

Aristotle's Form of the Species as Relation

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The question of the nature and status of Aristotelian forms has divided scholars into three general camps: those who argue that forms are particular, those who argue they are universal, and those who maintain that forms can be regarded both as particular and as universal. Each of these approaches can cite various passages in Aristotle for textual support and has the advantage of evading difficulties arising from the other approaches. However, due to fundamental problems arising from the former two approaches, which will be outlined below, the following paper will adopt the third strategy and distinguish between form in the sense of a principle of organization for a particular, concrete object (particular form) and form in the sense of species (species form), which is a universal. The concept of the species form is the central feature in this interpretation, and it will be argued that the species form is best understood as a type of *relation* holding between particular forms. The species form, so construed, is ontologically dependent upon the particular form, i.e. requires the particular form for its existence, but has objective, ontological status as a real feature of the world. The species form's objective status as a relation enables it to be a basis for Aristotle's realism about universals that neither reduces them to concepts in the mind (conceptualism) nor identifies them with entities such as Platonic Forms. However, it must be emphasized at the outset that the aim of the paper is not to argue that Aristotle expressly defends the notion of the species form as a relation. Rather, it is to argue that this interpretation of the species form is consistent with many of Aristotle's major texts and doctrines, helps render crucial texts and doctrines intelligible, and can be viewed as implied by at least some texts.

The paper will be divided into five main sections. The first section will outline standard versions of the three approaches to Aristotelian forms described above. The second section will consist of two parts: the first part describes the notion of a particular form, and the second part describes the crucial concept of the species form. The third section will examine the role of the species form in

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Aristotle's discussion of definition and substance in the *Metaphysics*. The fourth section will consider two interpretive advantages to the present interpretation that were not brought to light in the previous analysis. The fifth and final section will address two possible objections to the present interpretation beyond those considered in the previous analysis.

I

Three Standard Approaches to Aristotle's Treatment of Form

Several scholars hold the view that Aristotle regards forms as particular rather than universal and defend the correlative view that Aristotle is either a nominalist or a conceptualist. Edward D. Harter, for example, uses Aristotle's account of change to argue that forms are particular.¹ Harter explains that change, for Aristotle, occurs when a privation-in-a-substratum gives way to an eidos(form)-in-a-substratum. In other words, change occurs when a substratum with the potentiality of receiving a form comes into possession of a form that it previously lacked. Thus the form is both actuality since it provides an object with its identifiable characteristics and it is also a fundamental principle of change, and when the change involves becoming a new substance the form is called the "substantial form". Harter contends, however, that the "substantial form is not universal," because "change, coming-to-be, is an affair of individual complexes; there is no change apart from these; and the principles and causes...are principles present in these (individual complexes)." (Harter, p. 14; parentheses added) Nevertheless, Harter does not believe that this view of forms as particular principles of change entails that there is *no* sense in which

¹ In addition to Harter, whose position is under consideration here, similar views have been defended by A.R. Lacey in "Ousia and Form in Aristotle", *Phronesis* 10 (1965), 363-82, and A.C. Lloyd, *Forms and Universals in Aristotle*, Great Britain: Francis Cairns, 1981. One of the more direct statements of the view that form is not universal is expressed by Wilfred Sellars who says, "Certainly the form of a material substance is not a universal, for, as Aristotle reiterates, the form is 'the substance of' the composite, and the substance of a this must be of the nature of a this and never a universal." (Sellars, p. 691).

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forms can be taken as universal. Rather, he maintains that it is possible to understand the form as universal in the minds of those who consider the particular instances of them. Harter says that "for Aristotle at least, there are universals only because there are natural kinds, and a natural kind is determined by the constitutions of its individual members. The character of the universal in the mind is determined by the characters of the individuals in the world; it is not the other way around." (Harter, p. 17) Thus Harter's position can be regarded as a type of 'conceptualism' in which universals are thought to exist only insofar as particulars are apprehended in a universal manner by the knowing mind.²

However, the fundamental difficulty of denying that universals have ontological status independently of human apprehension is that it is inconsistent with Aristotle's concept of *episteme*, or scientific knowledge. As Aristotle argues in *Metaphysics Zeta* 15, scientific knowledge can only be of what is definable, but what is definable is the universal, not the particular. Thus, if one denies objective ontological status to universals, then one is denying that scientific knowledge comprehends definable realities in the world. The issues of scientific knowledge and the appropriate objects of definition will be discussed in more detail in section III below. What is important presently, however, is that the inconsistency between Harter's view that there are only particular forms and Aristotle's concept of scientific knowledge might incline one to adopt the opposing position that Aristotelian forms are exclusively universal. James Lesher adopts this position but contends that it leads Aristotle immediately into an insuperable contradiction based upon his acceptance of all

² The argument which shall be given below will, like Harter's analysis, base the ontological status of a universal such as the species form upon the particular forms which are ontologically prior to it. However, the species form will be acknowledged to have ontological status as a real principle independent of conceptualization. Of course, the following account does not require a denial that a universal can be abstracted from the perception of sensible particulars and conceptualized in the understanding as Aristotle describes in the *Posterior Analytics* (100 a3-8). Rather, the account will provide a means of explaining how the universal abstracted in conceptualization reflects a real part of the world that is independent of the human intellect and is the basis of scientific knowledge.

