might better understand the role of species – and perhaps decide which of the above accounts is correct – through a better understanding of the general scholastic theory of forms. If the goal is to understand Aquinas in particular, then it would of course be ideal to look closely at how he conceives of accidental forms. This, however, is not going to be my strategy. Although it would be no doubt interesting to read Aquinas closely on this topic, it seems to me that the issues at stake emerge more clearly in various later authors. One might suspect that some of the obscurity in Aquinas’s conception of species is a consequence of some lack of clarity in his broader conception of the relationship between an accidental form and its subject. Even if this were so, it could hardly count as a criticism, because we will see that while the status of accidental forms became a more explicit topic of discussion among later authors, it is hard to find anyone who gives a very lucid account of the relationship between form and subject.

## 2 The Inherence of Accidental Forms

Scholastics from the fourteenth century on worry about accidental forms in a way that earlier generations do not. Nicholas of Autrécourt, for one, complains that we do not know what it means when we say that an accident inheres in a subject (*Exigit*, p. 194); this issue would continue to occupy scholars up to the end of the scholastic era. It seems plausible to think that Ockham’s vigorous attack on the reality of various accidental categories gave this issue a certain prominence: after all, it is hard to evaluate a debate over whether such and such an accident is real without some understanding of what exactly an accident is. But in a way just as striking, it seems to have been Ockham’s contemporary and fellow Franciscan, Peter Auriol, who provoked scholastic authors to reconsider their theories of accidental form.

Auriol begins his discussion of accidents with this summary statement:

I state the following proposition, that an accident is a true thing, on account of the opinion of the ancients, who say that an accident is not a reality outside the soul but is a thing (*res*) that is not the substance itself. Nevertheless it is not a bounded (*terminata*) and complete thing without its substance. Thus it has a reality that is not [the reality of] its substance and nevertheless it is not a *thing* distinct from its substance. (IV *Sent.* 12.1.1 [109aC])

On its face, this looks like quite a safe and bland thing to say about accidental forms: they are in some sense true things, but are incomplete and dependent on their substance. To say they are not “bounded” is to say just this: that their nature is incomplete until they are attached to some subject that serves to bound them. The examples Auriol goes on to offer are perhaps no clearer than the summary statement, but they are not obviously controversial. First, he offers the example of the relationship between line and point – not presumably, that either one is an accident of the other, but that they share the characteristics of each being a thing, but yet one being dependent on the other. (In fact they are mutually dependent, as Auriol

indicates, but that is an incidental feature of the example.) Then, more aptly, he offers the examples of whiteness and its surface, shape and quantity, and rarity and the parts of a thing (which spread out as the thing becomes rarified). In each case, he argues that the form and its subject make one undivided thing. So, for instance, “from the whiteness and the surface there comes about one thing: not through their being linked together in the way one complete thing is linked together with another complete thing” (109aE).

Just what this lack of division amounts to becomes clear only when Auriol turns to giving arguments for his view. The five complex arguments that he offers focus entirely on establishing that an accident is not something independent from its subject, but rather that the two are “indivisible in every way.” His first and principal argument runs as follows:

Form and formal effect are the same formality. But the formal effect of an accident is not a thing divided from its subject; instead, the subject and the formal effect are one through their being internally indivisible. Therefore the form or accident and its subject are not divided things, but are one through their being indivisible in every way. (109bAB)

Auriol goes on to argue at length for each of the premises, and we can get a clear sense of his account by considering some of these arguments. The obscurely-phrased first premise can be glossed as follows: *that the form and its effect qua form are essentially the same thing*. I gloss “formal effect” as the form’s effect *qua* form. The point is that a form is a kind of cause, a formal cause, and so for any form there should be an associated effect that it has on its subject. By “formality” (*formalitas*), Auriol seems to mean something like *quiddity* or *essence*.<sup>6</sup> As it happens, however, the word *formalitas* never again appears in this article, and so the discussion comes to focus on the claim that there is no difference between a form and its formal effect.

