

Jeremy Kirby

Aristotle's Metaphysics

Form, Matter and Identity



CONTINUUM STUDIES IN ANCIENT PHILOSOPHY

Aristotle's Metaphysics

Continuum Studies in Ancient Philosophy

Series Editor: James Fieser, University of Tennessee at Martin, USA

Continuum Studies in Ancient Philosophy is a major monograph series from Continuum. The series features first-class scholarly research monographs across the field of Ancient Philosophy. Each work makes a major contribution to the field of philosophical research.

Aristotle and Rational Discovery, Russell Winslow

Aristotle's Metaphysics, Jeremy Kirby

Aristotle's Theory of Knowledge, Thomas Kiefer

The Enduring Significance of Parmenides, Raymond Tallis

Happiness and Greek Ethical Thought, M. Andrew Holowchak

The Ideas of Socrates, Matthew S. Linck

Plato, Metaphysics and the Forms, Francis A. Grabowski III

Plato's Stepping Stones, Michael Cormack

Pleasure in Aristotle's Ethics, Michael Weinman

The Socratic Method, Rebecca Bensen Cain

Stoic Ethics, William O. Stephens

Aristotle's Metaphysics

Form, Matter, and Identity

Jeremy Kirby



Continuum International Publishing Group

The Tower Building
11 York Road
London SE1 7NX

80 Maiden Lane
Suite 704
New York NY 10038

www.continuumbooks.com

© Jeremy Kirby 2008

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any information storage or retrieval system, without prior permission in writing from the publishers.

British Library Cataloguing-in-Publication Data

A catalogue record for this book is available from the British Library.

ISBN-10: HB: 1-8470-6246-6

ISBN-13: HB: 978-1-8470-6246-8

Library of Congress Cataloging-in-Publication Data

Kirby, Jeremy.

Aristotle's metaphysics : form, matter, and identity/Jeremy Kirby.

p. cm.

Includes bibliographical references.

ISBN 978-1-84706-246-8

1. Aristotle. Metaphysics. 2. Metaphysics. I. Title.

B434.K57 2008

110.92-dc22

2008018905

Typeset by Newgen Imaging Systems Pvt Ltd, Chennai, India

Printed and bound in Great Britain by Biddles Ltd, King's Lynn, Norfolk

For Marlo

This page intentionally left blank

Contents

Introduction	1
1. Matters of Individuation	9
2. Resurrection and Entrapment	45
3. Aristotle on Composition and the Puzzle of Unity	67
4. Particularities and the Puzzle of Composition	101
Conclusion	132
<i>Notes</i>	139
<i>Bibliography</i>	151
<i>Index</i>	157

This page intentionally left blank

Introduction

The Metaphysics of Aristotle

The first known work containing the term “metaphysics” in its title, or at least an ancestor of that term, was a work belonging to Aristotle. This particular work was distinguished from his other treatises, or other tracts, so it seems, by an editor in the first century CE, commonly thought to be Andronicus of Rhodes.¹ At that time, the work in question was called “*ta meta ta physika*,” or the stuff after the stuff on physics. The stuff on “physics” would be contained in Aristotle’s treatise known to us as the *Physics*. Thus, Aristotle’s *Metaphysics* seems to have been thought of as a work that comes after, in some sense of the term, the *Physics*. And while it is not clear precisely what the sense in question is, it is tempting to think that editors thought that students should come to the more abstract problems of the *Metaphysics*, only after grappling with those problems found in Aristotle’s natural philosophy.

Precisely what metaphysics is, as a discipline, is an interesting philosophical question in its own right. Aristotle’s *Metaphysics* concerns a number of wide-ranging topics about reality as a whole. Therein, he is concerned, among other things, with the nature and varieties of causation, the nature of substance and property, the existence of an unmoved-mover, and the nature of possibility and actuality. And, to this day, these are perennial issues that will be taken up in almost any survey of metaphysics.

To be sure, Aristotle treats a number of issues in other sections of the corpus that would, nowadays, be considered metaphysical. And, in the *Metaphysics*, there are discussions that might not be thought of by a number of contemporary philosophers to be adequately described as metaphysical. So one can hardly understand metaphysics simply as the discipline that treats the topics taken up in

Aristotle's *Metaphysics*. With that said, one would not run far astray, were she to say that issues bearing a family resemblance to those in the *Metaphysics* are likely to be considered the subject matter of metaphysicians.

It is commonly thought that metaphysics is the study of what there is or of what exists. Aristotle spoke of the study of being *qua* being as first philosophy or theology. Needless to say, the physicist too, for example, is concerned with what exists, so this cannot be the story in its entirety. Perhaps metaphysicians, also known as ontologists, are those who are concerned with the existence of abstract entities? It is true, indeed, that ontologists frequently want to understand the natures that correspond to our use of expressions such as "number," "relation," "proposition," and so on. And the natural scientists will not attempt to prove that numbers, relations, or propositions, exist, even though they will make frequent use of these expressions. Ontologists, however, sometimes debate over the nature of concrete entities as well. The debate over the existence of God would, for example, be a debate over the existence of an entity that is, arguably, not abstract. And, it bears mentioning, some ontologists are keen to argue that only concrete entities exist.

Perhaps the subject matter of metaphysics concerns those questions, about the nature of reality, which lie beyond the scope of the other sciences? If physics is considered a fundamental discipline, then Andronicus' coinage seems fitting. Of course the mathematician, on this way of viewing matters, would seem to qualify as a metaphysician. The mathematician, however, much like the natural scientist, need not be concerned to prove that numbers, for example, exist.

Furthermore, we cannot appeal to the tendency of the ontologist to inquire about necessary truths, rather than mere contingencies, as this tendency may be said of the mathematician as well. For the present, we may allow ourselves a *via negativa*, by understanding the ontologist to focus her attention on a variety of questions, those concerning the nature and existence of putative entities, which lie beyond the ken of those working in the other disciplines. A fairly general account such as this may help to characterize the metaphysical and exegetical issues that we will encounter in what follows, as we will be concerned with Aristotle's views on the nature of a certain

kind of abstract entity, namely the universal, as well as the nature of a certain concrete entity, the substance or bearer of universals. The former may be thought of, for the moment, as a “way of being” that is shared by a plurality of objects. The property of “being five grams,” for example, might belong to a number of objects that are presently located upon my desk. And while it may sound strange to put matters in this way, we can say that the numerically same property, that of being five grams, is exemplified by a variety of objects on my desk. Substances, for the moment, in contrast, can be understood simply as the bearers of these properties.

Two Challenges to Change

One question that has not been neglected by metaphysicians is the nature of change. And, as strange as this might sound, some philosophers have denied that change occurs. In fact, some of Aristotle’s predecessors, namely the Eleatic philosophers, marshaled a number of arguments targeting the intelligibility of change. In the eighth chapter of the first book of the *Physics*, Aristotle takes up one of their arguments (191a24–29a):

Those who were the first to search for the truth philosophically and for the nature of beings were diverted and, so to speak, pushed off track by inexperience. They say that nothing that is either comes to be or perishes. For, they say, what comes to be either comes from what is or from what is not, and coming to be is impossible in both cases; for what is cannot come to be from what is not (since it already is), while nothing can come to be from what is not (since there must be some subject). And then, having reached this result, they make things worse by going on to say that there is no plurality, but only being itself.²

The puzzle that is raised seems to run syllogistically as follows:³

- (1) If there is at least one thing that comes into being, that entity will come to be from what is or what is not.
- (2) If it comes to be from what is, then it comes to be from what already is.

- But: (3) That which already is cannot come, anew, into being.
 [2,3] (4) It is not the case that it comes into being from what is.
 (5) If it comes to be from what is not, then it comes to be from nothing.
 But: (6) Something cannot come from nothing.
 [5,6] (7) It is not the case that it comes from nothing.
 [1,4,7] (8) It is not the case that there is at least one thing that comes into being.

Provided that one understands all change as being reducible to terms of coming-to-be (and perishing), the puzzle presents a formidable hurdle for the philosopher who accepts change. Aristotle, as we will see, would be unhappy with the direction of such a reduction. And he goes on to disarm this challenge by introducing certain distinctions concerning the ways that things are said to exist.

Like many of us, Aristotle believes that substances undergo change. But some would not, moreover, consider this claim inexorable. Consider the following modification of a puzzle, which is attributable to the comic playwright and philosopher Epicharmus.⁴ A stack of pennies has been placed upon a surface. Arguably, were I to remove one of the pennies, the result would be a new heap of pennies. (Were the stack not of pennies, but, rather, a stack of 100-dollar bills, which I had agreed to give you, you might protest that the removal of one of the bills makes for a stack that is different from the stack I agreed to give you). Furthermore, just as a heap of pennies is composed of individual pennies, human beings are composed of certain particles. Suppose, then, that someone contracted a debt with you. Three weeks later, you attempt to collect that debt. The person you contact, however, says the following:

A human being, I submit, is simply a collection of particles. And when particles are added to or subtracted from a collection, a new collection results. The contract you entered into was with one collection of particles, but I assure you, I am not that same collection of particles. As you can see, for example, my hair is slightly longer than the individual with whom you contracted the debt. Clearly, I am not the debtor.

On this view, let us call it the view of the Mereological Essentialist, objects do not really undergo change in the way we normally think of change. The stack of pennies, or the stack of 100-dollar bills, seems not to undergo a change; rather, these stacks simply seem to vanish, as new stacks replace their former location, when a penny or a 100-dollar bill is added or subtracted. Needless to say, the Eleatic arguments ring reminiscent at this point, as one is led to ask from whence the new stacks arrive? Do they arrive out of nothing and nowhere? On the view of the Mereological Essentialist, as it were, objects do not undergo change, as they simply enter into, and out of, existence.

It is worth pointing out a number of responses that one might make to the Mereological Essentialist.⁵ Suppose, for example, that we were to have a wax statue of Socrates. We might suppose that the object has a certain number of properties, e.g. it is a certain color, it has a certain smell, it even tastes peculiar, it is found in a particular location, when one raps one's knuckle on it, it makes a certain sound, and so on. Now, suppose that the statue is smashed by a press, and thereby loses the shape of the statue, leaving only a lump of wax. If we say that the statue simply went out of existence, and the lump of wax came into existence, then it is simply a mystery as to why the wax is similar in all of these respects, color, smell, taste, sound, place, and so on. However, if we understand the wax to be a continuant that undergoes the change of being a statue at one time and a non-statue at another, we face no such mystery.

Furthermore, the lender in Epicharmus' play might have responded as follows:

But I have a true memory of lending the money. But it is a true memory only if the state of remembering may be traced back in time in such a way that this state of remembering may be attributed to the same thing that underwent the experience of lending the money. In other words, I have a memory. But nothing can begin to exist with a memory. So I did not begin to exist just now, for example, with the reconfiguration of my molecules. And, by parity of reasoning: Neither did you dear debtor.

The lender, however, in Epicharmus' play, instead responds by striking the putative debtor. When the putative debtor becomes angered,

the (putative) lender responds by maintaining that the person who struck him is a different collection of particles than the collection arranged before him at present. Aristotle's response to the debtor would be a little more sophisticated. Aristotle, I take it, would argue that organisms and collections are fundamentally different in kind. Organisms have only some of their properties essentially, those which Aristotle would identify with the organism's form, while mere collections have all of their properties essentially. Thus, being human may be thought of as an essential property of mine. Were I to lose that property, it may be argued, I would no longer exist. Having short hair, however, is not an essential property of mine. If I were to go without a haircut for an extended period, I would not, thereby, be driven out of existence.

Matter, Form, and Paradox

The first book of the *Metaphysics* is concerned with the nature of cause and explanation. Having surveyed the views of his predecessors, Aristotle determines that there are four types of causes—those mentioned in the second book, third chapter, of the *Physics*. The first is the *causa materialis*, or the material cause. This is the stuff, for example the bronze, out of which something, e.g. a statue, comes to be. Next is the *causa formalis*, or the formal cause, which might, for the present be thought of as the figure imposed on the bronze that is responsible for the artifact's being a statue. Thirdly, we have the *causa efficiens*, the efficient cause, or that which brings an item about, as, for example, the sculptor brings about the statue. And, finally, there is the *causa finalis*, or the final cause, which is the end or that for the sake of which a statue is commissioned.

Aristotle, thus, distinguishes between the matter and the form of things. And in *Metaphysics* VII.8, he maintains that two organisms of the same species will be compounds of matter and form, which are different in virtue of their matter, but the same in terms of their form (1034a5–8):

And when we have the whole such and such a form in this flesh and in these bones, this is Callias or Socrates; and they are different

in virtue of their matter (for that is different), but the same in form, for their form is indivisible.

Suppose that we understand Socrates and Callias to be hylomorphic substances sharing the same form. (The important forms seem to be species taxa, for example, that of being *Homo sapiens*.)⁶ The form in question, we may assume for the moment, is a universal (UF). With respect to form, then, Socrates and Callias are identical. (If it helps, we might consider a possible state of affairs wherein Socrates and Callias are qualitatively identical—perhaps they are twins or clones.) So what will account for their being different? Aristotle maintains that it is in virtue of their matter that they are different (HI). We might stipulate, however, assuming that substances undergo change, that the material elements that compose Callias are redistributed to serve as the material elements of Socrates (HM). (While it may seem somewhat extraordinary, we may suppose that when Callias dies, Socrates, for reasons unknown to us, eats his corpse. Subsequently, over the course of 30 years, the material elements that composed Callias gradually replace those of Socrates.) Thus, Callias is identical to his matter and form, and, Socrates is, after the redistribution, identical to the same matter and form. With the acceptance of the Transitivity of Identity (TI), Socrates is, and of course is not, so runs the *reductio ad absurdum*, identical to Callias. Needless to say, we seem to suffer a serious case of double-vision if we allow for Socrates and Callias to be identical (NI) or co-located (NC), provided that we are willing to grant that Callias, having died, may re-enter existence (NR). In summary, the following propositions seem to entail an absurdity:

The Puzzle of Simple Composition

UF	Universal Form:	Form is a universal and the form of Socrates is numerically identical to Callias.
HI	Hylo-Difference:	Cospecific substances are numerically different in virtue of their matter.