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three of the following propositions: "(A) No universal can be a substance. (B) The form is universal. (C) The form is that which is most truly substance." (Leshner, p. 169) Proposition A presumably derives its force from Aristotle's attacks upon Platonic Forms, particularly his express denial in *Zeta* 13 that universals can be substances. The issue of whether Aristotle intends to assert that there is *no* sense in which a universal can be a substance also will be discussed in section III, but Leshner's view is that Aristotle unequivocally denies substantiality to universals. Among the arguments Leshner uses to support Proposition B is a line of reasoning, similar to the one above, describing the difficulties that would arise for Aristotle's concept of scientific knowledge if universals are denied ontological status. Finally, in support of Proposition C, Leshner simply cites several passages from Aristotle in which he advances the view that form is that which is most truly substance.³ Thus, if Leshner's analysis is correct, then it appears that adopting the position that there are only universal forms in Aristotle yields a result that is as undesirable as the inconsistency between exclusively particular forms and the concept of scientific knowledge, namely, that Aristotle's fundamental doctrines concerning form, substance, and universals are contradictory.

Clearly if there is a more charitable reading of Aristotle that will allow him to avoid this apparent contradiction without denying the ontological status of universals, then such a reading is preferable. There appears to be only one viable alternative for this more charitable reading, which is to adopt the view that Aristotle allows for both particular forms and universal forms.⁴ Rogers Albritton attempts this third approach by trying to locate textual evidence in the *Metaphysics* that Aristotle holds that there are both particular and universal forms. On Albritton's reading, the problem is not in providing textual evidence that Aristotle thought there are universal forms, but rather the difficulty is in

³ Leshner cites *Metaphysics* 1032 b1-2, 1033 b17, 1037 a 27 ff., 1041 b6, 1050 b2.

⁴ There remains, of course, the logical possibility of arguing that forms are neither particular nor universal for Aristotle, but such a view appears to be meaningless and contrary to textual evidence.

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finding evidence that there are particular forms. According to Albritton, the best evidence that there are particular forms is located in Book *Lambda* of the *Metaphysics*, but there is also some evidence of this view *Zeta* 10 and 11. The following discussion will pursue this third alternative by exploring the case that there are both particular forms and universal forms in Aristotle as the best possibility of resolving the difficulties of the first two approaches cited above.

II

Particular Forms and Species Forms

A. Particular Forms

The present discussion will begin by clarifying the concept of particular form before considering the status of the species form (i.e., universal form) since it will be argued that the latter concept and reality presuppose the former concept and reality. The discussion will be based upon the notion of form found in Aristotle's account of composite substances in the *Metaphysics*, i.e., his account of substances composed of both material and formal principles, although the conclusions drawn may apply to forms existing independently of matter as well, such as an unmoved mover. In light of these prefatory remarks, a particular form can be understood as the principle of organization and unity intrinsic to an object, or, as in the case of Aristotle's familiar example of a bronze statue, it can be understood simply as the structure or shape of an object. The particular form is thus a set of basic functions, or a structure, around which the independent activities, secondary functions (such as those of its organs), and parts of an object are organized into the activities, secondary functions, and parts of a unified whole. The basic functions constituting the particular form are the essential features which both make the thing into the object that it is and render intelligible the functions of its parts in relation to the object as a whole. For example, the independent functioning of the various organs of the human body such as the stomach, eyes, and brain can be explained and rendered intelligible through the contributions they make to the basic nutritive, sensitive, and

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rational⁵ functions that Aristotle identifies with the human soul as the form of a human being. It is also important to emphasize that the particular form has these functions relative to a particular quantum of matter (i.e. if the object is a composite substance). As the basic functions enforming a particular quantum of matter the particular form is numerically distinct from every other instance of form.⁶

The best direct textual evidence in the *Metaphysics* to support this notion of a particular form is located primarily in Book *Lambda*. Aristotle there maintains that, "the causes of different individuals are different, your matter and form and moving cause being different from mine, while in their universal definition they are the same." (*Metaphysics*, 1071 a 27-29) Aristotle's point, of course, is that the complex of material, efficient, and formal principles in each human being must be differentiated from the complex of these principles in every other human being since we are discrete, individuated substances. In other words, the existence of discrete, individuated human beings is explained by our unique causal principles. Consequently, our particular forms, or souls, as particular human beings are numerically distinct principles of organization of our particular bodies even though the same formula or definition will apply to each of our souls given our identity *qua* human beings. Moreover, this conclusion about the presence of particular forms within human beings can be generalized as applying, *mutatis mutandis*,⁷ to all composite substances.

Additional textual support for the notion of particular forms is located in *Zeta* 10 where this concept is contained in Aristotle's claim that, "Man and

⁵ This, of course, assumes a contemporary perspective about the brain as the organ for cognition and thought.

⁶ In *Substantial Knowledge*, C.D.C. Reeve proposes the notion of "universal forms" to fulfill the role attributed to the particular form here. Thus, Reeve says that, "universal forms carve up or individuate the world into particular objects of singular significance," (Reeve, p. 131) or, in other words, the "universal form" provides to matter the essential determinations and functions that render matter into the particular composite objects that we encounter empirically.