To evaluate this claim, Auriol needs to grapple with the question of what a formal effect is. Auriol’s initial characterization is that “the formal effect of a form is to form (*formare*), and the formal effect of an act is to actuate (*actuare*)” (109bB). This looks unhelpful, but it suits Auriol’s purpose because it leaves wide open the question of what this formal effect might be. He then argues as follows:

The formal effect of a form and act is to form and actuate matter. Then I ask: Is the form the actuation itself, or is the actuation something deposited (*derelictum*) by the form in the subject? The second cannot be maintained, since what is deposited would be either [i] something absolute or [ii] something relational. If [i] it were something absolute (as one doctor imagines), then quantity would deposit some sort of extension and redness would deposit reddening (*rubicundatio*). If so, then it follows that something can be actuated without the act, and formed without the form, because, as a result of its being absolute, God can through his power separate the thing deposited [from the form that deposited it]. Further, the form is then not a formal cause, but an efficient cause, for the form would in this way impress its effect in matter just as would an efficient cause. Nor [ii] can that which is deposited be

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<sup>6</sup> Compare Aquinas, I *Sent.* dist. 8 exp. 2 (vol. I, p. 236), which refers to “*formalitas, sive quidditas.*”

something relational, for if it were a relation then to be actuated and formed will be to be related. (109bBD)

This passage goes to the heart of Auriol's account. To ask about the identity of the form and its formal effect, for Auriol, is to ask whether or not the role of a form is to "deposit" some further thing in the subject. If so, then we would have to say that the accidental form of quantity would deposit extension, or some such thing, and the form of redness would deposit reddening.

Auriol plainly intends for this to look unattractive on its face, but he thinks that when we consider the possibilities for what might be deposited, we will realize that the account is utterly incoherent. The deposit will be either something relational or something absolute (that is, nonrelational). If it is relational, then we would be committed to the view that every case of a thing's being made actual or informed consists in its being related somehow. This seems quite implausible. If, on the other hand, the deposit is something absolute, then Auriol sees two equally implausible consequences. First, for every accidental form it would be possible to distinguish two absolute things: the form itself and its deposit. But where there are two absolute things, it is logically possible for one to exist without the other. Hence it is possible, at least by the power of God, if not naturally, for a thing to undergo reddening without the form of redness, and so on in other cases. This seems absurd – how could a thing become red without taking on the form of red? Second, if an accidental form acts as a cause by impressing something on the effect, then it is hard to see what distinguishes formal causality from efficient causality. The distinction seems to collapse.

Auriol offers just one argument for the main argument's second premise, that the formal effect of an accident (what he calls the actuation) is indivisible from the subject itself.

Now I prove the minor, that the formal effect of an accident is undivided<sup>7</sup> from its subject. For if the actuation is a thing divided from that which is actualized, then – since that actuation actuates the thing being actualized – I ask what that actuating of that actuation is. If you say that it is the same as that actuation, then I have my conclusion, because by parity of reason one might as well stop at the first. If it is distinct, then that will again actuate the thing that is actualized, and I ask about its actuation. If it is the same, I have my conclusion, that one might as well stop at the first. If it is distinct, this will go on to infinity. (110aAB)

The argument is based on the threat of a regress. If we recognize two different things, the actuation and the subject actualized, then we can ask the same question as before, one level down: what is the actualization of that subject? If at this point we choose to identify this lower-level actuation with the subject's actualization, then we might as well have done so at the previous stage – there is no rationale for going one level down before asserting the identity. But this of course is a formula for an infinite regress, which in this context looks to be vicious.

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<sup>7</sup> Reading *indivisus* for *indivisio*. Compare *non est res divisa* in the original statement of the minor premise. My translation of this whole article, based on a corrected edition of the text, is available through Russ Friedman's "Auriol Homepage," currently at <http://www.igl.ku.dk/~russ/auriol.html>.



Auriol's overall conception of accident is perhaps best understood through his examples. A subject stands to an accidental form, he claims, as a line stands to its endpoint. If the two were divided as distinct things, "then each would be bounded (*terminata*) without the other. . . . The point would not be the boundary of that line, but would be something impressing that boundary" (110aB). Admittedly, the obscurity of points in their own right diminishes the value of this as an analogy, but what Auriol is trying to get at is the idea that a form does not stand to its subject as something extrinsic, acting on that subject. This is the wrong causal model, the model of efficient causality. Instead, there is (as Auriol puts it) an *intima indivisio* between form and subject, an intrinsic undividedness. As an actual example of an accidental form, Auriol considers quantity, which he takes to be associated with the formal effect of making a thing *partible* – that is, making it susceptible to partition in the way that is characteristic of extended things. Auriol now runs a version of the earlier argument, arguing that this effect is not something deposited by quantity in its subject, but is the quantity itself (111aAB). So quantity is not something that literally *makes* its subject be susceptible to partition – rather, quantity is that susceptibility itself. It is the very feature of the subject that constitutes its being in such and such a state, rather than something prior that *puts* the subject into that state. The same of course goes for other accidents. The accidental form of red does not literally *make* a thing be red; rather, it just is the subject's state of being red. In Auriol's words, "color is nothing other than the coloration itself and a state (*affectio*) that belongs intrinsically to another" (IV *Sent.* 12.1.2 [112aC]). The form of rectangularity does not *make* its subject have a certain shape; rather, it just is the state of having that shape. Thus Auriol says that when talking about shapes it is more appropriate to use "figuration" (*figuratio*) than "figure" (*figura*), because "figure" implies a thing with its own unbounded existence, whereas "figuration" implies a thing bound to another.<sup>8</sup>