HM	Hylo-Migration:	The matter of one substance may become the matter of another cospecific substance.
SH	Strong Hylomorphism:	Substances, such as Socrates and Callias, are to be identified with their matter and form (<i>Migration</i> for short).
TI	Transitivity of Identity:	For any cospecific substances, x, y, and z, if x = y, and y = z, then x = z.
NI	Non-Identity:	Necessarily, Socrates and Callias are not numerically identical.
NC	Non-Double Occupancy:	No two cospecific substances may occupy the same region of space at the same time.
NR	Gappy Existence:	Substances having deceased may re-enter existence (<i>Resurrection</i> for short).

Aristotle, however, faces a contradiction only if he is committed to the soundness of the argument. The thesis to be established herein is that Aristotle has the means to resist this argument. Establishing this thesis will, however, require making several interpretive decisions. And, consequently, an interpretation of Aristotle's metaphysics will emerge, and will, needless to say, require some defense. The reader can expect, in the chapters that follow, to find exegetical and philosophical treatment of the above propositions.

The Puzzle of Composition provides a nice point of departure for understanding, testing, and interpreting, the metaphysical views that developed out of Aristotle's studies concerning change. In this way, it respects the sentiment that students should view *ta meta ta physika* in light of *ta physika*. It is also a juncture whereat a number of interesting metaphysical and exegetical issues intersect, as the propositions enumerated above bear out. There are, undeniably, other points of departure. And many of these yield interesting interpretations, different in kind to that which the reader will find herein. But herein I defend the view that I have been persuaded to accept.

Chapter 1

Matters of Individuation

Matters of Change

In the *Physics*, I.7, Aristotle attempts to steer a middle course between two unwelcome alternatives: either that which comes to be comes to be from being, and, thus, already is, or, that which comes to be comes to be out of nonbeing. Aristotle's approach to this difficulty involves a distinction between form and matter. We can explain how a statue comes into existence by noticing that at one point in time the sculptor has a mere lump of material with which to work. When the work has been completed, a form has been imposed upon the sculptor's material. The lump of clay undergoes the transition from not being a statue, while lacking the form, to the state of being a statue, once the work of the artist is complete. Consider, then, the fifth premise of the Eleatic Puzzle:

- (5) If it comes to be from what is not, then it comes to be from nothing.

One might interpret Aristotle as maintaining that the premise is ambiguous between two interpretations:

- (5a) If it comes to be from what is not such-and-such, then it comes to be from nothing.
- (5b) If it comes to be from what is not in existence, then it comes to be from nothing.

The latter premise amounts to very little. If we assume that our candidate for change will come to be from what is not in existence, and what is not in existence is nothing, then (5b) simply says that

whatever comes into being from nothing comes into being from nothing. The former premise, while a little less vacuous, appears, however, to be false. For we might take, in the antecedent of this conditional, the term “it” to refer to a statue of Pericles. And we may suppose that the statue comes to be such-and-such a statue from a mere lump of bronze, which, needless to say, is not such-and-such. But this is not to say that the statue comes to be from nothing. On the contrary, the lump of bronze is something (191a7–12):

The underlying nature can be known by an analogy. For as the bronze is to the statue, the wood to the bed, or the matter and the formless before receiving form to anything which has form, so is the underlying nature to substance, i.e. the “this” or existent.

In this same way, Aristotle is led to analyze those substances with which he is most concerned: biological organisms (190a31–b5):

Things are said to come to be in different ways. In some cases we do not use the expression “come to be”, but “come to be so-and-so”. Only substances are said to come to be without qualification. Now in all cases other than substance it is plain that there must be something underlying, namely, that which becomes. For when a thing comes to be of such a quantity or quality or in such a relation, time, or place, a subject is always presupposed, since substance alone is not predicated of another subject, but everything else of substance. But that substances too, and anything that can be said to be without qualification, come to be from some underlying thing, will appear on examination. For we find in every case something that underlies from which proceeds that which comes to be; for instance, animals and plants from seed.

Thus, Aristotle’s use of matter, as substrate, and form, as a way that the substrate is modified, plays an integral role in his analysis of change. Indeed, Aristotle’s technical term for matter, *hylê*, does not appear in the works that are typically thought to precede the *Physics*. And, for this reason, some scholars believe that Aristotle includes matter in his ontology as a result of his having grappled with the analysis of change.

Matters of Difference

Matter, however, seems to account for more than that which underlies change. On the traditional view, Aristotle also believes that matter accounts for numerical difference. In the *Metaphysics*, VII.8, he maintains that two organisms of the same species will be compounds of matter and form, which are different in virtue of their matter, but the same in terms of their form. Aristotle's comments here, and elsewhere, have suggested to some scholars that he takes matter to be a *principium individuationis*, or a principle of individuation. Other scholars, however, are weary of the interpretive costs of attributing this view to Aristotle.

A fair amount hinges on this exegetical issue. For if Aristotle does not take matter to be that which is responsible for the numerical difference that obtains between Socrates and Callias, then it would seem that we may jettison HI:

HI Hylo-Difference: Cospecific substances are numerically different in virtue of their matter.

Having done so, the Puzzle of Composition might be sidestepped. If matter is not that which is responsible for the numerical difference of Socrates and Callias, one might wonder why SH, the claim that organisms are to be identified with their matter and form, ought to be accepted. For if the form of Socrates and Callias really is numerically identical, one cannot hope to identify Socrates with his form, as one might as easily, thereby, identify Callias. (We will later consider the merits of denying that the form in question is a universal.) In this way, the matter of Socrates and Callias would seem to be the only means for providing the requisite uniqueness for identifying organisms with their matter and form. Of course, one might be willing to part ways with SH as well, but then it seems unclear what Aristotle's hylomorphism amounts to. Furthermore, if matter is to be considered the principle of individuation, this is *prima facie* evidence for thinking that Aristotle might reject HM, the claim that the matter of one substance may become that of another. For if matter, in some sense of the term, is that which really individuates Socrates and Callias, then the matter of one could not become the matter of the other.

Identity, Diversity, and Unity

Individuation and predication

One might think of the following text, from *Metaphysics* V.6, as fairly supportive of the view that Aristotle does think of matter as the principle of individuation (1016b32–5):

Again some things are one in number (*eti de ta men kat' arithmon estin hen*), others in species (*ta de kat' eidos*), others in genus (*ta de kata genos*), others by analogy (*ta de kat' analogian*); in number those whose matter is one, in species those whose formula is one, in genus those to which the same figure of predication applies, by analogy those which are related as a third thing to a fourth.

While it looks as if Aristotle is here explicitly maintaining that matter is that which individuates, saying in effect that things are one in number when they are one in matter, there is some reason for caution. One source of confusion has been the tendency to confuse the relation of numerical sameness with that of unity or wholeness. In fact, Professor Łukasiewicz and Professor Anscombe, in interpreting Aristotle's metaphysics, were thought to disagree over the "source of individuality," the former taking the side of form, the latter that of matter, until Sir Karl Popper demonstrated that Łukasiewicz was treating a part-whole question, while Anscombe was taking up that of numerical sameness and difference.¹ Perhaps it is with this in mind that some scholars believe that Aristotle is not saying that matter is that in virtue of which things are numerically different, but that a continuous whole, or unitary object, is simply continuous with its matter.²

For example, when one says that the Northern Hemisphere and the Southern Hemisphere of a planet, make one object, or are one in number, one is discussing the way in which continuous parts make up one object or whole. And this part-whole relationship is different in kind from the relation to which we refer when, for example, we say that Hesperus and Phosphorus are one in number. For the terms "Hesperus" and "Phosphorus" name the same entity, namely, Venus, while "Northern" and "Southern" do not name the same entity, even though they may refer to different parts of the same entity.

In this way, it is possible that when Aristotle says “things are one in number whose matter is one,” he might be thought to mean that things like planets are one thing, rather than two, since their parts, say the Northern and Southern Hemispheres, are one, or continuous, in terms of their matter. He need not be saying, so runs the argument, that things such as Hesperus are numerically identical to Phosphorus, that is Hesperus = Phosphorus, in virtue of the fact that the *relata* have the same material nature. And if it is the former relation that Aristotle has in mind, we need not take the above text as evidence for the claim that Aristotle takes matter to be the principle of individuation.

There are, however, certain difficulties that face such an interpretation. For suppose we take Aristotle to be committed to the following claim:

- (1) That, and only that, which is one is continuous in matter.

Aristotle will have to say that if something is one, it is continuous in terms of its matter, and if something is continuous in terms of its matter, it will be one. Two people shaking hands, however, might be thought to be continuous in matter (or we may suppose that their skin bonds together, is surgically conjoined, or, even, that the individuals are Siamese twins), but we are loath to say that they are one person. Furthermore, we may countenance things that are one but not continuous in their matter. A deck of cards is not continuous in terms of its matter, when it has been dealt in a game of Texas Hold'em, but surely the deck still exists.³

And the difficulties do not end here. As S. Marc Cohen has argued, there are two ways of interpreting (1):

- (2) x is one individual if, and only if, x 's matter is continuous.
 (3) x and y together make up a single individual, if, and only if, the matter of x is continuous with the matter of y .

If one could establish that (2) is the correct interpretation, then it would be somewhat more difficult to argue with the claim that the above text does not support the view that matter is the principle of individuation. And while it may seem plausible in isolation, it is

difficult to square, or so it seems to me, with the actual passage. Aristotle is concerned in this chapter, as all will agree, with distinguishing oneness in number from oneness with respect to genus, form, and analogy. Thus, (2) and (3), where F is a formal, generic, analogical, or, let us say, arithmetical, predicate, have the form of (4) and (5) respectively:

- (4) x is one in respect F .
- (5) x is one with y in respect F .

However, (5), as Cohen points out, is a superior candidate to (4). For several Bekker lines earlier, 1016a24–7, Aristotle has just said the following:

Things are called one whose genus is one though distinguished by opposite differentiae; and these are called one because the genus which underlies the differentiae is one (e.g. horse, man, and dog are something one because all are animals).

Taking the reading represented by (4), then, requires us to take Aristotle's point to be, for example, not that *Equus caballus* is one in genus with *Canis familiaris*, i.e. that both belong to the same genus, for that would involve a two-place predicate. Instead we would have to read Aristotle as simply asserting:

- (6) *Equus caballus* is one in respect of genus.

But (6) is a strange locution. Why would someone state, of any given species, that it belongs to one genus? Why should one expect otherwise? Nobody would expect *Equus caballus* to belong to two genera. So it is better to understand the predicate in question to be of the two-place variety, as it is in (5), rather than the monadic predicate, as in (4). And if we take the subject of the paragraph to be treating two-place predicates rather than one-place predicates, the more consonant reading would be illustrated by the following:

- (7) Tully is one with Cicero if, and only if, the matter of Cicero is identical with that of Tully.

Put another way, identity is expressed in terms of a two-place predicate: x is identical to y , where x might be the *inventor of bifocals* and y is *Ben Franklin*. Oneness, in contrast, is expressed in terms of a one-place predicate: x is one, or, the inventor of bifocals was one [individual]. But when Aristotle says that Socrates and Callias are one in form, as their account is one, he is making use of a two-place predicate. As a result, we should expect that in the passage in question, Aristotle is not simply talking about oneness. In particular, we may take him to be making use of a two-place predicate, in connection with the phrase “in number whose matter is one.” And if this is the case, we may understand him to be making the claim that substances of the same species are one, in the sense of being identical, whose matter is one.

One might counter that it is anachronistic to read Aristotle as being mindful of sentence-schemata, such as “ x is one” or “ x and y are one,” or that he is simply not in this passage concerned with such schemata.⁴ But the fact remains that reading Aristotle in these terms requires reading Aristotle as, at best, overlooking the distinction in question, and, at worst, as speaking equivocally. The traditional view, which reads Aristotle as upholding the view that matter is the principle of individuation, in contrast, need not visit this result on Aristotle.

The Zeta-eight passage

Another *locus classicus* for the traditional interpretation, to which we may turn our attention, is a passage that we have already encountered. This is the passage, we may call it the Zeta-eight passage, wherein Aristotle says explicitly that Socrates and Callias are distinguished in terms of their matter (1034a5–8):

And when we have the whole such and such a form in this flesh and in these bones, this is Callias or Socrates; and they are different in virtue of their matter (*heteron dia tên hulên*), for that is different, but the same in form, for their form is indivisible (*atomon*).

While this passage appears straightforwardly as evidence for the traditional view, those who would resist the received interpretation have sought to maintain that Aristotle is not, as it were, talking about what

it is that makes Socrates and Callias different, but, rather, how one determines that Socrates and Callias are different. William Charlton, for example, says the following:

There is, I claim, nothing in this passage or its context to show that Aristotle is considering . . . [w]hat in the nature of specifically identical individuals makes them numerically distinct . . . rather than . . . how we tell one individual from another.⁵

Support for this claim is marshaled from *Metaphysics* X.9, we may call this the Iota-Nine Passage, where Aristotle seems to argue that qualitative differences do not make things different in species (1058b1–11):

And since one element is formula and one is matter, contraries which are in the formula make a difference in species, but those which are in the compound material thing do not make one. Therefore, whiteness in man, or blackness, does not make one, nor is there a difference in species between the white man and the black man, not even if each of them is denoted by one word. For man plays the part of matter, and matter does not make a difference; for it does not make individual men species of men, though the flesh and bones of which this man and that man consist are other. The compound thing is other, but not other in species, because in the formula there is contrariety. And this is the ultimate indivisible kind (*atomon*). Callias is formula together with matter; white man, then, is also, because Callias is a white man; man then is white only incidentally.