⁷ For example, as indicated above, the particular form of some inanimate objects is best described as a structure or shape rather than a functional ordering of parts.

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horse and terms which are thus applied to individuals, but universally, are not substance but something composed of this particular formula and this particular matter treated as universal..." (*Metaphysics*, 1035 b 27-30). "Particular formula" in this passage refers to a man's or horse's particular form, and Aristotle is thus observing here that a universal term such as 'man' or 'horse' applies to a particular man or horse by virtue of its particular form. How the particular form can be understood as the principle that enables particular substances to be categorized into species or kinds will be described in more detail below. The essential point for the moment, however, is that there is clear textual support that Aristotle maintained a doctrine of particular forms.⁸

B. Species Form

The foregoing description of the concept of 'particular form' provides the background for the following discussion of the notion of 'species form', the nature and status of which is one of the crucial issues in the present interpretation of Aristotle's analysis of form.⁹ There are a variety of interpretive advantages, which will be discussed below, for thinking that a 'species form' is best understood as a relational concept.¹⁰ More precisely, the species form

⁸ It is frequently thought that *Zeta* 13 provides additional support for the view that forms are particular since Aristotle there contends that, "it is plain that no universal is a substance," (*Metaphysics*, 1038 b35) and in light of *Zeta* 10 and 11's doctrine that form is substance it follows that the form is particular. However, in *A Map of Metaphysics Zeta*, Myles Burnyeat rejects the claim that *Zeta* 13 provides textual support for the particularity of form (Burnyeat, p. 52). Burnyeat's conclusion rests on his idiosyncratic reading of *Zeta* 13 as constituting an independent inquiry from *Zeta* 10 and 11, and while this is an interesting interpretive claim it can probably be claimed with equal justice that these are stages in a single argument concluding that substance is form.

⁹ The focus of the following analysis will be the concept of species, but the arguments about the relational status of a species apply also to the genus. Both concepts are universal forms that are ontologically dependent on particular forms, and the difference in extension between the concept of a species and the concept of a genus is immaterial to the status of each as a real relation.

¹⁰ In "Aristotle's Realism," Martin Tweedale similarly suggests that, "sameness in species is an equivalence relation." (Tweedale, p. 515) Although Tweedale's paper and the present one are superficially similar insofar as both recognize that species are a type of relation, Tweedale's

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should be understood as a real relation of functional identity holding between numerically distinct particular forms that allows individuals to be classified as members of the same kind. A relation of functional identity holds between numerically distinct particular forms when the individuals possessing those forms each has the capacity for exercising the same fundamental functions, or possesses the same structure or shape, relative to their own quantum of matter. For example, the nutritive, sensitive, and rational functions of Socrates' soul that enform Socrates' body stand in a relation of functional identity with the same functions of Callias' soul that enform Callias' body, and this relation of functional identity is what enables both individuals to belong to the class of human beings. Thus, an individual can be said to possess a species form, and be a member of a species, when that individual is related to other actual or possible individuals by virtue of possessing identical fundamental functions.

Several important points of clarification about the notion of species form are necessary here. First, it should be evident from the previous description that the species form is *ontologically dependent* on the particular form since there cannot be a relation of functional identity holding between individuals unless there is at least one actual individual exhibiting the functions in question. Of course, this does not preclude fictional or imaginary individuals from belonging to fictional or imaginary species. Yet even in this case the species form must be conceived as ontologically dependent on the particular forms of the individuals that are fictionally or imaginatively related since such

objectives, arguments, and conclusions contrast sharply those of this essay. For example, Tweedale views forms exclusively as particulars, seems to regard universals in a fundamentally conceptualist manner (Tweedale, p. 513), considers his interpretation to be defended expressly by Aristotle, and endeavors to refute the notion that Aristotle is a "robust realist." None of these applies to the present paper. Moreover, I believe that Tweedale's notion of an "equivalence relation" is ambiguous since it might refer to the conceptual, ontological, epistemological, or numerical equivalence of the terms, and Tweedale does not clarify it further. This ambiguity in Tweedale is significant since the manner in which 'species' is construed as a relation will be crucial for the present interpretation of Aristotle's analysis. See Martin Tweedale, "Aristotle's Realism," *Canadian Journal of Philosophy*, vol. 18, no. 3, (September 1988), pp. 501-526.

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dependence is essential to the relation of these two types of form. Secondly, in general and aside from the exception of fictional and imaginary individuals and species, the species form must be granted objective ontological status since it is a *real* relation holding between the particular forms of actual and possible individuals. In other words, the species form is a genuine aspect of the objective world and does not exist only conceptually through abstraction from particular forms. Thirdly, the species form must be regarded as *universal* since each member of a species must stand in a relation of functional identity with every other actual and possible member of the species. This meaning of the universality of a species form prevents it from being conflated with a Platonic Form despite the objective ontological status of both of these types of form. A Platonic Form must be regarded paradoxically as both universal to every member of a species and also as a particular member of that species. The latter feature of a Platonic Form clearly cannot be asserted of the relational meaning of the species form suggested here.