Auriol expressly claims at the start of his discussion, and occasionally throughout, that the accidental form is a "true thing" with its own reality. Thus the quantity and the underlying substance "are not one and the same" (111aB). It can look at times as if he is not really serious about that claim, given the sort of unity he describes between subject and accident. In fact, though, it is crucial to Auriol's strategy to insist on a distinction between subject and accident. This whole discussion comes in the context of Eucharistic theology, and Auriol takes for granted that any satisfactory account of that topic must allow for accidents to exist without their subject, at least by divine power. Hence there must be some sort of distinction to be drawn here, and not merely a conceptual one. But Auriol doesn't think that his account of the unity between subject and accident presents an obstacle to the notion of free-standing accidents (IV *Sent.* 12.2.1). To be sure, such a thing is not naturally possible. Even so, it is possible in the absolute sense, which is to say that God could

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<sup>8</sup> "Intentio Philosophi est quod accidens, eo quod non est ens, sed entis, non sit res terminata, sed res in adiacentia, imo ipsa adiacentia ad alterum. Unde proprius figura exprimitur per hoc nomen figuratio quam per hoc nomen figura, quia figura rem suam importat per modum cuiusdam terminati, figuratio vero per modum adiacentis" (IV *Sent.* 12.1.2 [112aEF]).

preserve the color and shape of the bread without the bread itself. What Auriol takes his philosophical analysis to reveal is just what sort of miracle this would be. It would not consist in God's making these accidents into independent, bounded things. That would be to turn accidents into substances, and so would not be a way of preserving the accidents of the host at all. Accidents are essentially unbounded and incomplete, in their own right, and so cannot fail to be such (113aBC). But what God can do is allow such things to exist on their own despite their incompleteness. Auriol concedes that we cannot conceive of how this is possible. Accidents are so dependent on their subject that, to us, it *seems* impossible for them to exist on their own. But Auriol denies that our intuitions are any guide to possibility: "God through his power can do more than our intellect can reveal or intuit" (113bC).

Auriol's conception of accidents was widely – perhaps even universally – rejected by later scholastics.<sup>9</sup> In large measure, that rejection was motivated by the sense that the view could not be squared with a plausible account of the Eucharist. And indeed Auriol's line on the Eucharist really is hard to swallow. He considers, for instance, the objection that on this account "God could make straightness without a line, and roughness and lightness in weight without parts." His reply is defiant: "Show me the reason why God can do whatever does not imply a contradiction, yet cannot do these things" (IV *Sent.* 12.2.2 [115bC]). This is hard to accept, but once we give up intuition as a guide to logical possibility, it is hard to know how to assess such claims. In any case, let us set aside such theological matters, and focus on what might be said about Auriol's theory as a metaphysical doctrine.

Later scholastic authors seem to have been in agreement that Auriol's account of form is flatly unacceptable for philosophical as well as theological reasons. John Capreolus, a Thomist writing a century after Auriol, decried the account as "utterly astonishing" (*valde mirabile*). Most damningly, Capreolus argues that "if all accidents are indistinct from their subject, then consequently they are indistinct from each other" (II *Sent.* 18.1.3 [154a]).<sup>10</sup> Once the logic of Auriol's argument is applied to substantial form, then "as many absurdities follow from this view as from the view of those who hold that all things are one" (*ibid.*). One part of matter could not be distinguished from another, because such distinctions require distinctions at the level of form. Hence human beings would not be distinct from donkeys.

In a way this line of argument goes too far. Auriol had actually anticipated this objection about accidents failing to be distinct from each other (IV *Sent.* 12.1.2 ad arg. [112bC]), and had stressed in reply that he is not asserting that accidents and

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<sup>9</sup> The distance between Auriol's view and mainstream opinion is made particularly clear by the way Suárez treats Auriol's view as so far from the mainstream.