Charlton, if I understand correctly, believes that Aristotle, in this text, is saying that matter does not account for any metaphysical difference. The differences between a pale and a dark individual are incidental. That which underwrites the qualitative difference is a difference in material nature. As such, these differences are contingent, and unable to do the metaphysical work of individuation. The metaphysical work of individuation holds necessarily, and not merely contingently, if it holds at all. And, as we are asked to notice, the language in 1058b1–11 bears some resemblance to that found in the

Zeta-eight passage. One finds such terms as “indivisible,” “flesh,” “bones,” and, let us assume not insignificantly, the name “Callias.” And, since Aristotle is not taking qualitative difference to make a metaphysical difference in the Iota-nine passage, and the Zeta-eight passage bears a resemblance thereto, we should not, as this line of reasoning has it, expect the difference between Socrates and Callias in the Zeta-eight passage to be metaphysical either. The difference, Charlton suggests, is, rather, merely epistemic. The difference in matter and qualitative difference is how we distinguish Socrates from Callias, i.e. how we tell them apart.

The distinction being drawn can be illustrated in the following way.⁶ If one wants to know whether there is a certain book in the library, one will consult the catalogue. One can determine whether the library has a book, that is, by consulting the catalogue. We would, however, hesitate to say that the fact that the catalogue contains an entry corresponding to our book is the fact that is responsible for the library’s having the book on the shelf. On the contrary, it is because the book is on the library’s shelf that we find an entry corresponding to it in the catalogue. The entry in the catalogue provides epistemic warrant for thinking that the book is on the shelf, but it does not make it the case that the book is on the shelf. We may refer to a criterion such as the entry in the catalogue as a useful or instrumental criterion.

Charlton’s idea, then, seems to be that matter, according to Aristotle, is simply an instrumental criterion for distinguishing Socrates from Callias. However, it has been pointed out that the Zeta-eight passage is entirely concerned with ontological affairs rather than epistemic conditions. Therein, Aristotle is addressing such issues as the generation of substances, and the relation of matter to form.⁷ It would seem strange were he to suddenly, and without warning, turn to discussing the epistemic conditions for distinguishing Socrates and Callias, when he has been doing ontology theretofore.

Furthermore, Edward Regis has pointed out that were Aristotle merely discussing the conditions whereby we are able to discern Socrates from Callias, one would expect the term “*dia*” to be followed by the genitive *tês hulês*, rather than the accusative *tên hulên*.⁸ And Regis is surely right. “*Dia*” plus the accusative, for Aristotle (as a glance at Bonitz’s index will bear out) carries a strong causal sense, in contrast

to the instrumental sense that is associated with the genitive. Herbert Smyth's grammar text states:

Dia with genitive is used of an agent employed to bring about an intended result. *Dia* with accusative is used of a person, thing, or state, beyond our control.⁹

And the ability to distinguish Socrates from Callias is certainly not a thing, or state, beyond our control. Their numerical difference, in contrast, is well beyond our control. To sum things up, what we would expect to see in the text, if Aristotle is merely making an epistemic point, in our Zeta-eight text, is this:

And when we have the whole such and such a form in this flesh and in these bones, this is Callias or Socrates; and they are different in virtue of their matter (*dia tês hulês*), for that is different, but the same in form, for their form is indivisible (*atomon*).

What we find in the passage, however, is this:

And when we have the whole such and such a form in this flesh and in these bones, this is Callias or Socrates; and they are different in virtue of their matter (*heteron dia tên hulên*), for that is different, but the same in form, for their form is indivisible (*atomon*).

It is pretty difficult, for my part, to pass the Zeta-eight passage off as merely epistemic. To do so would seem to place a serious intrusion on the text.

Ultimate, individual, matter

Alongside the texts we have been discussing, 1016b32–35, scholars also point to *Metaphysics* VII.10, 1035b27–31:

But man and horse and terms which are thus applied to individuals, but universally, are not substances but something composed out of this particular formula and this particular matter treated as universal; but when we come to the individual, Socrates is

composed of ultimate individual matter; and similarly in all other cases.

When Aristotle says that Socrates is composed of “ultimate individual matter,” it is fairly difficult to read him as making an epistemic claim. Ultimate, individual, matter, seems fairly unique—so unique that we might take it to serve as a principle of individuation.

It appears, therefore, to my mind, that the text supports the traditional view, wherein one understands Aristotle as thinking of the matter of a sensible substance to be the principle of individuation. But how does matter serve as the principle of individuation? The answer to this question is far from clear. In fact, the degree of difficulty that is involved in answering it is, perhaps, so great that one may sympathize with the approach that attempts to sidestep the difficulty, by interpreting Aristotle as doing the same. In the following sections, I will consider some of the philosophical difficulties involved in taking matter to be the principle of individuation, and attempt to provide some justification for the claim—which Aristotle certainly seems to make—that matter is what is responsible for numerical difference among cospecific substances.

Aristotle and the concept of identity

While some scholars have thought that Aristotle’s locutions concern wholeness, others identity, some scholars have thought that Aristotle confuses the two.¹⁰ If this is the case, one might make the following criticism of our attempt to disentangle Aristotle’s metaphysics from the Puzzle of Simple Composition. If Aristotle lacks the concept of identity, then any puzzle that relies upon that concept cannot meet up with his view. For Aristotle’s problems are more severe than those raised by the Puzzle of Simple Composition, if he does not have an adequate grasp of the concept of identity.¹¹ The following passage has been thought to be suggestive of this very idea (1018a7–9):

Clearly, therefore, sameness is a unity of the being either of more than one thing or of one thing when it is treated as more than one, i.e. when we say a thing is the same as itself; for we treat it as two.

Aristotle seems to treat the relation of sameness in terms of wholeness, or composition, when he says: "sameness is a unity of the being . . . of more than one thing." However, thereafter, he seems to extend this analysis of sameness to a relation to which it clearly does not apply, numerical identity, when he says "sameness is a unity of the being of . . . one thing when it is treated as more than one, i.e. when we say a thing is the same as itself; for we treat it as two." Of course, one might read Aristotle as marking a distinction here, rather than extending an analysis. That is, one might take the claim "when we say a thing is the same as itself . . . for we treat it as two" as suggesting that $x = x$ simply means that x at t , and x at $t+1$, compose a whole. And, if this is the case, Aristotle would be, arguably, confusing identity with composition.

Still, scholars maintain that what Aristotle really means, when he says "for we treat it as two," is simply that when we say something is the same as itself, we need to refer to the entity in different ways, by making use of different names or (definite) descriptions.¹² And, indeed, Aristotle does seem to say something very close to this in the *Topics* (103a9–10):

First of all we must determine the number of ways we talk of sameness . . . We generally apply the term numerically, specifically, or generically—numerically in cases where there is more than one name but only one thing, e.g. doublet and cloak.

There is, nevertheless, still some reason for concern. Consider what Aristotle says in *Metaphysics* V.6 (1015b16):

We call one (1) that which is one by accident, (2) that which is one by its own nature. (1) Instances of the accidentally one are Coriscus and musical, and musical Coriscus . . . For all these are called one by accident, just and musical because they are accidents of one substance, musical and Coriscus because the one is an accident of the other.

Aristotle, then, seems to countenance accidental unities, or items which Gareth Matthews has deemed "kooky objects."¹³ Accidental unities are those objects that supervene upon a collective set of

features that do not bear a particularly interesting relationship to one another. When the metaphysician, with an air of paradox, asks whether Socrates and Socrates-seated are the same or not, Aristotle, in his usual fashion, seems to suggest that in a way they are, and in a way they are not. Socrates and Socrates-seated, of course, have different modal properties. The former, but not the latter, may stand, and, at the same time, remain in existence. But there is a sense, a fairly less significant sense, Aristotle seems to think, in which we might say they are the same. Someone might try to pick Socrates out of a crowd, for example, by saying something akin to “the seated person who is conversing,” as Aristotle explains in the *Topics* (103a32–9):

[A] third use is found when it is rendered in reference to some accident, as when the creature is sitting, or who is musical is called the same as Socrates. For all these are meant to signify numerical unity. That what I have just said is true may be best seen where one form of appellation is substituted for another. For often when we give the order to call one of the people [among those who] are sitting down, indicating him by name, we change our description, whenever the person to whom we give the order happens to not understand us; he will, we think understand better from some accidental feature; so we bid him call to us the man who is sitting or who is conversing—clearly supposing ourselves to be indicating the same object by its name and by its accident.

And, while the seated interlocutor may go out of existence when she stands or ends her conversation, the substantial being who has left her seat and has become at this point reticent, will, nevertheless, continue on in existence.

To be sure, most of us would prefer to say that we sometimes make use of a practice whereby we use descriptions to refer, instead of names. Indeed, the descriptions in question do not always have to be accurate to refer. When I say that the “Bald individual drinking champagne in the corner is married,” I successfully refer, even in the case where he is drinking mineral water.¹⁴ And we are not inclined to say that this practice commits us to the existence of kooky objects. But Aristotle seems to believe otherwise. He seems to take the fact that we make use of certain descriptions such as “the man in the corner” to

suggest that in a sense the man in the corner and, say, the chair of the department, both exist, albeit accidentally, copresently, in the corner.

Indeed, Aristotle relies on his notion of an accidental unity, in a discussion on oneness. The oneness of the musical and the just, or the musical and Coriscus, or the seatedness and Socrates, for example, is explained by their being bound together (the former in one substance, the latter being an aspect of a substance). But this explanation is also that given in the passage concerning sameness, which we were previously considering. For in *Metaphysics* V.9, Aristotle says (1017b26) thus:

We call the same (1) that which is the same in an accidental sense, e.g. white and musical are the same because they are accidents of the same thing, and man and musical because the one is the accident of the other.

Thus, if we consider the discussion of sameness with which we began, we see Aristotle relying upon his views concerning accidental sameness. And, when we consider the discussion of oneness in V.6 we see Aristotle relying, again, on his views concerning accidental sameness. If the same explanation for oneness is invoked for the explanation of sameness, perhaps there is some reason for thinking that Aristotle is conflating the two relations.

That Aristotle is thus confused seems a little controversial. To my mind, Aristotle seems to rely upon the concept of identity in order to distinguish between accidental and substantial unities. It would seem strange indeed if Aristotle did not make the following natural inference: Socrates and Socrates-seated are numerically different, as, by an application of Indiscernibility of Identicals, Socrates and Socrates-seated differ in terms of their properties. And, there is some reason for thinking that Aristotle made use of the principle of the Indiscernibility of Identicals, in the following passage from the *Topics* (105b25):

Speaking generally, one ought to be on the look-out for any discrepancy anywhere in any sort of predicate of each term, and in the things of which they are predicated. For all that is predicated of

the one should be predicated also of the other, and of whatever the one is a predicate, the other should be a predicate as well.

The above passage seems very close to saying something akin to the claim that if $x = y$, whatever is truly said of x will be said of y and whatever is truly said of y will be said of x . So there is sufficient reason for thinking that Aristotle made use of Leibniz Law (and indeed may be here articulating it). And if this is the case, we have every reason to suppose Aristotle had a firm grasp of the conceptual differences between wholeness, on the one hand, and numerical identity, on the other.¹⁵

At this point, one might attempt to argue that Aristotle's countenance of kooky objects suggests a potential solution to the Problem of Simple Composition. For that puzzle depended upon the assumption that entities, such as Socrates and Callias, cannot occupy the same position at the same time.

NC Non-Double Occupancy: No two cospecific substances may occupy the same region of space at the same time.

One might argue that accidental unities violate NC, as Socrates and Socrates-seated seem to occupy the same place at the same time. Socrates is certainly a substance. So if Socrates-seated is considered to be a substance, it would seem that we have a violation of the principle in question. There is, however, ample reason for thinking that Aristotle would reject the idea that Socrates-seated is a substance (*Metaphysics* VI.2, 1026a15–21):

For the arguments of the sophist deal, we may say, above all with the accidental; e.g. the question whether musical and lettered are the same, or whether musical Coriscus and Coriscus are the same, and whether everything which is, but is not eternal, has come to be, with the paradoxical conclusion that if one who was musical has become lettered, he must also have been lettered and have come to be musical,—and all the other argument of this sort; the accidental is obviously akin to non-being.

In this passage, we find Aristotle maintaining, in the case of Musical-Coriscus, that the object that is the result of the accidental unity is obviously akin to nonbeing. Of course, substance is the type of being from which all the other categories of being are derivative. Hence, things such as Musical-Coriscus, or Socrates-seated, being the product of the accidental, are not, on Aristotle's view, substantial. And because NC is a principle that is thought to concern substances, kooky objects such as these are not within its domain. And there is no suggestion that Aristotle would consider it possible for Callias and Socrates, paradigmatic *ousiai*, to form an accidental unity.

Aristotle and the Absolutist versus Relativist Controversy

Because many believe matter poorly suited for the role of individuation, some scholars have been motivated to free Aristotle from this view. A number of philosophers, in fact, believe that there really is not a good candidate to which one may appeal. And, on this view, the philosophically sound position is to recognize that the individuation of two objects is a brute fact, which will not admit of explanation.¹⁶

The problem that matter faces, as the means of individuation, may be presented as follows.¹⁷ Suppose we take matter to be our principle of individuation, and we say that Socrates and Callias are numerically different in virtue of their matter. If so, we face the following dilemma: We simply stipulate, without further explanation, that matter is that which individuates, or we explain why matter is capable of this role by appealing to certain features thereof. To ask for an explanation of the numerical difference between Socrates and Callias, only to be told that it is simply in the nature of their matter, is, it would seem, a little stipulative. If however, seizing the other horn of the dilemma, we are able to appeal to a certain feature of the matter that is unique, perhaps its spatio-temporal features, it seems that the newly discovered feature will be a better candidate for the role of individuation than the matter in question.