Before describing some of the advantages the foregoing account has for interpreting Aristotle's texts, it will be helpful to clarify further the distinction between particular form and species form by placing it in the broader context of the *Metaphysics*. This will be achieved in the next section by relating the distinction to some basic features of Aristotle's analysis of the definitions underlying scientific knowledge and to his treatment of the concept of substance.

III

Definition, Substance, and Form

The role of the species form as the object of a definition yielding scientific knowledge emerges from three fundamental positions expressed in the *Metaphysics*: (1) "definition and essence in the primary and simple sense belong to *substances*." (*Metaphysics*, 1030b 5-6) In *Zeta* 4, Aristotle allows that we can speak in a derivative sense of essences and definitions of categories such as

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qualities and quantities, but he insists that essences and definitions belong primarily to substances, and this is presumably because the other categories depend on substance for their being; (2) a definition must be of the *universal* rather than the particular. As Aristotle holds in *Zeta* 15, "If then demonstration is of necessary truths and definition is a scientific process...clearly there can neither be definition of nor demonstration about sensible individuals;" (*Metaphysics*, 1039b31-1040a2)¹¹ and finally (3) Aristotle seems to conclude in favor of form as substance in *Zeta* 3 after he identifies matter, the composite, and form as the possible candidates for substance but eliminates the former two alternatives. In light of these three positions, if the species form can be regarded as a type of substance, then it is the species form rather than the particular form which is the object of a definition since the species form would be described by all three of the points above. The particular form, in contrast, is precluded from being the immediate object of a definition by the position expressed in the second point since it is not universal.

Keeping these considerations in mind, it is necessary to establish the sense in which the species form can be regarded as a type of substance before describing how it functions as the object of a definition. For this purpose, a discussion of key texts in the *Metaphysics* concerning the nature of substance is needed. Naturally, an exhaustive account of these texts is impossible here due to their subtlety and complexity, which have led to disagreements among commentators concerning even whether matter, form, or the composite is most properly regarded as substance. Thus, the following brief discussion has the modest objective of highlighting salient features of Aristotle's analysis of substance for the purpose of illuminating further the concept of a species form.

It is perhaps best to begin this brief discussion of the concept of substance by recognizing that Aristotle's chief project of *Metaphysics Zeta* is to identify the principle or type of being that is most primarily substance and to

¹¹ Aristotle also contends in *Zeta* 10 that, "when we come to the concrete thing...there is no definition, but they are known by the aid of intuitive thinking or of perception" (*Metaphysics*, 1036a 1-6).

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address some puzzles and issues surrounding this question. In *Zeta* 3, Aristotle presents two criteria that can be regarded separately as necessary conditions, and perhaps collectively as sufficient ones, for identifying a principle or being as substance when he states that, “both separability and ‘thisness’ are thought to belong chiefly to substance.” (*Metaphysics*, 1029a 27-28)¹² Mary Louise Gill offers the useful suggestion that the criteria of ‘thisness’ and ‘separability’ each have two senses, and there seem to be two sorts of principles or beings that satisfy the thisness criterion, and two ways in which a principle or being could satisfy the separability criterion. Largely following Gill, the criterion of ‘thisness’ can be satisfied by a particular individual such as Socrates, presumably because such an individual is a subject to which other predicates belong without itself ever being a predicate. In addition, the criterion of ‘thisness’ can be satisfied by a species or universal designated by a phrase such as ‘this *human being*’ (a ‘this *something*’) since such a phrase indicates a determinate kind distinguished from other kinds. Similarly, the criterion of ‘separability’ can mean either separable in account or separable in existence. Separability in account occurs when it is possible to provide a definition of a principle without referring in that definition to an additional, distinct principle; e.g., if a thing’s form is separable in account, then one can define it without referring to the thing’s matter in that definition. Separability in existence is presumably the sort of ontological independence that allows something to be a subject of predicates without itself ever being a predicate, which parallels the first sense of ‘thisness.’¹³

¹² It is evident that Aristotle views thisness and separability as necessary conditions for qualifying as a substance, but it is less apparent that they should be regarded as sufficient conditions. This is because, as will be described below, a composite seems to satisfy both criteria yet Aristotle quickly rejects it as a candidate for substance. The importance of separability and thisness for the understanding of substance is first noted in the *Metaphysics* at *Delta* 8 (*Metaphysics*, 1017b 23-25) where Aristotle describes these criteria as one of two senses of ‘substance,’ the other being a substratum not predicated of anything else.

¹³ See Gill, *Aristotle on Substance*, pp. 31-38 for her discussion of these criteria.