<sup>10</sup> Johannes Capreolus (1380–1444) is sometimes described as "the prince of Thomists." All citations are drawn from his *Defensiones theologiae*, vol. IV. As in all his writings, he sprinkles his discussion of Auriol with passages from Aquinas intended to support his own view. In this case, however, these passages do little to ease the concern that Aquinas has nothing very clear to say about the issue Auriol is addressing. Capreolus's discussion of Auriol includes a lengthy and essentially verbatim description of Auriol's arguments – a description that in many places provides a clearer and less corrupt text than the Rome edition of Auriol's work.

their subject are identical. Subjects and accidents are *distinct things*. Accordingly, Auriol is not committed to the identity of accidents. Auriol's claim is rather that a subject has a certain kind of unity with its accident, distinct from the weaker way in which two things that are independent can be unified. Thus he asserts not that accident and subject are *indistinct* (the identity claim), but only that they are *undivided* (the unity claim). Even so, there is something to Capreolus's charge. Auriol wants us to treat accidents as states (*affectus*) of a subject: to be rarified just is to have parts spread out in space; to be a rectangle just is to have parts bounded in a certain shape. In each case there is no accidental form over and above these states of the subject. Once this way of thinking about form becomes generalized, it is easy to form the suspicion that accidents have been analyzed away, and that all there are bodies arranged in various patterns. This is not to say that human beings are the same as donkeys, because of course human bodies are in different states than donkey bodies are. But it may be that form has simply dropped out of the picture.

The suggestion is that Auriol's approach to form is tantamount to abandoning Aristotelianism – or at least to abandoning the hylomorphic framework. But of course this is not how Auriol views his project: he regards himself as simply offering the most plausible interpretation of accidental form. (He takes an analogous position regarding substantial form at II *Sent.* 12.2.1.) In fact it is a complex matter to decide whether Auriol's account amounts to a rejection of form or simply a reinterpretation. Setting aside the question of what Aristotle himself might have made of this dispute, we can understand Auriol as just one among various voices attempting to understand the ontology of the nine accidental categories. Among later scholastics, there was general agreement that something like Auriol's account might be acceptable for most of the nine. Capreolus, for instance, is troubled by Auriol's account only as it concerns two of the accidental categories, quantity and quality. Like most scholastic authors, Capreolus was not inclined to defend in strong terms the reality of all the categories. This does not mean, however, that Auriol's view was uncontroversial even in the case of these lesser categories. Ockham, for instance, argued against the reality of all the categories other than substance and quality by describing those categories in terms very much like Auriol's. Shape, for instance, according to Ockham, just is the disposition of a thing's parts. But Ockham takes this not as providing insight into what forms are, but as an argument against shape's being a genuine form. From Ockham's perspective, then, Auriol's account really would lead to the elimination of all accidental form.<sup>11</sup>

These issues come into sharper focus in the later work of Francisco Suárez. Like Capreolus, Suárez thinks that Auriol's view is utterly indefensible in the case of quality and quantity. But Suárez recognizes that Auriol might be understood in

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<sup>11</sup> I have not found Ockham actually discussing Auriol's views in this regard, and there is reason to doubt whether he would have been aware of those views, given that he remarks at one point that "I have seen little of what this doctor says – for if all the time I have had to look at what he says were put together, it would not take up the space of a single natural day" (*Ord.* 1.27.3 [*OTH* IV, 238], trans. Pasnau in *Cambridge Translations of Medieval Philosophical Texts. Vol. 3: Mind and Knowledge*, New York: Cambridge University Press, 2002, 226).

several different ways. If he means, as Capreolus seems to have thought, that there is no real distinction between an accident and its subject, then his view “is incompatible and inconsistent with the faith in many ways” and is moreover “supported by no plausible arguments” (*DM* 16.1.2). But Suárez saw that Auriol might be understood as making a weaker claim, that forms are distinct from their subject, but identical to the actuation of that subject.<sup>12</sup> (This in fact surely is Auriol’s view.) Suárez thinks that this account too is false. It may not flatly contradict the faith, but it is a “perilous view” – as indeed we have seen with regard to the Eucharist. Suárez also thinks that it gets formal causality wrong, at least in the case of the real accidents in the categories of quantity and quality (*ibid.*). Over the course of Suárez’s long discussion of accidental form, it becomes clear that he accepts something like Auriol’s account for certain sorts of accidents – what Suárez calls *modes*. Among the modes that Suárez recognizes are shape, location, and position.<sup>13</sup> These are true accidents, inasmuch as they do exercise formal causality on their subject, but there is no distinction in these cases between the form and its causality on the subject: “in the case of these modal forms, the formal cause is not distinguished from its actual causality” (*DM* 16.1.22). But Suárez thinks that between a mode and its subject there is no real distinction but only a modal distinction, which is to say that the mode cannot exist apart from its subject. There can be, as Suárez says by way of example, no sitting without a sitter – not even God can pull that off (*ibid.*). So this way of thinking about accidents would push Auriol back toward the first and utterly unacceptable view according to which forms are not really distinct from their subject.