With that said, one might, nevertheless, be attracted to the idea that spatio-temporal properties may serve Aristotle's purpose. One might understand Aristotle's claim that matter is the principle of

individuation to be elliptical, in some sense, for the claim that material objects occupy space and time. Philosophers have, to be sure, attempted to make use of just these properties, and in just this way. John Locke, for example, maintained that “[existence] determines a Being of any sort to a particular time and place incommunicable to two Beings of the same kind.”¹⁸ Immanuel Kant might be thought to hold a similar position when he says: “Difference of spatial position at one and the same time is . . . an adequate ground for the numerical difference of the object.”¹⁹ Of course, according to Kant, space and time are ideal. Spatio-temporal properties may be no more mind-independent than qualitative states such as pleasure and pain. If spatio-temporal properties are, in this way, mind-dependent, then one might take Kant’s remarks as pointing more toward the epistemic than the ontological. And such a move would not seem to meet up with the project in which Aristotle was engaged.

Still, one might take arguments to the effect that spatio-temporal properties are not real as arguments against the idea that they may be used as the means of individuation. Leibniz, it is well known, offers several arguments against the view that space is real. The location of an object, on his view, is not something that is a function of an independent, extrinsic, space. The location of an object, rather, is determined by a property that is internal to the object. Space is simply the relation that supervenes upon a collection of objects; time is nothing over and above the order of events. Were there no objects, there would be no space.

Leibniz argues for his idealist conception of space in a variety of ways. The most impressive may be the following. Suppose, for *reductio ad absurdum*, that space is absolute. Every region, however, would be indiscernible from every other region. However, if every region were indiscernible from another, there would be no reason for the one to be different from the other. And there must be a reason for the difference if there is a difference (as Leibniz holds firm to the principle of sufficient reason). Leibniz here accepts the Identity of Indiscernibles, which maintains that if $x = y$, then whatever is true of x is true of y and whatever is true of y is so of x . So if there were two entities that differed in no way, there would be no reason for taking them to be two. But, Leibniz thinks, there must be a reason. So different regions

will, and of course will not, be identical if space is extrinsic. Thus, space is not extrinsic.²⁰

Isaac Newton, needless to say, thought otherwise:

For times and spaces are as it were the places as well of themselves as of all other things. All things are placed in time so as to order of succession and in space in order of situation. It is from their essence or nature that they are places; and that the primary places of things should be moveable is absurd.²¹

That Newton's answer here may too sound a little stipulative, when he says that places are primary in virtue of their essence, or nature, might be one's first reaction. But Newton offers two rather famous thought experiments in support of his view. And while many have not been entirely moved by these, they still have their defenders.²²

Of course, many people believe the decisive blow to be that the general theory of relativity requires that space be relative. The claim that the general theory is so committed, however, admits of some controversy as well. The field-equations therein allow for solutions wherein the density of matter amounts everywhere to zero. Were this possibility to obtain, space, containing nothing in terms of gravitational mass, would in effect be empty. And while the absolutist will not find this result problematic, it is a little unclear what the relativist will have to say.²³

In any case, the idea that spatio-temporal properties are absolute, substantial, and extrinsic, has both its advocates and detractors. For the absolutist, these properties may indeed serve as the means of individuation. For the relativist, it is fairly difficult to see how they could. For our purposes, it is important that a number of scholars have thought Aristotle to lean toward the relativist way of thinking.²⁴ In Book IV.4 of the *Physics*, he says the following (212a2–7):

Well, then, if place is none of the three—neither the form nor the matter nor an extension which is always there, different from, and over and above the extension of the thing which is displaced—place necessarily is the one of the four which is left, namely, the boundary of the containing body at which it is in contact with

the contained body. (By the contained body is meant what can be moved by locomotion.)

Aristotle seems to indicate here that place can only be spoken of in relation to the body that it surrounds. And this suggests that location supervenes upon the collection of material objects. Were there no objects, there would be nothing surrounded, so there would not be any place. This, of course, sounds very Leibnizian.

It bears mentioning, however, that Aristotle, in the very same chapter says something that has a Newtonian ring as well (212a14–21):

Just, in fact, as the vessel is transportable place, so place is a non-portable vessel. So when what is within a thing which is moved, is moved and changes, as a boat on a river, what contains plays the part of a vessel rather than that of a place. Place on the other hand is rather what is motionless: so it is rather the whole river that is place, because as a whole it is motionless. Hence, the place of a thing is the innermost motionless boundary of what contains it.

The above passage is not without interpretive difficulties. But the fact that place is said to be that which cannot be moved around rings reminiscent of Newton's statement that "the primary places of things should be moveable is absurd." Further, the fact that Aristotle maintains that place is unchangeable, and also that wherein locomotion occurs, provides some difficulty for upholding the relativist interpretation. In fact, the "first unchangeable limit" sounds a little like a fixed reference point. So it is a little unclear what we are to make of Aristotle's inclinations on the debate concerning space.

What about time? There are certain texts, *Physics* IV.14, for example, which suggest that Aristotle does not consider time to be a real, or mind-independent, entity (223a21):

Whether if soul did not exist time would exist or not, is a question that may fairly be asked; for if there cannot be some one to count there cannot be anything that can be counted either, so that evidently there cannot be number; for number is either what has been, or what can be counted. But if nothing but soul, or in soul reason,

is qualified to count, it is impossible for there to be time unless there is soul, but only that of which time is an attribute, i.e. movement can exist without soul. The before and after are attributes of movement, and time is these qua countable.

The clear suggestion here is that were there no minds to count successive events, there would not be such a thing as time. Time is mind-dependent. This would seem to place Aristotle's thinking concerning time very close to that of Leibniz. And, if temporal properties are part of us, so to speak, rather than *rerum natura*, they will be poor candidates for individuating the substances that Aristotle takes to be in *rerum natura*.

But, again, there are difficulties here. If Aristotle is an antirealist about time, this is difficult to square with his proof of an Unmoved-mover. For Aristotle begins the proof in the following way (1071b6–8): “But . . . time . . . cannot come to be or perish (since there cannot be a before and an after if there is not time).”

We can reconstruct Aristotle's thinking here as follows:

- (1) If something comes to be, it does so at some time.
- (2) Suppose time is not eternal.
- (3) If time is not eternal, then time came to be.
- [2,3] (4) Time came to be.
- [1,4] (5) Time came to be at some time.
- (6) If time came to be at some time, there was a time before time existed.
- [5,6] (7) There was a time before time existed (but this is absurd).
- [2–7] (8) Time is eternal.

Time, we are told, in the *Metaphysics*, is something eternal, and, it is inextricably tied to motion (1071b10): “Movement also is continuous, then, in the sense in which time is; for time is either the same thing as movement or an attribute of movement.” And in the *Physics*, Aristotle says (219a9–14):

Hence time is either movement or something that belongs to movement. Since it is not movement, it must be the other. But what

is moved is moved from something to something, and all magnitude is continuous. Therefore the movement goes with the magnitude. Because the magnitude is continuous, the movement too is continuous, and if the movement, then the time; for the time that has passed is always thought to be as great as the movement.

(9) Motion and time are inextricably tied.

[8,9] (10) There must be eternal and continuous motion.

Importantly, Aristotle believes that the only kind of motion that can be continuous is circular motion (1071b10–11): “And there is no continuous movement except movement in place, and of this only that which is circular is continuous.” All other changes involve movement between contraries and so must come to an end. A body undergoing uniform circular motion is such that at any point in its motion what counts as completing the motion is always different. There is no nonarbitrary candidate for its starting and ending point.

(11) Whatever is in eternal and continuous motion is in circular motion.

From here Aristotle is in a position to argue that there is something always moving and that whatever is responsible for this ceaseless motion may be called a prime mover (1072a22): “There is something, then, that is always being moved in a ceaseless motion (this is clear not only from argument but from what actually happens); and so the first heaven is everlasting.”

[10,11] (12) There must be a case of eternal circular motion (the outer heavenly sphere).

Aristotle goes on to say that there must be something responsible for the instance of eternal circular motion as follows (1072a24–26):

There is, then, something which is always moved with an unceasing motion, which is in motion in a circle; and this is plain not in theory only but in fact. Therefore the first heavens must be eternal. There is therefore also something which moves them. And since

that which is moved and moves is intermediate, there is a mover which moves without being moved, being eternal, substance, and actuality.

And, thus, the reasoning seems to be this:

(13) Whatever is in motion has a mover moving it.

[12,13] (14) The outer heavenly sphere has a mover moving it.

And, Aristotle, finding an infinite series of movers to be philosophically unsatisfying, is led to consider the mover a principle cause (994a1–18): “Evidently there is a first principle, and the causes of things are neither an infinite series nor infinitely various in kind.”

(15) If the outer heavenly sphere has a mover moving it, and there cannot be an infinite series of movers and moved, then there must be an unmoved, Prime Mover.

(16) There cannot be an infinite series of movers and moved.

[14–16] (17) There is a Prime Mover.²⁵

This brief look at the proof makes it plain that Aristotle is thinking of time as something that is mind-independent, even if it is inextricably tied to motion. It would be a strange state of affairs were Aristotle to argue that a Prime Mover exists on the basis of time, while simultaneously maintaining that time does not exist. Perhaps Aristotle attempts to steer a *media via* between the view that time is not real and the absolutist conception. Time, and space, perhaps, are real, supervenient properties, which supervene upon the motion of material objects. Nevertheless, the relativist is right to say, on this view, that were there no material objects, there would be no space or time. Perhaps it is appropriate here to take a closer look, therefore, at the way that Aristotle considers matter.

The Bare Materials

In *Physics*, I.7, moreover, Aristotle distinguishes between something that comes to be such-and-such from that which comes to be simpliciter.

In terms of change, the former may be thought of as alteration, while the latter is understood as generation. In the cases classified by the former, it is clear that there is something underlying the change. Socrates, for example, might go from being pale and uneducated to being tan and versed. Socrates, no doubt, is the subject that undergoes the alteration in question. But what about the change that occurs in 469 BCE, where Socrates himself comes to exist? Here, too, Aristotle maintains, there will be an underlying subject.²⁶

But that substances too, and anything that can be said to be without qualification, come to be from some underlying thing, will appear on examination. For we find in every case something that underlies from which proceeds that which comes to be; for instance, animals and plants from seed.

We might understand Aristotle as reducing generation to alteration here. He seems, therefore, committed to (1):

(1) For every generation there is an underlying subject.

This is no small matter. For it is, of course, Aristotle's response to the challenge of the Eleatics. And that Aristotle is thinking of the underlying subject to be matter should be clear. For at *Physics*, IV.6, he states (211b31–33):

For just as in change of quality there is something which was formerly black and is now white, or formerly soft and now hard—this is why we say that the matter exists—so place, because it presents a similar phenomenon, is thought to exist . . .

Indeed, the claim that the underlying subject is said to be matter is repeated in *On Generation and Corruption*, I.5, (320a1–5):

Matter, in the most proper sense of the term, is to be identified with the substratum which is receptive of coming-to-be and passing-away; but the substratum of the remaining kinds of change is also, in a certain sense, matter, because all these substrata are receptive of the contraries of some kind.

Additional support may be garnered from *Physics* I.9, where Aristotle explicitly calls matter the first subject out of which a thing comes to be (192a31):

For my definition of matter is just this—the primary substratum of each thing, from which it comes to be, and which persists in the result, not accidentally.

Aristotle, then, is committed to the following claim:

- (2) For every object undergoing generation the underlying subject of it is matter.

However, seeds and biological materials are generated as well. So they too will have an underlying matter—an underlying matter that, in turn, will be generated as well. And the simplest bodies, as one makes one's way toward the interior of the ontological layer-cake, will be, for Aristotle, the elements: earth, water, air, and fire. These, in turn, are characterized by the contrary forces of hot, cold, wet, and dry (330b1ff). It is by means of these contrary forces, as we are told in *On Generation and Corruption*, II.4, that the elements transmute into one another (331a6–a24):

Now it is evident that all of them are by nature such as to change into one another; for coming to be is a change into contraries and out of contraries, and the elements all involve a contrariety in their mutual relations because their distinctive qualities are contrary. For some of them both qualities are contrary, e.g. in Fire and Water, the first of these being dry and hot, and the second moist and cold; while in others one of the qualities is contrary—e.g. in Air and Water, the first being moist and hot, and the second moist and cold. It is evident, therefore, if we consider them in general, that every one is such as to come to be from every one. And when we come to consider them severally, it is not difficult to see the manner in which their transformation is effected. For though all will result from all, both the speed and the facility of their conversion will differ in degree.

As Aristotle goes on to describe the process, water is transmuted into air, for example, when the contrary cold is exchanged for hot, while the quality of moist is retained. Air is transmuted into fire when moist

is exchanged for dry, but hot is retained. And, finally, earth is transmuted into water when dry is exchanged for wet and cold is retained. At this point, one wants to ask: Retained by what? Aristotle clearly believes the elements come to be. It follows straightaway from (2), and the fact that there is such change at the elemental level, that:

- (3) The simplest elements have an underlying subject of matter.

This point is made explicit in *On Generation and Corruption* (329a25), when he says as follows:

Our own doctrine is that although there is matter of perceptible bodies (a matter out of which the so-called elements come to be) it has no separate existence but is always bound up with contrariety.

And it is echoed, in *De Caelo*, where Aristotle “reiterates our own doctrine,” stating thus (312a30):

The kinds of matter, then must be as numerous as these bodies, i.e. four, but though they are four there must be one matter common to them all—particularly if they pass into one another—which in each is in being different.