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With the criteria of thisness and separability in hand, Aristotle sets out to determine the principle or being that is most fundamentally identified as substance. In *Zeta* 3, Aristotle famously considers matter, the composite, and form as candidates for substance, but summarily rejects the former two possibilities. In addressing the issue of whether matter might be substance, Aristotle rejects this as “impossible; for both separability and ‘thisness’ are thought to belong chiefly to substance.” (*Metaphysics*, 1029a27) Matter, divested of all determining characteristics and independent of a form which organizes it into a determinate being, is a completely undetermined potentiality rather than a determinate *this* in either of the senses mentioned above. Moreover, as a completely undetermined, pure potentiality matter has no essence that can be defined and is thus not separable in account, nor is it separate in existence since matter exists only determinately and is thus dependent on a form. After this brief consideration of matter’s candidacy as substance,¹⁴ Aristotle quickly dismisses the composite as most fundamentally substance by asserting that, “The substance compounded of both, i.e. of matter and shape, may be dismissed; for it is posterior....” (*Metaphysics*, 1029a31) Aristotle’s point is simply that if matter is not the fundamental substance, then neither is the composite of matter and form since matter, as one of the

¹⁴ The issues here are, of course, complex and much that can be said in defense of the candidacy of matter as substance. For example, Michael Loux is one of many to observe that “proximate matter”, i.e. the particular matter comprising a composite substance of a given kind, plays a significant role in the explanation of a substance, and might even enter into the composite’s definition. Nevertheless, as Loux acknowledges in *Primary Ousia*, this does not imply that proximate matter is itself properly regarded as substance for “although no complete account of why things are oak trees or human beings can fail to make reference to the kind of stuff out of which they are composed, what functions as matter in an account of this sort is of itself a thing for which it is possible to provide something analogous to the ousia explanation into which it enters” (Loux, p. 158). In other words, a further account or definition can be provided of such matter, so it cannot be regarded as separable in account.

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composite's constitutive principles, "precedes" the composite in being.¹⁵ Indeed, Aristotle's swift dismissal of the composite is somewhat remarkable and puzzling here since he emphasizes the importance of thisness and separability for the concept of substance just lines before he rejects the composite, and yet the composite seems to be a good candidate for satisfying at least one sense of both criteria. Nevertheless, the elimination of matter and the composite leaves the form as the remaining viable candidate for 'substance.'

However, while it will be seen below that the species form plainly satisfies at least one sense of the thisness and separability criteria of substance, it is not immediately evident that the same claim can be made about the particular form. This result is noteworthy since we have seen that the species form is ontologically dependent on the particular form, and so it conflicts with the result one might reasonably expect. The discussion will proceed with the more difficult case of whether the particular form satisfies both of these criteria before providing a description of how the species form satisfies them.

The particular form, *qua* particular, obviously fails to satisfy the second sense of the thisness criterion since it is not a determinate kind or universal, but it can be argued that it meets the thisness criterion in the first sense, namely, as a particular individual that is a subject but never itself a predicate. The particular form can be understood to meet the first sense of the thisness criterion through its relation to a concrete individual, which seems non-controversially to meet the first sense of the thisness criterion. This relation is crucial because a particular individual such as Socrates is arguably identical with the soul that is his particular form since his soul is the organizing principle that makes him the being that he is.¹⁶ Thus, if Socrates is identical with his soul, and Socrates is a subject that is never a predicate, then Socrates' soul is a

¹⁵ Whether Aristotle means to suggest that matter precedes the composite not only ontologically in the sense described above, but also conceptually, i.e., "in account", is a more complex issue that does not need to be resolved for the present purposes.

¹⁶ Even if Socrates is identified with his form, or soul, because it is his soul that makes him the being that he is, it should be clear that Socrates' soul cannot function as an organizing principle unless it stands in relation to his body.

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subject that is never a predicate. In this manner a particular form can be thought to satisfy the thisness criterion. However, the case for the particular form satisfying the separability criterion is more problematic. In its most common manifestation as a principle of a composite substance, the particular form seems neither separate in existence since it cannot exist independently of matter, nor separate in account since we have seen that on Aristotle's view the particular cannot be the object of a definition. However, perhaps the best case that can be made for the particular form satisfying the separability criterion is that it is separate in account. For although the particular form, *qua* particular, is indefinable, it provides the ontological basis for the species form that is both the object of a definition and, as will be seen subsequently, separate in account. In other words, the relation of functional identity that applies universally to members of a species is real and definable because of the particular forms that are its terms, and thus the particular form can be said to be indirectly separable in account through the definition of the species form that it makes possible. Thus, if it is granted that the particular form indirectly satisfies the separability criterion, then it is reasonable to conclude that the particular form meets both of the necessary conditions for substance. Nevertheless, the failure of the particular form more immediately to satisfy the separability criterion for substance is a potential obstacle both for interpreting Aristotle as positing particular forms and for thinking that he would have regarded such forms as substances even if he posited them.