Viewed in its context as part of a larger scholastic debate over the status of accidental forms, Auriol’s view can be read as just another strategy for maintaining a hylomorphic approach while moving away from the most avidly realistic, nonreductive conception of how forms relate to their subject. Auriol’s critics denied that his strategy was successful; they took him to be confusing accidents with modes,<sup>14</sup> or to be eliminating accidents altogether. But of course any such critic owes us some positive story about accidental form. And what is really surprising about the discussions I have studied is just how very obscure they are. Given the centrality of this issue to the Aristotelian picture, one would expect there to be a clear account – or at least various clear competing accounts – of how accidental forms relate to their subject. But what the post-Auriol discussion of this topic reveals, more than anything, is just how unclear the scholastics were on these issues.

Consider Capreolus, who summarizes his reply to Auriol in this way: “His principal assumption is false, because the actuation and formation that a form gives to its subject is not the same as the form itself, nor is it a relation (*respectus*); rather, it is *esse*” (*II Sent.* 18.1.3 [151b]). Capreolus denies, then, that form and subject are

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<sup>12</sup> This is so even though Suárez plainly does not have Auriol’s work in front of him, but is relying on Capreolus’ detailed exposition.

<sup>13</sup> See S. Menn, “Suárez, Nominalism, and Modes”, in K. White (ed.) *Hispanic Philosophy in the Age of Discovery* (Washington, DC: Catholic University of America Press, 1997), 226–256.

<sup>14</sup> Thus Suárez: “it is hardly intelligible what he means, unless perhaps he thought that no accident is a *thing* distinct in reality from the being of the substance, but only a *mode*.”

“undivided” in the way Auriol had argued. Instead, there is something in between a form and its subject, something that Capreolus too is willing to call the actuation of that form, but which he thinks is not the form itself but *esse* – the accidental being that a form imparts to a subject in virtue of its informing that subject. In his own words again: “the form, although it is the act (*actus*), is nevertheless not the actuation. Thus it does not actuate immediately through its essence, but through the *esse* that it gives, because neither is that form properly the act, unless inasmuch as it is considered under *esse*” (151a). This is not efficient causation, as Auriol had argued, but the *sui generis* manner of action proper to form. The account allows us to understand forms as absolute things, complete in their own right, and not purely adjectival on substance. But it does not, as Auriol had argued, lead to the absurd result that a thing could be actualized without having the corresponding accident, because Capreolus insists that this *esse* cannot occur apart from its form. “Not all absolute things that are essentially distinct can be separated from each other” (150b).

Suárez agrees with Capreolus that something of this sort has to be said against Auriol. Unless “actual causality is something distinct from both the causing form and the receiving subject,” there is no way to understand how “God can preserve the whole being of the accidental form and the subject without the accident’s exercising its formal causality on the subject” (*DM* 16.1.6). But Suárez cannot accept Capreolus’s specific response, because he wants to reject the very distinction that Capreolus assumes between essence and *esse*. That is something he will argue for much later, however (in *DM* 31), so for now he concludes only that “these arguments should be resolved by abstracting from that question about the distinction between essence and existence” (*DM* 16.1.8).<sup>15</sup> In its place, Suárez offers the following:

This information or actuation is something absolute, essentially including a transcendental relation (*respectus*). But it is something absolute not as an entity really distinct from the entity of the form, but as a mode distinct by the thing’s nature. This is why it implies a contradiction for such a mode to be preserved without that form, although not vice versa. The mode just mentioned includes that transcendental relation of actual union to a subject, and this is why it implies a contradiction for that mode to remain in nature without the subject’s remaining affected and informed by such an accident. (*DM* 16.1.9)

So in reply to Auriol’s central challenge – Is the actuation something absolute or something relative? – Suárez replies that it is both: something absolute that essentially involves something relational. What is absolute is not a full-fledged *res*, however, which would be something really distinct from the form. Instead, it is a mode, something that is only modally distinct from the form and so incapable of existing without the form. But that mode is also connected to its subject, not as a mode of that subject but in virtue of being essentially related to that subject. (To say that this relation is transcendental is presumably to say that it does not fall into any

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<sup>15</sup> Quite apart from his resistance to this distinction, Suárez offers other reasons at this point for rejecting Capreolus’s approach, even granting the *esse* – *essentia* distinction. I will not summarize those here.

category, and in particular not into the category of relation.) Hence the mode cannot exist without the subject's being informed. But the mode is not the subject, no more than the mode is the form.