It is important to note that according to Aristotle there is nothing perceptible below the level of the four elements. So the matter that is operative here must be imperceptible. And there can be no question that earth, water, air, and fire, are the most basic elements (302a15):

An element we take it is a body into which other bodies may be analyzed, present in them potentially or in actuality (which of these is still disputable), and not itself divisible into items different in form. That, or something like it, is what all men mean by “element.”

The fact that Aristotle takes everything below the level of the elements to be imperceptible, “formless and shapeless” (306b16–22), combined with (3), strongly suggests that:

- (4) Earth, water, air, and fire, have an underlying characterless matter.

Aristotle calls this prime matter, in *On Generation and Corruption*, II.1, 329a29. And so the substratum for elemental change is a characterless, prime matter. Could this matter, a sort of characterless goo, be what Aristotle is thinking of when he takes matter to be the principle of individuation?

In the *Metaphysics*, VII.3, Aristotle considers and rejects the idea that matter might be substance in the primary sense. Matter is, we are told, the subject of all qualities. And, as such, it is a putative candidate for being substance. (In the fifth chapter of the *Categories* Aristotle maintains that the ultimate subject will be substance in the primary sense. But it is clear that he is thinking of individuals such as Socrates or Secretariat as the ultimate subjects in that work.) Aristotle proceeds by removing in abstraction the various attributes from the possessor thereof. Having abstracted all of the properties, including, apparently, length, breadth, and depth, he reaches the conclusion that all that remains is matter (1029a20):

By matter I mean that which in itself is neither a particular thing nor of a certain quantity nor assigned to any other of the categories by which being is determined. For there is something of which each of these is predicated, so that its being is different from that of each of the predicates; for the predicates other than substance are predicated of substance, while substance is predicated of matter. Therefore, the ultimate substratum is of itself neither a particular thing nor of a particular quantity nor otherwise positively characterized; nor yet negatively, for negations also will belong to it only by accident.

It is difficult to understand Aristotle as not being concerned here with prime matter. He is not, for example talking about flesh and bones, or bronze, which surely are stuffs in their own right. And the suggestion here seems to be that prime matter is not even a particular thing. As such, it is a poor candidate for being a bare particular, or the means of individuation. We are told that it lacks length, breadth, and depth. Being unextended, and lacking in spatial properties, prime matter cannot even be said to be unique in terms of spatial and temporal properties.²⁷

Prime Matter, Somatic Matter, and Individuation

A number of scholars have rejected HD on the basis that Aristotle considers matter to be nothing particular.²⁸ How could that which is sheer potential, possessing no properties per se, be responsible for any difference between two individuals? Of course it is only prime matter, not material such as the flesh, bones, or bronze that is without character. Might matter at a higher level account for the individuation in question? In the Zeta-eight passage, we may recall, the matter that is said to individuate is not prime matter, but flesh and bones.

Aristotle seems to speak less than univocally concerning the relation between body and space. We noted that certain comments suggest that Aristotle leans toward a relativist view of space, while others contain absolutist tones. It is possible, however, to understand Aristotle as taking something of a middle path here, as he has been inclined to do elsewhere. Aristotle, as we saw, thinks that time supervenes upon change. He nevertheless, seems to think of it as a real, necessarily real, property. Change and time, one might say, are coextensive, even though time is ontologically dependent on change. By analogy, one might say, material substances, and their spatio-temporal coordinates, may be understood as being coextensive, even though, strictly speaking the latter supervene upon the former. To be sure, were there no objects, there would be no space and time. However, given that there are material objects (beyond prime matter), these objects will have spatial and temporal coordinates, and this will indicate that they are unique. Aristotle, in our Zeta-eight passage, indicates that matter is that which is responsible for the numerical difference because in a sense it is. For matter is ontologically prior to the space it occupies. Nevertheless, that it is found to occupy a unique spatio-temporal position is clear evidence of its uniqueness. That it is found to occupy such a position is, we might say, borrowing Bertrand Russell's phrase, an instrumental or useful criterion of uniqueness.

The Varieties of Matter

According to Aristotle, there are a number of ways to consider matter. He seems to countenance a prime matter, an elemental matter, as

well as a kind of matter that is still more complex: the matter characterized as the flesh and bones that constitute our bodies. One might, at this point, suggest that our puzzle turns on an equivocation. Aristotle understands different kinds of matter. And if that which is picked out by “matter” in *Hylō-Migration* is not the same thing as that which is picked out by “matter” in *Strong-Hylomorphism*, then we should expect the puzzle to be resolved once the ambiguity has been cleared away.

Question One: Which of the following alternatives is the “matter” in *Migration*?

1. None of the following
2. Proximate Matter (homoioimerous and anhomioimerous)
3. Elemental Matter
4. Primal Matter
5. Proximate cum Elemental
6. Proximate cum Primal
7. Elemental cum Primal
8. Proximate cum Elemental cum Primal

The above list seems to exhaust the possibilities with respect to the kind of matter involved in putative cases of *Migration*. Here, of course, is the second question:

Question Two: Which of the above alternatives is the “matter” in *Strong-Hylomorphism*?

Needless to say, if the puzzle does not turn on an equivocation, the answer to these questions will need to be the same. In a sense that would seem reasonable to today's folk ontologist, Aristotle seems to allow matter to flow in and flow out in cases of growth and diminution (*Generatione et Corruptione* 321b17–28):

We must grasp the cause after previously determining, first, that the non-homoeomerous parts grow by the growth of the homoeomerous parts (for every organ is composed of these); and secondly, that

flesh, bone, and every such part—like every other thing which has its form in matter—has a twofold nature; for the form as well as the matter is called flesh or bone. Now that every part should grow—and grow by the accession of something—is possible with respect to form, but not in respect of matter. For we must think of the process as being like what happens when a man measures water with the same measure; for what comes to be is always different. And it is in this sense that the matter of flesh grows, some flowing out and some flowing in; not in the sense that fresh matter accedes to every particle of it. There is however an accession to every part of its figure and form.

Focusing on the phrase “some flowing out and some flowing in,” some have taken these lines as textual support for the claim that Aristotle would accept *Migration*.²⁹ However, “some flowing out and some flowing in” does not entail *Migration*, where *Migration* is the thesis that all of the (relevant) matter of one thing can come to be all of the (relevant) matter of another thing. Nevertheless, perhaps Aristotle’s remarks here strongly suggest that he would accept, or is committed in some way, to *Migration*?

We must, however, bear in mind several things that Aristotle says in the near vicinity of the text that is here relied upon. First of all, Aristotle says (322a28–33):

This form, like a tube, is a capacity in matter. If some matter comes in which is potentially tube, having its quantity potential as well, these tubes will be larger. But if [the matter] can no longer act, but is just as water mixed with wine in ever greater amount which finally makes the wine watery or water, then it will produce a diminution of quantity. The form however persists.³⁰

What does Aristotle mean by saying that the form persists? These remarks can strike a reader as involving either a category mistake or a pleonasm. Do they persist in a way similar to three-dimensional, middle-sized objects? At 321a18–22, Aristotle has just said:

Of the three things that happen one is that every part whatsoever of the growing extension (e.g. of flesh, if flesh is growing) is bigger,

secondly by the accession of something, and thirdly what is growing is preserved and persists.

In the latter of these two segments of text, we are told that what is growing is preserved and persists. In the former we are told that it is the form that persists. A natural suggestion is that Aristotle is, in some sense, thinking that the form is what is growing and being preserved. In the former, Aristotle uses the simile of a tube that envelopes the contents within—the elements that are said to flow in and flow out. In the latter, Aristotle discusses the growth of flesh, which, just like the tube, expands with the accession of that which it envelopes. It seems that form is being thought of in terms of flesh, bone, and the like. This, for example, is how Alexander of Aphrodisias³¹ understands Aristotle in *De Mixtione* (237.26):

Each of them grows as a whole by this proportion, while they preserve the body that they are in, and we must understand that the case of bodies that grow through nutriment by the agency of nature and the nutritive faculty is like conceiving of wine moving along a tube which maintains the same shape, but because of the elasticity and pliancy it is compressed and maintains its shape in a smaller volume when the water moving along it is less, but when this is greater, it expands in every direction and assumes a larger volume. As with such a tube the water is not what grows, as it does not remain at all stable but assumes varying volumes, but the shape containing the liquid is what is stable and what assumes expansion and contraction—so too must the process involved in natural growth be understood: that while the matter to which the growing form belongs must vary at different times on account of its continual deterioration, the form, on the other hand, that remains stable on the flowing matter by analogy with the shape of the tube, diminishes when the matter decreases, but grows when the assimilation of matter increases, maintaining all along the body's individual shape. For an identical form belonging to a smaller amount of matter is larger than one that belongs to a smaller amount, just like the shape of the tube, which, because of its elasticity, adjusts to what flows through it.³²

The general contours of an argument for the steadfastness of matter begin to emerge. First, it seems relatively clear that by “form” Aristotle is not referring to the form as it is discussed elsewhere (for example, in *De Anima* I.2). The referent of “form,” as he is using the term here, is something that is able to move in space, as it grows and shrinks. Aristotle rejects Plato’s view that the soul can move spatially (as we will see in great detail in the next chapter) in *De Anima* I.3. Thus it follows:

- (1) That which admits of growth and diminution, e.g. flesh, is a form different in kind to form proper or soul, call it “Form_b.”

Aristotle believes that the form of a living organism is its soul. Form_b is not, however, soul. And insofar as it is an organic entity, which expands and shrinks, it seems that Aristotle is thinking of Form_b as a material object: “for the form as well as the matter is called flesh or bone.” In addition, we are told that Form_b is preserved and persists.

- (2) Form_b is a material object that is preserved and persists.

Of course, the organic, somatic, material of living organisms will be best described as the proximate matter of the organism. Can Form_b serve as the continuant of a living organism, while the matter which flows in and out is of another variety? The type of matter involved in the flowing in and flowing out would seem to be elemental matter—so we are dealing with the alternatives referred to above by (3) or (7). The natural response is that this matter is not essential to a substance’s existence. It is, or so one might answer, not the matter of *Strong-Hylomorphism*. That role is occupied by (2), the proximate, somatic matter. And it is it not the case that Form_b is susceptible to *Migration*. On the contrary, it appears that some of the proximate matter will remain as a continuant. Alexander describes the process on the model of a wine skin. This, of course, is pretty clearly what Aristotle has in mind at (322a28–33). And if we stick with the simile of the wine skin, where wine is gradually replaced by water, until the wine within is entirely replaced, the wine skin itself does not have its material replaced. Furthermore, Aristotle says that the fresh matter, the matter

that flows in, does not attach to every particle of the matter. It is in this sense that the matter of flesh is said to grow, some flowing out and some flowing in; not in the sense that fresh matter accedes to every particle of it. And if the fresh matter does not attach to all of the matter of a given organ, it can hardly replace all of it. Thus, by all appearances, Aristotle rejects the claim that all of the material of an organism will admit of *Migration*. On the contrary, he seems to indicate that the organs of a living thing do not admit of *Hylo-Migration*.

Two Old Arguments against Migration

The contemporary advocate of *Migration* might find this idea, that the matter of an organism is never replaced entirely, as somewhat incredible. But there are arguments from antiquity for just this view. In *On Aristotle's On Coming-to-Be and Perishing*, John Philoponus, on the one hand, maintains that Form_b can persist even when its matter is entirely replaced, so long as the process is gradual³³ (1999: 106, 8–9):

As a solution, we say that if all the matter were to go out of existence together at the same time the point just made would be correct, but, as it is, it seeps away bit by bit, a new replacement immediately found for it, and thus form remains one and the same numerically.

Nevertheless, Philoponus, offers two arguments for the claim that some of an animal's matter must persist (1999: 107, 3–15):

But it must not be thought that the whole of matter as a whole replaces itself over time, seeping away bit by bit, so that there is [no bit] of body in us when we have grown old [which was part] of the substrate that was in us at the time of our original framing. For if that were so, it would be possible for animals to be immortal, their matter always being at its peak. As it is, however, the matter is not able to keep its form throughout its whole extent, since it becomes weary with time, the parts that have been fitted together being incapable of preserving throughout the harmony and correct

mixture as a result of their being affected by contrary powers. So it must be supposed that not all the matter is dissipated, but that the more solid parts of it particularly remain always numerically the same. This is why we also see the scars of wounds which may chance to have been received in youth remain in flesh and bones until death. So for this reason also the form must remain numerically the same.

There are really two arguments here, which are nonetheless supportive of one another, for the claim that the whole of matter “as a whole” does not get replaced over time. The first of these rings reminiscent of what Alexander has had to say. It is a straightforward *reductio ad absurdum*.

- (1) Suppose that over time Secretariat continually has his matter entirely replaced.

Then, the supposition seems to be that fresh matter, which is continually replenishing old matter, will not be in a state of decay.

- (2) Fresh matter, opposed to the substrate that was present in us in our original framing, is not in a state of decay.

Secretariat, for example, is continually having his old matter, the matter that would be susceptible of decay, replaced with fresh matter that is not in its present state susceptible of decay. Hence

- (3) Secretariat continually has matter that is not susceptible of decay.

But if he continually lacks any matter that is susceptible of decay, he will never himself decay. And if he will never decay, then he is immortal. But this is absurd. Animals are essentially mortal, as, for example, *Metaphysics* X.9 drives home (1059a2). So, the argument runs, it must be supposed that there is “[a bit] of body in us when we have grown old [which was part] of the substrate that was in us at the time of our original framing.” This claim is further supported by the evidence

that is provided by scars in flesh and bones. The argument seems to be this:

- (5) If fresh matter replaces old matter, fresh matter should replace the matter where incisions have been made on flesh and bone.
- (6) If fresh matter should replace the matter where incisions have been made on flesh and bone, we should expect all scars, in the course of a lifetime, to disappear.