Fortunately, however, the species form satisfies both the thisness and separability criteria more straightforwardly than does the particular form. First, the species form satisfies the second sense of the thisness criteria by being a determinate kind, or universal, distinguished from other kinds, which is represented by phrases such as 'this human being'. Secondly, the species form satisfies the first sense of the separability criterion by being separate in account. For it is unnecessary to appeal to a further, distinct principle or being such as a thing's matter in order to define a species form. For example, defining a human being in terms of the soul's three functions does not require referring in the

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definition to the matter of which human beings are composed. Nor does defining the species form require incorporating the particular form into its definition despite the species form's ontological dependence on the particular form. For example, one need not refer to Socrates' soul, or any other individual human being's soul, in defining 'human being' even though the existence of the species depends upon the existence of at least one member. As a result of satisfying these two criteria, the species form can be regarded as a type of substance. Equally importantly for the present discussion, the species form conforms to all three of the Aristotelian positions stated at the outset of this section concerning an object of a definition yielding scientific knowledge. Accordingly, the species form is properly regarded as such an object.¹⁷

Having thus demonstrated that the species form is a type of substance and an object of a definition it is finally possible to provide a short description of how the species form functions as the object of a definition. It will be recalled that the particular form, *qua* particular, cannot itself be the object of a definition, but it can be described as a set of fundamental functions that stand in a relation of functional identity with other actual or possible particular forms. The species form is this relation of functional identity, and to define it is both to isolate the functions of the particular forms that allow them to be so related to others and to state these functions in a general formula. Thus what is expressed in the definition are the essential characteristics belonging to every actual and possible¹⁸ member of a class. A particular being belongs to a species because its fundamental (essential) functions are common to some other actual or possible beings. In other words, the species is predicable of the concrete individual because of its particular form. The definition of the species form thus applies universally to its members, can be stated without reference to any particular member, and thus has a type of permanence that allows it to yield scientific knowledge of objects. Once again, it is important to emphasize that as

¹⁷ It should be evident that the analysis provided here of the species would also hold true of another universal, namely, the genus.

¹⁸ The importance of including 'possible members' of the class will be discussed below.

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a definable relation the species form is ontologically dependent on the particular forms that are its terms, but that the definition of the species form does not refer to any individual particular form in its formula.

After completing this discussion of the meaning of the concepts of the particular form and the species form it is now possible to describe some of the interpretive advantages of the previous analysis and to address some difficulties related to it.

IV

Interpretive Advantages to the Present Interpretation

The preceding account of the distinction between particular form and species form has a number of interpretive advantages for Aristotle's treatment of substance and form in the *Metaphysics*. As a prefatory remark to the discussion of these advantages, it is important to emphasize again that although there is textual evidence in Aristotle's works for a distinction between particular forms and species forms, he does not expressly defend the concept of the species form as a real relation of functional identity holding between actual and possible members of a class. Nevertheless, this view of the species form does yield the advantages below and is consistent with central Aristotelian texts and doctrines.

One advantage of the account of the species form as a real relation holding between actual and possible members of a class is that it establishes an explanation and foundation for Aristotle's realism concerning scientific knowledge of universals. It is, of course, widely recognized that Aristotle held the epistemologically realistic view that our scientific knowledge of universals corresponds to a reality existing independently of human cognition. Aristotle's perspective on this issue naturally raises the question of how universals can have the objective status necessary for such realism without being posited as entities on the order of Platonic Forms. The interpretation of the species form as a real relation holding between actual and possible members of a class provides an answer to this question since the species form, so construed, exists

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objectively and independently of the human intellect that grasps it. This interpretation thus prevents the reduction of Aristotle's view of universals both to a Platonism that posits them as particular, eternal entities and to a conceptualism that would ascribe to them only epistemic status and deny their objectivity, which is inconsonant with Aristotle's broader realistic perspective.

However, one might object that the present interpretation does not yield the advantage of preserving Aristotle's realism because it rests on a faulty concept of what constitutes a *real* relation. According to this objection, a real relation requires two *actual* terms, but the present interpretation regards the relation constituting a species form to be real for a class having only one actual member bearing a relation of functional identity to merely possible members. In response to this objection, it is important first to note that any interpretation of the concept of 'species' in Aristotle must allow for species having only one member since Aristotle himself expressly acknowledges such species. For example, Aristotle indicates in *Zeta* 15 that the sun is a unique particular, i.e. belongs to a species with only one member, and he also contends that its status as the sole member of a class leads some to think falsely that it is definable *qua* particular. Aristotle holds that, "people err [in attempting to define the sun *qua* particular]...by the mention [in the definition] of attributes which can belong to another subject; e.g. if another thing with the stated attributes comes into existence, clearly it will be a sun; the formula therefore is general." (*Metaphysics*, 1040 b30-1040 b1; parentheses added) Aristotle's claim here is that the attempt to define the sun will refer to general attributes that can apply to other possible suns, and thus that the definition formulated does not define the sun *qua* particular. In addition, the definition places the sun in relation to other possible members in its class (suns) by virtue of attributes that are essential properties for beings of that kind. In other words, what allows a general definition to be formulated for a class with only one actual member is the relation of functional identity holding between the one actual member and other *possible* members of that class.

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Yet although these considerations provide a textual basis for the present interpretation's claim that a relation of functional identity holds even for a species with only one actual member, it does not address the objection that a real relation requires two *actual* terms whereas the present interpretation regards the relation constituting a species form as real as long as it has one actual term. There are, however, some clear responses to this objection. First, it should be noted that there are ubiquitous examples of relations holding between actual beings and possible beings that seem best described as real relations. For example, throughout the animal kingdom behaviors having procreative ends, such as the nesting behavior of birds, relate the actual members of a species to their potential offspring. Indeed, these behaviors, whether attributed to blind instinct or some other impulse, are based upon, and are rendered intelligible by, a relation between actual and possible members of the species of animals in question. Moreover, the number of real relations having actual and possible terms increases dramatically when one considers the manifold behaviors of human beings that are based upon their relation to an assortment of possible beings including potential children, deities, wealth, ice cream sundaes, political ideals, etc. Secondly, a more obvious Aristotelian rejoinder to the objection is that it presupposes that reality is exhausted by what is actual, which entails denying reality to potentiality as a type of possibility. Of course, denying reality to what is potential certainly might be a tenable metaphysical position, but it is clearly inconsistent with an Aristotelian framework. Most Aristotelians would thus probably regard the cost of accepting the objection above as too prohibitive, and these two rejoinders can be used to defend the present interpretation's claim to provide a basis for Aristotle's realism.