All this seems perfectly coherent and consistent, but at the same time rather obscure. It is as if Suárez made a list of all the things that needed to be said, and then patiently constructed an account that would allow him to say it all, regardless of how convoluted the results look to be in the end. Of course, a more sympathetic picture might emerge from a lengthier, less superficial investigation. But I will content myself here with having sketched these several alternates to Auriol's approach, and offer the bare suggestion that scholastic thinking about accidental forms was far less clear than one would hope and expect. With this material in hand, we can return to the problem of sensible and intelligible species.

### 3 Species Considered as Accidental Forms

So far as I have found, no scholastic philosopher thought to analyze sensible and intelligible species by appealing in any rigorous way to a general theory of accidental form. Even so, it seems clear that such an appeal is very much in the spirit of scholasticism, and moreover that it holds considerable promise for illuminating the role of species. So at any rate I now want to suggest.

I began by distinguishing three accounts of how a cognitive power relates to the species that inform it. It will, I hope, be obvious that the first of these accounts, the adjectival model, corresponds quite closely to Auriol's conception of the relationship between an accidental form and its subject. Auriol claims that an accidental form is nothing other than the actuation of a subject, which seems to amount to the claim that the form is a state or condition of the subject. The adjectival model makes the analogous claim: that the species is nothing other than that state of a cognitive power in virtue of which it cognizes  $\phi$ . Indeed, since a species just is an accidental form, and a cognitive power just is its subject, we can fairly describe the adjectival model as a special case of Auriol's more general theory.

As an instance of the more general account, the adjectival model ought to meet with the same sorts of criticisms that Auriol's proposal faced. Indeed, just as Auriol's approach was generally rejected as unacceptable, we ought to expect the adjectival model to be likewise rejected. Now there is not, so far as I know, any explicit scholastic discussion of what I'm calling the adjectival model of species. Some scholars believe that such an account should be read into Aquinas and presumably into other authors as well, but no scholastic is known to have either defended or criticized such an account explicitly. The proponent of the adjectival model is likely to say that the view does not need to be stated explicitly, because it would have been taken for granted that this is how a form relates to its subject. The preceding discussion, however, makes a very strong case for the contrary conclusion: that this is not how accidental forms were generally understood, and that therefore it would be

most surprising for anyone other than Auriol to treat species in this way, especially without explicitly indicating as much.

Once we recognize that the adjectival model cannot be regarded as the standard or official scholastic account of species, we can explain the otherwise puzzling fact noted earlier: that scholars could challenge the very existence of species without receiving an incredulous stare. To anyone taking the view that the species is nothing more than the state in virtue of which a cognitive power is cognizing  $\varphi$ , the claim that species do not exist could be rejected out of hand. We can now see why Olivi, Ockham, and other critics of species did not meet with that sort of response. The prevailing understanding of accidental forms took there to be something intervening between the form and its subject, something deposited (*derelictum*) in the subject by the form, as Auriol put it. When species are understood on this model, then it becomes quite apparent why some would want to treat them as superfluous, and to maintain that cognition occurs in virtue of a power's taking on a certain state, but without any further species involved. The rejection of species is incoherent only if one follows Auriol in identifying the species with the subject's actuation.

Yet the friend of species ought to hesitate before appealing to Auriol. The hostile reception of his view raises doubts about whether the adjectival model can be regarded as a genuine defense of species. As noted earlier, Ockham wanted to give a similar analysis of many of the accidental categories and then conclude on that basis that *those forms do not exist*. There is thus a question of whether the theory succeeds in preserving a hylomorphic analysis of cognition, or whether instead it replaces it with something not distinctively Aristotelian at all. One might suggest it is a mere truism that when a cognitive power apprehends  $\varphi$ , it does so in virtue of entering into a state such as to apprehend  $\varphi$ . Indeed, this is more than a suggestion; part of what makes the adjectival model attractive is that it does render species invulnerable to attack. But can it be right to understand a hylomorphic analysis of cognition in such a way that the hylomorphism comes out as trivially true? Shouldn't the Aristotelian approach be a substantive thesis about how cognition occurs?

These remarks, all by themselves, do not show anything about how a given author's theory of species should be interpreted. For even if the general theory of form *ought* to have pushed the scholastics in a certain direction, there is no guarantee in particular cases that the author in fact was consistent in his thinking about species. This is especially so for Aquinas and other scholastics writing prior to the fourteenth century's heightened concern over the status of accidental forms. So in defense of ascribing the adjectival model of species to Aquinas, one might say that he treated species in a way that he would not have treated forms in general, or that he had no clear conception of how to treat forms in general, or even that he implicitly accepted something like Auriol's general account of form. I do not claim to have ruled out any of those possibilities. But what I do think we can flatly reject is the suggestion that the adjectival model is preferable because species are forms and this is how forms in general are to be understood. That is manifestly not the case.