Of course some “scars of wounds which may chance to have been received in youth remain in flesh and bones until death. So for this reason also the form must remain numerically the same.”

The Scars Argument is also attributed to Alexander by Averroes in his *of Aristotle on Generation and Corruption* (4.1, 117).³⁴ And while the arguments do not appear impervious to criticism, they are not obviously and clearly unsound. One might still insist on the point that, despite the fact that the contemporary advocate of *Migration* finds Aristotle's rejection thereof as somewhat incredulous, due in part to the empirical findings of his own era, thinkers more contemporary with Aristotle too found *a priori* and *a posteriori* reasons for doubting *Migration*.

A Possible Objection

Heretofore, I have avoided a fairly influential objection to the idea that matter can be considered the principle of individuation. The problem is famously expressed in Max Black's dialogue “The Identity of Indiscernibles.”

Isn't it logically possible that the universe should have contained nothing but two exactly similar spheres? We might suppose that each was made of chemically pure iron, had a diameter of one mile, that they had the same temperature, color and so on, and that nothing else existed. Then every quality and relational characteristic of the one would be a property of the other. Now if what I am describing is logically possible, it is not impossible for two things to

have all their properties in common. This seems to me to refute the principle [of the identity of indiscernibles].³⁵

If such a world obtained, call it MBW (Max Black world), if there were two spheres that were identical in terms of all of their properties, relational and nonrelational properties alike, then the spheres may not be individuated in terms of material properties, as they will have these in common as well. Does Aristotle have any principled way of addressing this situation?

I believe he has. First, given Aristotle's teleological inclinations, Aristotle might hold fast to the principle of sufficient reason. In *Metaphysics* XII.7, Aristotle seems to do just that. If so, he might reject the claim that it is logically possible that the universe should have contained nothing but two spheres with all of their properties in common. For, then, it would seem that whatever is true of the one is true of the other. And were this the case, there would be no reason for the two being different. However, insofar as the spheres are two contingent beings, there must be some reason for their difference. The difference, Aristotle, might maintain, is going to be underwritten by material difference.

Secondly, the MBW is a problem for synchronic individuation. In order to keep the properties of the two spheres common, one needs to consider the relational properties, i.e., the spatio-temporal properties common. When, however, we consider the Puzzle of Simple Composition, we consider the matter of one substance becoming the matter of another. *Ipsa facto* we are considering entities with different spatio-temporal histories. And this is not to say that these histories are more than instrumental criteria for distinguishing the two, as the material differences will underwrite the respective histories.³⁶ Furthermore, it is not clear that Aristotle would consider the spheres in question to be substances, and the Puzzle of Simple Composition is a puzzle concerning substances. In Book VIII.2 of the *Metaphysics*, for example, Aristotle suggests that inanimate objects, e.g. thresholds, houses, and blocks of ice, are not substances. Thus, the MBW might be a problem, but it is a problem different in kind to the Puzzle of Simple Composition.³⁷

Conclusion

Several important considerations may at this point be enumerated. The primary result of the present chapter is that there is sufficient reason for thinking that Aristotle does take matter to be a principle of individuation. In addition, several corollaries are evident. Aristotle seems to explicitly reject *Hylo-Migration*, which is precisely what one would expect an upholder of *Hylo-Difference* to do. In addition, we have seen reasons for taking spatio-temporal properties to provide an instrumental criterion for the uniqueness of substances. This will be of some importance in the next chapter wherein we consider the possibility that substances might undergo resurrection and or gappy or intermittent existences.

Chapter 2

Resurrection and Entrapment

A Putative Response to the Puzzle of Simple Composition

Consider the following response to the Puzzle of Simple Composition. Socrates is not numerically identical to Callias, for, like his matter, he is no longer around. About the time that Socrates went missing, however, Callias—who was buried nearly twenty years prior—was seen in very close proximity to where Socrates was at the time he went missing. This situation is extremely strange, but it is not as strange as the situation where Socrates and Callias are numerically identical.

The move, needless to say, is to accept the phenomena of the thought experiment, without accepting *Hylo-Migration*. There are, of course, other ways to defend the rejection of *Migration*. *Migration* will, in all likelihood, be rejected with appeal to the idea that Socrates' individuality is intimately related to his matter. In the following, for reasons that will become apparent in just a moment, I will call any rejection of *Migration*, which relies on the idea of a substance going out of and returning to existence, "Resurrection."¹ Few will find Callias' situation unremarkable. His situation is about as peculiar as, say, a resurrection. I think Resurrection is out of the question for Aristotle. But I do not believe that his not having recourse to Resurrection results in a vulnerability with respect to the Puzzle of Simple Composition. As I will argue in this chapter, Aristotle's rejection of Resurrection can be considered, with some plausibility, to be a strength.

As it happens, then, Aristotle seems to think that Resurrection is absurd.² My view is that Aristotle can reject *Migration*, but that Resurrection, moreover, is out of the question. First, I will defend the view that Aristotle would unequivocally reject Resurrection. Thereafter, I will argue that a rejection of Resurrection may actually serve as

a response to the Puzzle of Simple Composition. Finally, I will present the way in which Aristotle would directly attack *Migration*.

In chapter three of the first book of the *De Anima*, Aristotle offers a series of arguments against the view that the soul admits of motion. He there points out, what he has already shown at *Physics* VIII.5, that that which originates movement need not be moved. The kind of motion he has in mind is motion per se, and not indirect motion—indirect in the way that sailors are in motion, yet stationary, on a ship. R.D. Hicks counts nine arguments in all against the apparently popular view that the soul is essentially mobile.³ Herein, I am concerned with just one of those arguments—an argument wherein Aristotle claims that the idea of Resurrection is absurd. The argument, which I will refer to as the Argument from Mobility, runs as follows (406a30–406b05):

Further, [1] since it is clear that [the soul] moves the body it is reasonable for it to set in motion these movements by which it also is moved and if this is the case, conversely also, [2] it is true to say that that by which the body is moved, this same way it [is moved]. But the body is moved by locomotion. So that the soul [AR] too should change with respect to place as a whole or with respect to the parts being reorganized. But if this, it is possible, [SM] having gone out, [the soul] would be able to enter in again. [RA] But the Resurrection of animals who have died would follow on this [assumption].

There is a fair amount of agreement that the argument is a *reductio ad absurdum* wherein Resurrection is thought to be an absurd consequence. The following can be understood, for the moment, simply as a philosophical datum:

NR Resurrection is absurd.

The claim that is to be assumed for *reductio ad absurdum* is, moreover:

AR The soul is mobile.

Aristotle accepts the view that the soul moves the body (1). His next move is to maintain that an acceptance of AR, combined with the

acceptance of the claim that the soul moves the body, combined with a putative fact (2), namely, that the motion of the body suggests that the motion of the soul is of the locomotive variety, renders plausible the view that the soul is able to alter its position in space.⁴ But the difficulties, according to Aristotle, begin with the claim that the soul is able to change its place. Such a capability, apparently, would make ready the possibility of soul migration (SM). But SM is inconsistent, in some way, with NR. So we should reject AR, on account of this, in the event that the other eight arguments, on Hicks' enumeration, are not persuasive.

The question one may ask, however, is what type of justification is at work in supporting NR? Aristotle seems to take it as given that Resurrection is absurd. But does NR stand well as a brute fact? Is it an *endoxon* of the many or the wise? Can the claim be readily considered a consequence of Aristotle's hylomorphism, or, more generally, his metaphysics?

Anastasis and Anachronism

At least one commentator has suggested, it bears mentioning, that the text in question, where Aristotle is thought to say, "But the resurrection of animals who have died (*anistasthai ta tethneōta tōn zōōn*) would follow on this assumption," is the result of interpolation. In his commentary on the *De Anima*, F.A. Trendelenburg maintains that the words in question made their way in from the margin, as they smack of the Christian era.⁵ The line is, on this interpretation, an excretion produced by commentators inadvertently reading Aristotle by means of Christian lenses.

And while there is an air of plausibility to Trendelenburg's reasons for suspicion, there is also a fair amount of evidence which suggests that the line he questions, the text responsible for NR, is not to be crossed out—not in terms of its being anachronistic anyway. Trendelenburg's view is criticized by Rodier, who refers to the words expressed by Prexaspes to Cambyzes, as reported by Herodotus (3.62):

I buried him with my own hands. If the dead (*tethneōtes*) rise again (*anestasi*), you may look for Astyages the Mede, too, to rise up

against you in rebellion. But if all is in the world as before, nothing new to hurt you shall grow out of Smerdis.

In the second sentence, then, we find the words used in the expression that Trendelenburg believes to be an interpolation.⁶ And there is no reason to believe that these terms made their way in from the margin. It is noteworthy that a principle very much like the principle of induction is here invoked. And Rodier suggests that it is more likely that Aristotle drew the consequence, as is his habit, to illustrate that the opinion he wanted to refute ran counter to experience.⁷ The claim that resurrection is absurd might be thought of merely as emphasizing, in an empirically vivid way, that psychic migration runs counter to experience.

Hicks is in agreement with Rodier in claiming that the reference to *anastasis* is not due to interpolation. But his reasons for thinking the line authentic may be somewhat stronger. He writes: "That the dead should rise again is to Greek ideas the typical instance of an event antecedently incredible as reversing the order of nature."⁸ And, while Hicks does not cite anything in the way of evidence for his view, what Apollo says to Athena, in his defense of Orestes, in Aeschylus' *Eumenides*, seems to reinforce his claim:

Zeus could undo fetters, there is a remedy for that, and many means of release. But when the dust has drawn up the blood of man, once he is dead, there is no return to life. For this my father has made no magic spells, although he arranges all other things, turning them up and down; nor does this exercise of force cost him a breath.⁹

Zeus is seen as he who arranges all things in nature. But not even his magic can bring a man back to life once it has been consumed by dust. While there is the suggestion here that so long as there remains some blood, Zeus could step in and raise an animal from the dead, the passage makes resurrection appear to be very akin to a metaphysical impossibility. On the other hand, the kind of *anastasis* Aristotle has in mind, in our passage at *De Anima* 406a39, seems to occur while there is still a body, and one that is not severely decomposed. A human being dies, as we are accustomed to believe, long before

the decomposition of the blood. Indeed, in the *Alcestis* of Euripides, some time after her funeral, Heracles brings Alcestis back, having wrestled her away from Death. Further, if one is going to take recourse to the myths as evidence of the view, it will be difficult to reconcile Zeus' punishment of Asclepius for daring to restore an already dead Hippolytus.

Much of what one can glean from the use of the term *anastasis* in antiquity, then, may be of little use in deciding why Aristotle rejects the possibility of resurrection. For the time being, the way is open for someone to make the case that resurrection is not to be taken as impossible, on Aristotle's view, and, is, rather, to be taken as extremely improbable.

Scientific and Dialectical Contexts

Herein, I would like to provide an argument against my thesis. (Subsequently, I will essay a response.) We can begin by noting Aristotle's recognition that a change in the context in which a scientific discussion occurs can issue a change in the range of acceptable remarks that can be offered. This is well known as one of the lessons of the third chapter of the first book of *Ethica Nichomachea*. In the third chapter of the second book of the *Metaphysics*, Aristotle maintains that the educated individual will be able to discern that range. Thus, as Rodier seems to have suggested, one might argue that it is more reasonable that Aristotle's arguments in the *De Anima* are, so to speak, of a more, *a posteriori* flavor. In the *Generatione et Corruptione*, Aristotle says the following (316a 9–12):

Those who have engaged in many discussions who are unobservant of the facts are more easily shown myopic. One can see even by the differences of those inquiring naturally and those logically.

Interpretation of these remarks may be less than straightforward. It is reasonable, nevertheless, given what has been said, that Aristotle is concerned to illustrate that certain views of the soul, those which make use only of dialectic, part ways with what can reasonably be expected from nature. And, so the argument runs, this is what one

might expect his claim about Resurrection to consist in. Aristotle is concerned to distance himself from those who, like the Eleatics and the Pythagoreans, lead modes of inquiry that are empirically impoverished. Empirical adequacy is precisely what the Eleatic philosophy lacks (as there are no true observational consequences for the theory). A kind of dualist philosophy is likewise empirically impoverished, as one might argue, in its neglect of key observations vis-à-vis the nature of the body. Even the physical theory of Democritus is criticized in the near vicinity of the Argument from Mobility, for its inability to preserve certain phenomena, such as how things can remain at rest when atoms are ceaseless (406b 15–25).

That Aristotle is not providing more metaphysical arguments, as it were, in the context of the Argument from Mobility, may seem even more fitting when we take note of his use of the term *eulogon* in this context. (Though it is by no means apparent whether the scope of the term extends to his remark about Resurrection). This term has the technical sense of expressing a probable conclusion independently of Aristotle's usage, though Aristotle's use of the term to express a reasonable expectation is well documented.¹⁰

It is Aristotle's habit, on nearly anyone's account, to require more than consistency of a theory of natural science. A theory of natural science should show itself adept at saving and predicting phenomena. And there can be little by way of doubt that the *De Anima* falls under the paradigm of natural science. On a sketch such as this, Aristotle might be read as criticizing the views of his predecessors for not meeting up with the phenomena. We should expect animals to rise from the dead, so the reasoning should go, if the soul is lodged in the body as those other philosophers would have it. No need, one might add, to take Aristotle to be ruling out resurrection as a metaphysical impossibility, for this would be too strong; Resurrection, much like Hume's golden mountain, is really weird, but it is not impossible.