A second major advantage of the present interpretation is that it offers a way to resolve the presumed inconsistency between the three Aristotelian doctrines cited by Lesher in section one above. It will be recalled that Lesher contends that there is a fundamental inconsistency between the positions expressed in these three propositions: (A) No universal can be a substance; (B) The form is universal; and (C) The form is that which is most truly substance.

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Leshner is correct in holding that there is a formal inconsistency between these statements, but this inconsistency is eliminated when it is understood that the term 'form' is ambiguous and has two different senses in the propositions. In light of the previous discussion, the two different senses of the term 'form' in the propositions are 'species form' and 'particular form'. When Aristotle defends the view in Proposition B that the form is universal, the term 'form' seems very clearly to signify the species form since it is the species form and not the particular form that is a universal. In contrast, to the extent that Aristotle truly defends the view expressed in Proposition C that the form is that which is most truly substance, the term 'form' is probably best understood as 'particular form'. The reasons for interpreting the term 'form' as 'particular form' in Proposition C, notwithstanding the difficulty that the particular form has in satisfying the separability criterion, are twofold: (1) in determining what is most fundamentally substance Aristotle seems to place priority, if one considers the broader analyses of both the *Metaphysics* and the *Categories*, on the thisness criterion of substance as a particular that is a subject but never a predicate. It is the particular form and not the species form that satisfies this sense of the thisness criterion. In addition, (2) the ontological dependence of the species form on the particular form seems to make the particular form more fundamentally a subject and thus more truly substance. Accordingly, when Aristotle defends the view that no universal can be substance in Proposition A, this is best understood as asserting that the species form cannot be regarded as most truly and fundamentally substance, but this does not imply the same conclusion about the particular form. Thus, if one interprets these propositions in light of the particular form/species form distinction it removes the apparent inconsistency between these three fundamental positions that threatens the coherence of Aristotle's analysis of substance.

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V

Two Objections to the Present Interpretation

After describing two interpretive advantages of the present interpretation, it is appropriate briefly to consider two objections beyond those already discussed in the course of the above analysis. Of those objections already considered perhaps the most significant is the minimal textual support for the description of the concept of a species form, which Aristotle nowhere explicitly defends. It must be reiterated, however, that the objective of the present interpretation is not to argue that Aristotle expressly developed the notion of the species form as a relation of functional identity holding between particular forms, but rather it is to show that this interpretation is consistent with many of his major texts and doctrines, helps render crucial texts and doctrines intelligible, and can be viewed as implied by at least some texts.

One objection to the concept of a species form that has so far not been considered concerns Aristotle's treatment of the categories of substance and relation in the *Categories*.¹⁹ The objection has two distinct, but related, parts. The first part is based on Aristotle's express treatment in *Categories* 7 of the issue of whether substance is relative, i.e. whether it must be explained, like terms that are truly relational, with reference to a correlative, such as when knowledge is explained with reference to the knowable. He unequivocally rejects the notion that primary substance, i.e. the particular individual, is relative, saying, "With regard to primary substances, it is quite true that there is

¹⁹ The relation between the *Categories* and the *Metaphysics* is one of the central points of divergence for interpretations of Aristotle's account of substance with some commentators viewing these works as defending inconsistent doctrines while others view them as compatible. Michael Wedin takes the latter approach in *Aristotle's Theory of Substance*, and yet he nevertheless holds that Aristotle's discussion of secondary substance in the *Categories* is, "largely irrelevant to the program of *Metaphysics Z*" because the latter "is devoted almost entirely to form and its role in explaining the nature and feature of what the *Categories* calls primary substances." (Wedin, p. 121) In contrast, the present interpretation allows the discussion of form in the *Metaphysics* to be relevant to and illuminate the analyses of both primary and secondary substances in the *Categories*.

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no such possibility, for neither the wholes nor parts of primary substances are relative.” (Aristotle, *Categories*, 8a15) In addition, although his position and analysis of secondary substance, i.e. of a universal such as a species, is more nuanced than his treatment of primary substance, his general conclusion is that there is also little basis for regarding secondary substance as relative. This conclusion about secondary substances seems to be particularly problematic for the present interpretation since to deny that a secondary substance such as a species is relative seems to preclude regarding the species form as a relation. In addition, it is precisely in the context of this discussion that one would expect Aristotle to describe the conceptual link between ‘secondary substance’ and the category of relation if he regarded the former as a type of relation. Yet he does not take this opportunity to describe this conceptual link. The second part of the objection rejects as incoherent the concept of the species form as a type of substance based on a relation. The presumed incoherence of this concept arises from Aristotle’s recognition in the *Categories* of substance and relation as distinct categories. According to this objection, it is impossible, at least on Aristotle’s principles, to combine substance and relation coherently into a single concept without destroying the distinction between these categories.

