

01  
02  
03  
04  
05  
06  
07  
08  
09  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45

# THEORIES OF PERCEPTION IN MEDIEVAL AND EARLY MODERN PHILOSOPHY

*Edited by*

**SIMO KNUUTTILA**

*University of Helsinki, Finland*

and

**PEKKA KÄRKKÄINEN**

*University of Helsinki, Finland*

 Springer

UNCORRECTED PROOF

01 **Id Quo Cognoscimus**

02

03

04 **Robert Pasnau**

05

06

07

08

09

10

11

12

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

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

36

37

38 R. Pasnau  
 39 University of Colorado

40

41

42

43

44

45

<sup>1</sup> I think the original arguments in R. Pasnau *Theories of Cognition in the Later Middle Ages* (Cambridge: Cambridge University Press, 1997), Ch. 6 remain persuasive 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  $\phi$ -ing – those features of the brain that constitute being in a mental state such as to  $\phi$ . 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.

---

<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).

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

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

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

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

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

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

41

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

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

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

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

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

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

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

31 \_\_\_\_\_  
 32 of “apprehend,” one with a “very strong cognitive connotation” (which he rejects) and another with  
 33 a “weaker cognitive connotation” (which he accepts). The first treats the species as the immediate  
 34 object of cognition, but even on the second reading the species is “grasped” in order to cognize  
 35 something else. Thus Perler's Aquinas is a proponent of the object model. This is an unsurprising  
 36 result, given Perler's focus on the formal identity of species and external object. As I wrote in my  
 37 (1997), “the most obvious motive for emphasizing the identity between species and object would  
 38 seem to be that this allows one to admit that the species is itself apprehended but nevertheless  
 39 deny that this entails representationalism” (pp. 299–300). In Appendix A of that work I argued  
 40 against appealing to formal identity as a response to skepticism. I likewise think it a mistake to  
 41 treat formal identity as yielding direct realism. But I suspect nevertheless that Perler and I are in  
 42 fairly substantial agreement on how to read Aquinas in this area: we agree that he treats species  
 43 as a kind of cognitive object, and we agree that the formal identity of species and object is what  
 44 makes it the case that an apprehension of a certain species yields the perception or thought of an  
 45 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.

01 I propose in what follows to take seriously the idea that species are just one  
 02 kind of accidental form. This suggests that we might better understand the role of  
 03 species – and perhaps decide which of the above accounts is correct – through a  
 04 better understanding of the general scholastic theory of forms. If the goal is to un-  
 05 derstand Aquinas in particular, then it would of course be ideal to look closely at  
 06 how he conceives of accidental forms. This, however, is not going to be my strategy.  
 07 Although it would be no doubt interesting to read Aquinas closely on this topic, it  
 08 seems to me that the issues at stake emerge more clearly in various later authors.  
 09 My suspicion is that some of the obscurity in Aquinas’s conception of species is a  
 10 consequence of some lack of clarity in his broader conception of the relationship  
 11 between an accidental form and its subject. But this can hardly count as a criticism,  
 12 because we will see that while the status of accidental forms became a more explicit  
 13 topic of discussion among later authors, it is hard to find anyone who gives a very  
 14 lucid account of the relationship between form and subject.  
 15  
 16

## 17 2 The Inherence of Accidental Forms

18  
 19 Scholastics from the fourteenth century on worry about accidental forms in a way  
 20 that earlier generations do not. Nicholas of Autrecourt, for one, complains that we  
 21 do not know what it means when we say that an accident inheres in a subject (*Exigit*,  
 22 p. 194); this issue would continue to occupy scholars up to the end of the scholastic  
 23 era. It seems plausible to think that Ockham’s vigorous attack on the reality of var-  
 24 ious accidental categories gave this issue a certain prominence: after all, it is hard  
 25 to evaluate a debate over whether such and such an accident is real without some  
 26 understanding of what exactly an accident is. But just as much as Ockham, it seems  
 27 to have been his contemporary and fellow Franciscan, Peter Auriol, who provoked  
 28 scholastic authors to reconsider their theories of accidental form.