In support of an interpretation such as this, one might point to the *De Motu Animalium*, where Aristotle appears, though it is by no means clear precisely what he is saying, to distinguish between kinds of necessity (669b 17–21):

Now things are called impossible in several ways; for when we say it is impossible to see a sound, and when we say it is impossible to see

the men in the moon, we use the word in different ways: the former is of necessity, the latter, though their nature is to be seen, will not actually be seen by us.¹¹

The impression that the passage provides is that seeing sounds is impossible *simpliciter*, while there is a weaker sense in which it is impossible to see those who (might) reside on the moon. Did Aristotle believe Resurrection impossible in merely this weaker sense? The answer, as I will argue in the following section, has to be no. Aristotle takes Resurrection, as we will see, to be impossible in the same way that it would be impossible for Socrates to become a light-switch, for the Surgeon General to become a fried egg, or for there to be a mountain without a valley.

Possibility and Inevitability

Thus one might attempt to read Aristotle as ruling out Resurrection on the basis of what we would call more natural reasons. And this may have the advantage of freeing Aristotle of the charge of begging the question against his more “Pythagorean” opponents. But even if we grant that this is an appropriate way of reading Aristotle, controversy remains. We are now operating on the assumption that Aristotle views Resurrection as a possibility that is so remote that it is not reasonable to believe it will be realized. Resurrection is something really weird, something that we should not expect to occur at anytime.

To sentiments such as these, however, one might object along the lines that Aristotle is inclined to analyze modality in terms of temporal quantifiers. *De Caelo* I.12, in particular, is thought to commit Aristotle to the following claims:

$\Diamond p$ If it is possible for x to be F , then at some time x is F .

$\sim\Diamond\sim p$ If it is necessary that x is F , then at every time x is F .

The first of these principles has been characterized, by A.O. Lovejoy, as the Principle of Plenitude.¹² Lovejoy argued that, in fact, Aristotle rejected the principle. But it is Plenitude, as we will see in a moment, which gives rise to a difficulty with respect to the claim that Resurrection may be taken as a remote possibility.

Everyone agrees that Aristotle could not have accepted these principles without some kind of qualification. We tend to think that golden mountains, for example, are possible even though there will never be one. Aristotle, too, seems to take there to be, contra Plentitude, possibilities that never obtain. In *De Interpretatione* 9, he speaks of a cloak that might be cut up into pieces, which nevertheless, will wear out first (19a12–14). Jaakko Hintikka, who believes that Aristotle accepts Plentitude, has argued that Aristotle believes $\Diamond p$ to be applicable to kinds and not particulars.¹³ That is, this very coat I am wearing might be cut into pieces, as at some time there will or has been a coat of this kind cut to pieces. If Hintikka is right, as this line of reasoning has it, then, Aristotle must either be committed to the view that a Resurrection will occur or that Resurrection is impossible *simpliciter*—neither alternative is very hospitable to the sketch provided in the previous section.¹⁴

The advocate of Resurrection might begin to shop around for an interpretation of $\Diamond p$ that does not require the inevitability of Resurrections or golden mountains. Richard Sorabji believes cases of Plentitude apply “only to a very restricted range of cases,” namely “everlasting things and their everlasting capacities.”¹⁵ He takes the example of the cloak in *Interpretatione* 9 to be an example that contrasts with substances that are eternal:

Aristotle distinguishes between something like a cloak and things (like the stars) that exist forever and are forever active (19a9–18). A cloak is (for a finite time) capable of being cut up, even if it is never cut up, but wears out first. With the stars, however, which last, and whose capacities last, for the whole of time, possibilities cannot thus remain forever unactualised. If the sun and stars were capable of stopping their motion, then given the whole of time, they would at some time stop.

R.M. Dancy expresses a similar view:¹⁶

My own intuition is that the principle is restricted to possibilities that are around for all eternity, and have all eternity to get realized in. Aristotle's coat's possibility of being cut up is not like that: when the coat wears out, that possibility wears out.

This is an attractive interpretation. In the first place, Aristotle says the following at *Physics* III.4: “For in the case of the eternal things, to be able and to be are in no way different.” Were the principle to be extended to eternal and perishable things alike, “in the case of eternal things” would be pleonastic. Of course the Sorabji-Dancy hypothesis can effectively accommodate such situations as Aristotle’s cloak, wherein we take a possibility not to entail inevitability. And the restriction of Plentitude to eternal entities prevents the application of the principle in other important areas as well. The same cloak has the possibility to wear out and the possibility to be cut up. If Plentitude holds for the capacities of the same cloak, both possibilities will need to obtain. Of course they cannot. So it is just as well if Plentitude does not hold for things like coats. Similarly, events such as Sea-Battles in the Aegean on July 5, 2010 at 3:30 p.m., may or may not obtain. But if Plentitude extends here as well, there will then be, and also will not be, such a battle. The Sorabji-Dancy hypothesis may even yield the correct result with respect to something like a golden mountain, provided that the capacities of mountains erode with the mountain.¹⁷

What about the possibility of a dead animal rising again? Here the relevant capacity is for a living thing to be able to rise once dead. But living things, like cloaks, are among the perishables. So, it seems, Plentitude, should not extend to living things and their capacities. Still, living things and their capacities are, in a way, eternal. Or, at least, that is the suggestion of, for example, *Generatone et Corruptione* II.11 and *De Anima* II.4. In what sense can a living thing be eternal? In the very qualified sense of being a member of a species that will always, on Aristotle’s view, be around.

Eternal Recurrence Limited

In the eleventh chapter of the second book of *Generatione et Corruptione*, Aristotle attempts to explain why it is that the same creature does not come-to-be again (338b7–19):

Why is it a fact then that some things thus, e.g. waters and air come-to-be in a cycle, and if there is going to be a cloud, it must rain, and if indeed it rains, it is also necessary for there to be a cloud, while men and animals do not return to themselves, so that the

same [animal] comes-to-be again? The beginning of the investigation moreover is this . . . whether all things return similarly or not, or some things [return] in number and others merely in form. With those for which the substance which is moved is imperishable, it is clear that these will be the same in number for the movement relies on that which is moved, but with those for which [the substance is] perishable, it is necessary to return [the same] not in number but in form. Wherefore water out of air and the air out of water is the same in form but not in number. But even if these are the same in number, it is not in this way for those things for which the substance comes to be which are able to not be.

The above is a *locus classicus* for the view that Aristotle held species to be eternal. For present purposes, the text holds some potential for understanding Aristotle's rejection of Resurrection, as we find Aristotle explaining why "men and animals do not return to themselves, so that the same creature comes-to-be again." Seasons return without fail, solstices return without fail—so, too, the planets. Why, once they have departed, do animals not thus return? The (typically) Aristotelian answer is that in a way they do and in a way they do not (415b3–6):

Since then [the living thing is] unable to share continually in what is eternal and divine (since not one of the perishables is able to remain one and the same, i.e., one in number), insofar as each is able to participate, it shares in this [to a degree] that is lesser or greater, and it remains not the same [individual] but as the same [individual], not in number, but rather in form.

Thus, living organisms have a share in the eternal, to the extent they can, by being members of a species that will always be around. So they are in a sense eternal, even though they are not, *qua* individual, eternal.¹⁸ Human beings, *qua* species, are eternal, perhaps in a way that cloaks are not. Were there to be cloaks perpetually, it would probably be so only accidentally, as humans will always make cloaks. And in any case, we can draw a distinction, as Aristotle does (*Metaphysics* VII 1040b5–16, 1041b38–30; VIII 1043a4–5), between artifacts and living organisms. If humans are going to be around for all eternity, one might

begin to think that were Resurrection a remote human capacity, by Plenitude, *mutatis mutandis*, we should expect Resurrection to occur sooner or later. Perhaps this is music to the Thomist's ear. But it is not so received by the individual attempting to understand the argument in *De Anima* I.3, where Resurrection is said, moreover, to be absurd.

Eternality and Essentialism

A member of a species can undergo a fair amount of alteration. But there are, according to Aristotle, certain properties the loss of which will drive the given member out of existence (*Topica* 125b 37):

[I]t is impossible for a thing still to remain the same if it is entirely transferred out of its species, just as the same animal could not at one time be, and another not be, a man.

The nature of Aristotelian essentialism is a complicated point of scholarship. But here we may assume what I take a number of philosophers will agree upon. In the words of Professor Marcus: "Aristotelian essentialism takes it that, if anything is a man or a mammal, it is so necessarily."¹⁹ Now, living things, for Aristotle, fall distinctly into the category of perishables (*De Anima* 415b3–b6):

Since then [the living thing is] unable to share continually in what is eternal and divine, since not one of the perishables is able to remain one and the same, i.e. one in number, insofar as each is able to participate, it shares in this [to a degree] that is lesser or greater, and it remains not the same [individual] but as the same [individual], not in number, but rather in form.

The best a living thing can hope for, then, is to participate in a form that is eternal. No individual living thing may expect to be eternal. And this is a necessity *de re*. Consider this (fairly lengthy) passage from *Metaphysics* XI:

For nothing is by accident perishable. What is accidental is capable of not being present, but perishableness is one of the attributes that belongs of necessity to the things to which they belong; or else

one and the same thing might be perishable and imperishable, if perishable is capable of not belonging to it. Perishability must either be the substance or be present in the substance of each perishable thing. The same account holds for imperishableness also; for both are attributes which are present of necessity. The characteristics, then, in respect of which and in direct consequence of which one thing is perishable and another imperishable, are opposite, so that the things must be different in kind . . . [B]ut things which differ in kind are further apart than those which differ in form.

Living things are simply incapable of being eternal. And the property of being perishable is essential to those things that possess it. Thus, perishables differ in kind from their eternal complements, and the difference, we are told, is even greater than that between members of different species. Whether Aristotle has more, so to speak, *a posteriori* reasons in mind, in the Argument from Mobility, or not, it is nevertheless clear that he has very strong metaphysical reasons for rejecting the possibility of resurrection. (*Generatione et Corruptione* 338b7–b20)

Why is it a fact that some things thus, e.g. waters [*sic*] and air come to be in a cycle, and if there is going to be a cloud, it must rain, and if indeed it rains, it is also necessary for there to be a cloud, while men and animals do not return to themselves, *so that the same animal comes to be again?*²⁰ . . . Those things . . . whose substance is perishable must return on themselves specifically, not numerically. (1059a2–a10)

Planetary cycles recur, seasons recur, and the elements recur. Socrates could not recur, however, any more than he could become a light-switch. Animals do not recur cyclically in the way that imperishables do because they are different in their substance or essence—different in their what-it-is-to-be. Of course, one might rightly maintain that the fact that animals necessarily perish may not entail that they must perish once and finally. But to perish and then recur would be to come to be again. And this is precisely what is being ruled out. And it is more than suggested at *Physics* 228b1–7, (see 228a3–19 also),

furthermore, that what metaphysicians refer to as “gappy existences” are going to be ruled out as well. Indeed, dying would seem to be in Aristotle’s thinking a situation where the soul parts ways with the body. And as we are told in the *De Anima* (412b):

We must not understand by that which is potentially capable of living what has lost the soul it had, but only what still retains it.

Once a living thing dies, the body loses its soul. According to Aristotle, it is not going to get it back. It is incapable of regaining it. If it is not going to get it back, Resurrection is not going to occur. Considerations such as these, to my mind, weigh heavily in favor of the view that Aristotle rejects the possibility of Resurrection as something that is broadly logically impossible.

Resurrection, Migration, and Gappy Existences

But even were Aristotle to allow a kind of Resurrection, where the body of an animal has died but not perished, such a result would be of little use with respect to the puzzle with which we began. To see why this is so, suppose that the kind of Resurrection that Aristotle seems to have in mind in *De Anima* I.3 involves the corpse of an animal rising up before the body has perished. The corpse, one might argue, is fairly in tact; resembling the body in large part. But the corpse was never in any condition such that its matter could migrate. And, as the Puzzle of Simple Composition is generally portrayed, the matter that migrates, say from Callias to Socrates, is not, so to speak, left intact. Callias’ corpse is either decomposed to the level of fire and earth before migration,²¹ or the corpse of Callias is fairly well mutilated when Socrates consumes it.²² It is reasonable to argue that a Resurrection, of the materialist variety, could not occur given the level of decomposition of the matter in question. Consider the following analogy given by Peter van Inwagen:²³

Suppose a certain monastery claims to have in its possession a manuscript written in St. Augustine’s own hand. And suppose the monks

of the monastery further claim that this manuscript was burned by the Arians in 457. It would immediately occur to me to ask how this manuscript . . . could be the very manuscript that was buried in 457. Suppose their answer to this question is that God miraculously created Augustine's manuscript in 458 . . . [or] . . . suppose one of the monks is, in a very loose sense, an Aristotelian. He tells the following story . . . "Augustine's manuscript consisted of certain 'parcels' of matter upon which a certain form had been impressed. It ceased to exist when this parcel of matter was radically deformed. To recreate it, God needed only to collect the matter that once composed it and reimpress that form upon it . . . " [C]ertainly . . . it would not be that one; its earliest moment of existence would have been after Augustine's death; it would never have known the impress of his hand; it would not have been a part of the furniture of the world when he was alive; and so on.

The point seems to be that the manuscript's identity is inextricably tied to certain causal processes such as Augustine's hands, his intentions, actions, his organization and interaction with its parts, etc. To reinforce the point, imagine further that you are a potential buyer for an original piece of art (that has not been destroyed). The curator proposes that you wire the money for the artwork and he will deliver the piece by means of his tele-transportation device, in order to eliminate the risk of theft. The device he has at his disposal will destroy the object and recreate it in your living room. One might have, needless to say, a few reservations. You might begin to question whether you were really buying an original. One would not express concern were she, say, buying a bicycle instead. A facsimile of the bicycle in the showroom will do just fine for the type of cycling I do. But if the salesman adds that Lance Armstrong won the Tour de Georgia on it, it might be better simply to ride it home. When it comes to objects whose authenticity is our concern, we may be less inclined to allow for "gappy" existences. Authenticity and identity seem inextricably bound.