In all, I think that Auriol makes a doubtful ally at best for the friend of species. What, then, about the other two models considered in section one? The second

theory considered, the actualizer model, treats the species not as the state of a cognitive power but as that which is immediately responsible for the power's entering into a certain state. This might be understood as corresponding fairly closely to the accounts of Capreolus and Suárez against Auriol. But the actualizer model itself is merely a general schema that might get fleshed out in any number of ways. The discussion in section two makes it fairly clear that scholastic authors would reject some of those possibilities out of hand. In particular, no one seems to take seriously the possibility that a species might be an efficient cause. Such an account would not qualify as a scholastic Aristotelian account. And since the term "species" in its cognitive sense is necessarily tied to that Aristotelian framework, we can conclude that the model of efficient causality is not a viable model for species.

Capreolus and Suárez agree that the relationship between form and subject is a special sort of relationship distinctive of formal causality. On Capreolus's model, the actuality of a cognitive power would be some sort of *esse* deposited by a species and quite distinct from that species. For Suárez, the actuality would be a mode of the species, distinct from that species only modally and also essentially related to the cognitive power. The sheer abstractness of these accounts, together with the evident lack of consensus over the different options, makes it unsurprising that scholastic authors did not commonly appeal to the general theory of form in analyzing cognition. That would have been to explain the obscure through the more obscure. It is no wonder, too, that modern scholars have been uncertain about how to understand the relationship between species and cognitive power. That uncertainty mirrors the uncertainty of the scholastics themselves.

Although the abstractness of Capreolus's and Suárez's accounts renders them of limited value in trying to understand cognition, they do shed some light on the last of the three accounts of species discussed in section one, the object model. According to this theory, species actualize a cognitive power in virtue of being somehow apprehended by that cognitive power. Like the actualizer model, this requires the species to be something over and above the cognitive power's state of being actualized, but here the relationship between power and species is a cognitive one. It is of course impossible to apply this analysis generally to the relationship between form and subject. The fire truck is not red in virtue of its apprehending the form of redness. And one might take that simple observation as enough to overturn the actuality theory of species, reasoning as follows: (a) species are forms; (b) forms cannot be analyzed in this way; therefore (c) species cannot be analyzed in this way; therefore (d) the object model cannot be considered an Aristotelian theory of cognition.

Even if this quick refutation were correct, it would not rule out the object model as the correct interpretation of a given author. As with the adjectival model, an author might be tempted to embrace the object model without realizing that it clashes with his more general conception of form. Moreover, given the obscurity of scholastic thinking about the form–subject relationship in general, it is easy to see how an author might think it excusable to employ the object model in the case of cognition. For it is not as if there was any commonly accepted general model to stand in place of the object model. So if Aquinas and others sometimes seem to treat species as



objects of cognition,<sup>16</sup> this might be attributed to the poverty of the overall scholastic conception of form.

The proposal just canvassed concedes in effect that the object model of species is not a genuinely Aristotelian theory, inasmuch as it treats species in a way that is incompatible with their status as accidental forms. Even so, the thought goes, it might still be the case that certain authors fell upon the object model as the best account they could arrive at. I now want to suggest, however, that a more full-bodied defense of the object model can be mounted from within the Aristotelian tradition. For once we accept, against Auriol, that there is a distinction between the form and the actualization brought about by that form, we can then quite properly ask about the relationship between the cognitive power and the species. This relationship will not be merely adjectival, but will have two distinct and independent relata. Now the natural thing to say about that relationship is that the species *informs* the cognitive power. This is of course not very helpful, since it amounts merely to reiterating the point that species are forms. Still, it may be the only uncontroversial thing that can be said, given the state of the debate on this issue. Even once we have said this much, though, we can see why a scholastic author might want to treat that species as something cognized. For no matter how one thinks in general of the *informing* relationship between accident and subject, it was routine to think that cognition just is the reception of a certain sort of form within a certain sort of power within the soul. When we have a form of that sort (a species), informing a power of that sort (a cognitive power), how ought we to describe it? Well, it seems entirely natural to say that the species stands in a cognitive relationship to that power. This is not to deny that the species is a form, and that the power is its subject, but simply to acknowledge that this sort of informing of subject by form is a cognitive informing, and so a case of cognition, brought about by the formal causality of the species.

To be sure, this way of describing the situation is bound to cause misunderstandings, unless one immediately goes on to explain that the species is not really the object of cognition in the sense of being the thing perceived or thought about. So some story needs to be told about why the species is not an object in that sense, and of course it is just this sort of story that Aquinas frequently tells. But given that the prevailing scholastic understanding of forms did treat them as independent, distinct entities, it seems almost inescapable that some authors would think of the species as a kind of object of the cognitive power. This need not be regarded as either a slip or a step away from the hylomorphic framework, given how that framework was understood.