29 Auriol begins his discussion of accidents with this summary statement:

30  
 31 I state the following proposition, that an accident is a true thing, on account of the opinion  
 32 of the ancients, who say that an accident is not a reality outside the soul but is a thing (*res*)  
 33 that is not the substance itself. Nevertheless it is not a bounded (*terminata*) and complete  
 34 thing without its substance. Thus it has a reality that is not [the reality of] its substance and  
 35 nevertheless it is not a *thing* distinct from its substance. (IV *Sent.* 12.1.1 [109aC])

36 On its face, this looks like quite a safe and bland thing to say about accidental  
 37 forms: they are in some sense true things, but are incomplete and dependent on  
 38 their substance. To say they are not “bounded” is to say just this: that their nature is  
 39 incomplete until they are attached to some subject that serves to bound them. The  
 40 examples Auriol goes on to offer are perhaps no clearer than the summary state-  
 41 ment, but they are not obviously controversial. First, he offers the example of the  
 42 relationship between line and point – not presumably, that either one is an accident  
 43 of the other, but that they share the characteristics of each being a thing, but yet  
 44 one being dependent on the other. (In fact they are mutually dependent, as Auriol  
 45

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

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

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

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

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

31 The formal effect of a form and act is to form and actuate matter. Then I ask: Is the form  
 32 the actuation itself, or is the actuation something deposited (*derelictum*) by the form in the  
 33 subject? The second cannot be maintained, since what is deposited would be either [i] some-  
 34 thing absolute or [ii] something relational. If [i] it were something absolute (as one doctor  
 35 imagines), then quantity would deposit some sort of extension and redness would deposit  
 36 reddening (*rubicundatio*). If so, then it follows that something can be actuated without the  
 37 act, and formed without the form, because, as a result of its being absolute, God can through  
 38 his power separate the thing deposited [from the form that deposited it]. Further, the form  
 39 is then not a formal cause, but an efficient cause, for the form would in this way impress  
 40 its effect in matter just as would an efficient cause. Nor [ii] can that which is deposited be  
 41

42

43 <sup>6</sup> Compare Aquinas, I *Sent.* dist. 8 exp. 2 (vol. I, p. 236), which refers to “*formalitas, sive*  
 44 *quidditas*.”  
 45



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

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

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

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

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

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

41  
42  
43 <sup>7</sup> Reading *indivisus* for *indivisio*. Compare *non est res divisa* in the original statement of the minor  
44 premise. My translation of this whole article, based on a corrected edition of the text, is available  
45 through Russ Friedman's "Auriol Homepage," currently at <http://www.igl.ku.dk/~russ/auriol.html>.

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

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

41

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

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

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

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

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

36  
 37  
 38 <sup>9</sup> I base this conclusion not a particularly thorough survey of texts, but simply on the way Suárez  
 39 treats Auriol's view as so far from the mainstream.

40 <sup>10</sup> Johannes Capreolus (1380–1444) is sometimes described as "the prince of Thomists." All cita-  
 41 tions are drawn from his *Defensiones theologiae*, vol. IV. As in all his writings, he sprinkles his  
 42 discussion of Auriol with passages from Aquinas intended to support his own view. In this case,  
 43 however, these passages serve mainly to confirm the suspicion that Aquinas has nothing very clear  
 44 to say about the issue Auriol is addressing. Capreolus's discussion of Auriol includes a lengthy and  
 45 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.

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

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

36 These issues come into sharper focus in the later work of Francisco Suárez. Like  
 37 Capreolus, Suárez thinks that Auriol's view is utterly indefensible in the case of  
 38 quality and quantity. But Suárez recognizes that Auriol might be understood in  
 39

---

40  
 41 <sup>11</sup> I have not found Ockham actually discussing Auriol's views in this regard, and there is reason  
 42 to doubt whether he would have been aware of those views, given that he remarks at one point that  
 43 "I have seen little of what this doctor says – for if all the time I have had to look at what he says  
 44 were put together, it would not take up the space of a single natural day" (*Ord.* I.27.3 [*OTH* IV,  
 45 238], trans. Pasnau in *Cambridge Translations of Medieval Philosophical Texts. Vol. 3: Mind and  
 Knowledge*, New York: Cambridge University Press, 2002, 226).