Both parts of this objection initially appear to be problematic for the present interpretation, but it is possible to address both objections fairly easily. First, the appropriate response to the objection that Aristotle expressly rejects the species form as relative in *Categories* 7, which implies that the species form cannot be a relation, is that it rests upon a misconception of the type of relation constituting the species form. Aristotle’s claim that a secondary substance is not relative entails that it is unnecessary to refer to something *external* to a secondary substance in order to explain it, but this does not imply that the secondary substance is not itself best understood as a relation of functional identity holding between members of a species or genus, i.e. it does not imply

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that there is not a relation *internal* to the concept of a secondary substance.²⁰ For example, it is unnecessary to refer externally to animals that are not human beings in order to explain 'human being', but the explanation of the latter will nevertheless require indicating the essential characteristics that make human beings functionally identical, which establishes that these beings are in a relation of functional identity. Thus, in light of Aristotle's concern with relations external to secondary substances in *Categories* 7, rather than with a relation internal to the concept, one would not expect Aristotle to describe in this context a conceptual link between 'secondary substance' and the category of relation. Secondly, it must, of course, be acknowledged that Aristotle makes a distinction between the categories of substance and relation. However, this implies that the concept of a species form, *qua* secondary substance, is incoherent only if that concept completely eradicates the distinction between these two categories. Clearly, however, the concept of a primary substance as a particular individual, whether this individual is a composite or the particular form, is completely untouched by this analysis of the concept of the species form. Thus, the notion of a secondary substance as a unique type of relation does not threaten the overall distinction between the categories of substance and relation. Indeed, as we have seen, explaining the concept of a secondary substance in this manner provides objective, ontological status for universals such as the species without reducing them to a type of primary substance as with Platonic Forms.²¹

²⁰ In this context, an external relation is one holding between the members of a species and objects or principles not belonging to the species, and an internal relation is one holding between the members of the species and so is contained in the concept of a species form.

²¹ Theodore Scaltsas rejects the notion that the substantial form is a relation and cites both the relevant sections of the *Categories* mentioned above and *Metaphysics Nu* for textual support for this rejection. However, Scaltsas' denial that substantial form is a relation does not entail rejecting the notion that the species form, construed in the manner above, is a relation. Indeed, what Scaltsas identifies as "substantial form" is precisely what is described by the particular form above, and, as we have seen, the latter is not properly understood as a relation. Thus, Scaltsas' reasons for distinguishing substantial forms from both aggregates and relations can be used to distinguish

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A second, distinct objection that was not considered above is the apparent circularity in the preceding account of the species form. It will be recalled that the species form can only be regarded as an object of a definition yielding scientific knowledge if it is a type of substance. But the species form is a type of substance only if it satisfies the criterion of separability by being separate in account, i.e., by being definable without reference to a further, distinct principle. Thus, the objection is that there is a circle because the species form is demonstrated to be the proper object of definition only by being defined in a particular manner.

Admittedly, there is a circle involved in the above analysis, although the circle might be more a function of Aristotle's own treatment of these issues in the *Metaphysics* than a product of the present interpretation. Regardless of the source of the circularity, however, the real issue is whether it makes the above analysis question-begging by guaranteeing the result that the species form is a type of substance and thus an object of a definition that yields scientific knowledge. The above analysis would guarantee this result if it produces the same result for any definable thing that is proposed as a candidate for an object of definition. However, it is easy to find a definable counterexample that produces a different result such as Aristotle's familiar example of snubness. In order to be an object of a definition yielding scientific knowledge snubness, like the species form, must satisfy at least one sense of the thisness and separability criteria needed to qualify as substance. However, it is clear that even though 'snubness' can be determinately defined as 'concavity in a nose' it does not thereby satisfy the first sense of the separability criterion by being separate in account. For the definition of 'snubness' must refer to a further, distinct object, i.e. the nose, since it is a concavity specific to that object. Moreover, since snubness is also clearly not separate in existence it does not satisfy the separability criterion of substance, and it thus fails to qualify as substance. Thus, snubness is a counterexample of something definable that fails to qualify

particular forms from relations as well. See pp. 65-68 of Scaltsas' *Substances and Universals in Aristotle's Metaphysics*.

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as a substance and as an object of a definition yielding scientific knowledge. As a result, the circularity of the preceding analysis is not question-begging since it does not guarantee the result that the species form qualifies as substance.

VI

Conclusion

It is doubtful that any interpretation of Aristotle's treatment of the concept of form in the *Metaphysics* can completely unravel the tangled nest of issues, complexities, and problems it contains, and the present interpretation is certainly no exception especially in light of its format as a short paper. Nevertheless, it is hoped that the foregoing discussion illuminates some of the basic concepts, doctrines, and texts surrounding Aristotle's discussion of form and renders them more intelligible and consistent than they are often taken to be by Aristotle's commentators and critics.

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