In light of all this, it seems possible to draw one final conclusion about the larger significance of the scholastic debate over species. Although medieval critics of species did make prominent appeal to epistemological considerations – to the threat of what Olivi called the “veil” of species<sup>17</sup> – it may be something of a distortion to frame the debate primarily in those terms. The denial of species is properly

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<sup>16</sup> For the evidence, in the case of Aquinas, see Pasnau (1997), 201–208.

<sup>17</sup> See Pasnau (1997), introduction and Ch. 7.

understood as part of the larger project of scholastic nominalism. Olivi, Ockham, and others sought to rid their ontology of any accidental forms they judged to be superfluous, and so they proposed to eliminate action, relation, quantity, and all the others accidental categories aside from quality. Sensible and intelligible species were a target not primarily for epistemology reasons, but because they too were judged superfluous. Likewise, the mockery of species among seventeenth-century authors arose not from epistemological concerns – after all, many of these authors were happy to embrace representationalism – but from a general scorn for the scholastics’ real accidents. Thus the medieval attack on species is best viewed not as a precursor to the debate over direct realism – although that is of course a *part* of it – but as an early step toward the modern rejection of scholastic Aristotelian metaphysics.

Accordingly, those who would defend species by embracing the adjectival model are to a considerable extent missing the point of the debate over species. To treat species as no more than states of a cognitive power is to give in to the nominalist critique, either by implicitly conceding that species are not true forms or by reducing scholastic hylomorphism to something utterly banal. Only once one sees what forms were generally thought to be, among scholastic authors, can one mount a proper defense on their behalf. If, that is, one still wants to mount a defense.

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## Bibliography

### Primary Sources

- John Capreolus, *Defensiones theologiae divi Thomae Aquinatis*, ed. C. Paban and T. Pègues (Turin: Cattier, 1900–1908; repr. Frankfurt: Minerva, 1967).
- Locke, John, *An Essay concerning Human Understanding*, ed. P. H. Nidditch (Oxford: Clarendon, 1975).
- Nicholas of Autrécourt, *Exigit ordo*, in J. R. O’Donnell, “Nicholas of Autrecourt”, *Mediaeval Studies* 1 (1939), 179–267.
- Peter Auriol, *Commentariorum in quartum librum Sententiarum* (Rome, 1605).
- Suárez, Francisco, *Disputationes metaphysicae* (Paris, 1866; repr. Hildesheim: Olms, 1965) [DM].
- Thomas Aquinas, *S. Thomae Aquinatis Doctoris Angelici Opera Omnia* (Rome: Commissio Leonina, 1882) [includes vol. 24(1), *Quaestiones disputatae de anima*; vol. 24(2), *Quaestio disputata de spiritualibus creaturis* [QDSC]; vol. 45(1), *Sentencia libri de anima*].
- Thomas Aquinas, *Scriptum super libros Sententiarum*, ed. P. Mandonnet and M. F. Moos (Paris: P. Lethielleux, 1929–1947) [Sent.].
- Thomas Aquinas, *Summa theologiae*, ed. P. Caramello (Turin: Marietti, 1948–1950) [ST].
- Thomas Aquinas, *Liber de veritate Catholicae fidei contra errores infidelium, seu Summa contra gentiles* [SCG], edited by C. Pera, P. Marc, P. Caramello (Rome: Marietti, 1961–1967).
- William Ockham, *Opera Philosophica et Theologica* (St. Bonaventure: Franciscan Institute Publications, 1967–1989) [OTh, OPh].

## ***Secondary Sources***

- Menn, S., “Suárez, Nominalism, and Modes”, in K. White (ed.), *Hispanic Philosophy in the Age of Discovery* (Washington, DC: Catholic University of America Press, 1997), 226–256.
- O’Callaghan, J., *Thomist Realism and the Linguistic Turn: Toward a More Perfect Form of Existence* (Notre Dame: University of Notre Dame Press, 2003).
- Pasnau, R., *Theories of Cognition in the Later Middle Ages* (Cambridge: Cambridge University Press, 1997).
- , *Cambridge Translations of Medieval Philosophical Texts. Vol. 3: Mind and Knowledge* (New York: Cambridge University Press, 2002).
- Perler, D., “Essentialism and Direct Realism. Some Late Medieval Perspectives”, *Topoi* 19 (2000), 111–122.
- , *Theorien der Intentionalität im Mittelalter* (Frankfurt: Klostermann, 2002).