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

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

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

40  
 41 <sup>12</sup> This is so even though Suárez plainly does not have Auriol’s work in front of him, but is relying  
 42 on Capreolus’ detailed exposition.

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

45 <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*.”

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

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

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

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

42  
 43 <sup>15</sup> Quite apart from his resistance to this distinction, Suárez offers other reasons at this point for  
 44 rejecting Capreolus’s approach, even granting the *esse* – *essentia* distinction. I will not summarize  
 45 those here.

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

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

13  
14  
15  
16

### 17 3 Species Considered as Accidental Forms

18

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

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

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

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

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

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

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

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



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

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

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

37 Even if this quick refutation were correct, it would not rule out the object model  
38 as the correct interpretation of a given author. As with the adjectival model, an author  
39 might be tempted to embrace the object model without realizing that it clashes with  
40 his more general conception of form. Moreover, given the obscurity of scholastic  
41 thinking about the form–subject relationship in general, it is easy to see how an  
42 author might think it excusable to employ the object model in the case of cognition.  
43 For it is not as if there was any commonly accepted general model to stand in place  
44 of the object model. So if Aquinas and others sometimes seem to treat species as  
45

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

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

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

37 In light of all this, it seems possible to draw one final conclusion about the  
38 larger significance of the scholastic debate over species. Although medieval critics  
39 of species did make prominent appeal to epistemological considerations – to the  
40 threat of what Olivi called the “veil” of species<sup>17</sup> – it may be something of a distor-  
41 tion to frame the debate primarily in those terms. The denial of species is properly  
42

43  
44 <sup>16</sup> For the evidence, in the case of Aquinas, see Pasnau (1997), 201–208.

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

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

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

20  
 21 **Acknowledgments** Many thanks for their suggestions to participants in the Helsinki conference  
 22 on theories of perception, and to the members of a 2004 NEH Summer Seminar in Boulder, for  
 23 their comments on this material.

24  
 25

## 26 Bibliography

27  
 28

### 29 *Primary Sources*

30  
 31

Aquinas, Thomas, *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*].

33  
 34

Aquinas, Thomas, *Scriptum super libros Sententiarum*, ed. P. Mandonnet and M. F. Moos (Paris:  
 P. L  thielleux, 1929–1947) [*Sent.*].

35

Aquinas, Thomas, *Summa theologiae*, ed. P. Caramello (Turin: Marietti, 1948–1950) [*ST*].

36  
 37

Aquinas, Thomas, *Liber de veritate Catholicae fidei contra errores infidelium, seu Summa contra  
 gentiles* [SCG], edited by C. Pera, P. Marc, P. Carmello (Rome: Marietti, 1961–1967).

38

Auriol, Peter, *Commentariorum in quartum librum Sententiarum* (Rome, 1605).

39  
 40

Capreolus, Johannes, *Defensiones theologiae divi Thomae Aquinatis*, ed. C. Paban and T. P  gues  
 (Turin: Cattier, 1900–1908; repr. Frankfurt: Minerva, 1967).

41  
 42

Locke, John, *An Essay concerning Human Understanding*, ed. P. H. Nidditch (Oxford: Clarendon,  
 1975).

43  
 44

Nicholas of Autrecourt, *Exigit ordo*, in J. R. O’Donnell, “Nicholas of Autrecourt”, *Mediaeval  
 Studies* 1 (1939), 179–267.

45

Ockham, William, *Opera Philosophica et Theologica* (St. Bonaventure: Franciscan Institute Pub-  
 lications, 1967–1989) [*OTh, OPh*].

Su  rez, Francisc  , *Disputationes metaphysicae* (Paris, 1866; repr. Hildesheim: Olms, 1965) [*DM*].

**Secondary Sources**01  
02  
03  
04  
05  
06  
07  
08  
09  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45

- 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).

UNCORRECTED PROOF