And, of course, one might have concerns about authenticity with respect to items such as Callias and Socrates as well. And with such characters as these, it seems reasonable to believe that a continual

biological process is essential to their existence. (Since he rejects dualism, and he believes in Resurrection, van Inwagen believes that God snatches the body of a dead human at the precise moment of his death, and preserves it so that it can be revitalized in Resurrection. God cunningly leaves a facsimile of the body, so that, I take it, Christians have to earn their faith.²⁴) In a later work, *Material Beings*, van Inwagen gives the following account of what he takes the persistence conditions for living organisms to be:

If an organism exists at a certain moment, then it exists whenever and wherever—and only when and only where—the event that is its life at that moment is occurring.

Essential to Callias, *qua* biological organism, will be a certain ongoing process, which develops and results in the exercise of certain capacities of the respiratory, excretory, digestive, nutritive, muscular, and reproductive variety. A “recreated” Socrates or Callias doppelganger will not, much like Augustine’s manuscript, or the tele-transported art work, have been a part of all of these internal causal processes.

I believe Aristotle, like van Inwagen, is likely to take issue with the account that van Inwagen’s Aristotelian provides. Something like van Inwagen’s view—minus what Dean Zimmerman has called “Body-Snatching”—seems much in line with what Aristotle, given his appreciation of biological function, might agree with.²⁵ For he seems to have the persistence conditions of organisms very closely linked to, as we will soon see, the living body. But the point I want to emphasize at present is that Aristotle seems to reject the idea of “gappy” existences even in the case of events (228a20):

Kinesis is one in an unqualified sense when it is one essentially or numerically; and the following distinctions will make clear what this is. There are three textures in connection with which we speak of kinesis—what, where, when. I mean that there must be something that is in motion, e.g. man or gold, and it must be in motion in something, e.g. a place or affection, and at some time . . . but it is the three taken together that make it one without qualification—for that in which the motion takes place (the species) must be one

and incapable of subdivision, that during which it takes place (the time) must be one and unintermittent, and that which is in motion, and that which is in motion must be one—not in an accidental sense in which Coriscus and the white may be one, nor if it is done in common (for there might be a case of two men being restored to health at the same time in the same way, e.g. from inflammation of the eye, yet this kinesis is not one, but only specifically one).

The event description “being cured of eye inflammation” might apply equally well to Socrates or Coriscus. Nevertheless, Aristotle wants to say that the events described would be numerically different. In addition, we are told that events cannot be intermittent, which is to say they cannot have “gappy existences,” which is to say they cannot recur. And, at *Physics* V.4, (228b1–7), moreover, Aristotle says the following:

And that is why change that is without qualification is continuous and one must be the same type, must belong to one subject and must take place in one time: in one time, so that immobility should not intervene. For when the time is interrupted, the thing has to be at rest, and where rest intervenes, there is not only change but a plurality. Thus if change is divided by rest, as it is if there is an intervening time, it is not one, not continuous.²⁶

We are told that a change where rest intervenes is not only a change but a plurality. If Aristotle is going to maintain that the same activity cannot contain a pause, *a fortiori*, he is going to reject the idea that a substance can have a “gappy” existence.

Resurrection and the Problem of Shared Identity

Our present considerations seem to suggest a way in which one might reconstruct, on Aristotle's behalf, a response to the Puzzle of Simple Composition, as it has been traditionally put forward. At the very least, it is clear that the characterizations of *Migration*, which have traditionally been offered, are somewhat misleading. For if Callias cannot be resurrected once he perishes into materials that are decomposed enough for *Migration*, then one might question the seriousness

of the threat that, given that Callias' matter has migrated to Socrates, Socrates and Callias will be identical. For the consequent to obtain, Callias would need to be capable of coming into being out of extremely decomposed materials. But were Aristotle to reject this as a possibility, in a manner consonant with the views of, for example, van Inwagen, as well as those of certain texts we have considered above, he would have a way of treating the Puzzle of Simple Composition. To do so he will need to introduce another principle, then, into the puzzle (one we have seen him endorsing heretofore):

NR: Resurrection is metaphysically impossible.

This principle, combined with our other two, namely,

SH: necessarily, that substance which has the same form and the same matter is the same substance; and,

UF: the forms of substances of the same species are numerically identical,

seems to go a fair distance toward resolving the puzzle of simple composition. NR may or may not be compatible with:

HM the material of one substance can migrate so as to become the matter of another cospecific substance.

Aristotle would, as I will argue in the sequel, reject HM. However, so long as he has NR at his disposal, this would seem to keep Callias from popping back into existence. And if Callias can be so kept, then Callias and Socrates will not be identical. Substances that are alive are essentially thus. Without the capacity for living they are driven out of existence. So we do well to consider the nature of the substances under consideration in SH and HM. With respect to SH we are concerned with living substances. This fact can be expressed more explicitly with the following emendation:

SH* Necessarily, if x is a living substance, and y is a living substance, and x has the same form (type) as y , and x and y have matter that is token identical, then $x = y$.

In order to avoid the risk of equivocation, HM is better stated as follows:

HM* The material of one living substance can migrate so as to become the matter of another cospecific living substance.

If we follow the descriptions of *Migration*, as they have been traditionally offered, Socrates and Callias will not be able to satisfy SH*. In the antecedent thereof, the substances in question are described as living. In the traditional depictions, Callias is dead and gone. For migration to occur, a material substance will have to die. Once dead, an organism cannot exist again. The recipient of this matter, should there be one (*per impossibile*), need not worry about competing for his identity with his benefactor, for his benefactor cannot, at this point, exist.

This is not to say that one might not support *Migration* with other examples, examples that keep Callias and Socrates alive and well during the process. One might suggest a case of continual transplantation.²⁷ But if the recipients are kept alive, at what single point in time will they have the same matter? Maybe it is too much to ask to require that they have the same matter at the same time?²⁸ Suppose a clever surgeon begins inter-transplanting the organs of Socrates and Callias at t and completes the inter-transplantation at t^* . It may be difficult, given Aristotle's commitments, to predict the operation table upon which Callias, at t^* , is to be found.

Certain responses to this sort of dilemma, however, seem, in a way, *prima facie*, available to Aristotle. He might claim that the operating table where Callias was at t is the table upon which we find Socrates at t^* . Alternatively, he might believe that when an organ is integrated into another biological system it is no longer the material part of its previous system—a kind of holism that stops *Migration* right in its tracks. He might believe that “where my brain (or heart) goes, go I,” as some philosophers do.²⁹ In any case, it is difficult to see why this would be a problem that is uniquely Aristotelian. Aristotle might not be able to answer the question of which operating table will contain Socrates and which will contain Callias. Then again, neither can I; nor can I think of a non-Aristotelian ontology that unequivocally answers the question sufficiently. Still, we will have something to say

on the Puzzle of Transplantation, on Aristotle's behalf, I believe, after we have treated, successfully, the Puzzle of Simple Composition.

Aristotle's Rejection of Migration

Heretofore, I have been arguing that Aristotle's views on Resurrection are, not a liability, but, an asset in dealing with the Puzzle of Simple Composition. In discussing his views on Resurrection, however, the idea that Aristotle would reject HM has been adumbrated. For we have seen reasons for believing that Aristotle believes that the body of, say, Callias, cannot survive the loss of the soul, and, as a result, *Migrate*. In the rest of this chapter, I will lean on this claim fairly heavily as a rejection of HM and as another, albeit related, Aristotelian response to the Puzzle of Simple composition.

The comparison that Socrates the Younger used to make, we are told, is unhappy. Socrates the Younger, as Aristotle maintains in *Metaphysics* VII.11, seems to have thought that living things can be accounted for in terms of their form without making essential reference to matter—much in the way that one would define circle without mentioning the types of materials, bronze, stone, wood, etc., which instantiate the form (1036b22–28). Aristotle, however, rejects the analogy (1036b28–32):

But this is not similar: an animal is something perceptive, and is not to be defined without motion, and for just that reason not without its parts being in a certain condition. For it is not a hand just anyhow that is a hand of a man, but, rather, one capable of performing its function, and so one that is ensouled: one not ensouled is not a part.³⁰

Animals have the capacity of perception essentially. Any account thereof will need to make reference to such a capacity. But Aristotle seems to take the capacity of perception to require essential reference to motion. And in order to accommodate such motion, in *De Anima* I.4, Aristotle says that this motion is some kind of alteration of the parts (415b23–25), those which Socrates the Younger neglects, which must be in a certain condition—namely the condition that enables

the proper function. The account, thus, needs to make reference to a type of matter that is in the right condition so as to perform its function. The condition that enables an organ to perform such a function is described by Aristotle as being ensouled. And this is a condition that is an essential feature, no less, of the organ (*De Anima* 412b 18–23):

For if an eye were an animal, [the capacity for] sight would be its soul and if this fails it is no longer an eye except homonymously, just like an eye in stone or a painted eye. We must now apply to the whole living body that which applies to the part.³¹

For Aristotle, certain operational entities have their characteristic capacities essentially. A knife or an axe simply cannot lose the capacity to cut and remain in existence. The house cannot lose the capacity to provide shelter and remain in existence. The vestige of such an instrument when it has lost such a capacity goes by the same name merely for the sake of convenience. For two things are homonyms when they have the same name, and, nevertheless, the accounts of their being are different (*Categories* 1a1–6). The same goes for the organs of living things. The eye cannot lose the capacity of sight and remain in existence. And, rather interestingly, the same goes for the body, whose characteristic capacity is that of living. Bodies are essentially functional, and, therefore, have, essentially, the capacity to live. This does not mean that they cannot lose such a capacity. But it does mean they cannot lose it and remain in existence. Let the following, then, be a principle that Aristotle accepts:

H_p A functional entity E exists only if E possesses the characteristic capacity of the species-type to which E belongs.

Aristotle believes that death is going to involve loss of the soul (412b1): “We must not understand by that which is potentially capable of living what has lost the soul it had, but only what still retains it.”

D_p An entity dies just in case its body loses its soul.

Furthermore, we are told that the form or soul of the body is its specific capacity for living: Soul is, of course, substance qua form of a natural body that has life potentially (412a 19–21):

S_p The soul of a body is its specific capacity for living.

Suppose, then, that Callias dies. By D_p, Callias' body loses his soul. But, then, by S_p the body of Callias no longer possesses the capacity to live. If we assume what seems natural, that the characteristic capacity of Callias' body is that of living (perhaps a certain kind of life), then, by H_p, the body of Callias no longer exists when Callias dies. Of course, if the body of Callias does not survive him, it is difficult to see how *Migration* can feasibly occur. It would seem that HM is either false or the puzzle turns upon an equivocation, wherein the matter in question for *Migration* is elemental matter and the matter in question for HD and SH is proximate.³²

Conclusion

Aristotle rejects Resurrection. His views on metaphysics would rule out such an event as impossible. His metaphysics seem to me to stray only infrequently from the natural. Determining what the essences are will be an empirical matter. Even God's existence is built upon the premise of change in the natural world. But Resurrection is not simply rejected on the basis of common sense or as something that runs counter to the opinions of the many or the wise. Perhaps Aristotle is not leaning too heavily on metaphysical necessity in *De Anima* I.3., as many of his remarks throughout *De Anima* I.3 have a very *a posteriori* flavor. Even so, it seems sufficiently clear from other texts that Aristotle would be well inclined to rule out Resurrection as a metaphysical impossibility. To open the way for entities to die and come back into being would be to question the distinction between entities that are perishable and imperishable, heavenly and terrestrial—a distinction that resisted erosion well into the seventeen hundreds. And so the appearance of a more *a posteriori* flavor in *De Anima* I.3 provides, in the end, little optimism for Aristotle's using Resurrection as a way

of responding to the Puzzle of Simple Composition. But this is just as well, as with such a rejection Aristotle is equipped with a principled reason, a reason which has its ground in his science and his meta-science, for resisting the force of the puzzle's claim that his view allows for two existing substances to be numerically identical. Furthermore, we have seen that Aristotle's views on the possibility of Resurrection dovetail nicely with his claims that the proximate matter cannot survive the loss of the soul. And we have seen, in the previous chapter, that proximate matter is the matter that serves as the continuant for organisms. As this matter cannot survive the loss of the soul, it is ill-equipped for *Migration*.

Chapter 3

Aristotle on Composition and the Puzzle of Unity

Composition

Common sense suggests that a number of things can come together to form a larger thing.¹ A number of pages, hexameters, words, syllables, indeed letters, compose the *Iliad*. A house is composed of wood, stone, and the elements that compose these. Common sense, however, does not equip us with an explanation, or rule, for distinguishing cases of composition from other relations. When I shake my neighbor's hand, and I come into contact with her, common sense has it that she and I do not compose a third object. Indeed, common sense suggests that a bonding relation, between her hand and mine, would not provide warrant for saying that we compose a third object. In fact, common sense suggests that cards compose a deck, but they are not all in contact with one another, much less bonded, in a game of "Texas Hold'em". Common sense might be rejected, on one extreme, by maintaining Compositional Nihilism: the view that the arrangement of simples is never sufficient for composition. Short of this, one might embrace a kind of Organicism, where biological entities are the only objects sufficiently integrated in a relation worthy of the description. Universalism, in stark contrast, is the view that any two objects compose a third: the bottom half of the Eiffel Tower, for example, and the upper half of the Washington Monument, compose a third object. Composition is ubiquitous, on this view, but not very special. There are, then, alternatives concerning how and when the composition relation is instantiated—alternatives that have concerned philosophers since antiquity. Aristotle, too, is concerned to understand what differentiates an organic whole from a mere heap

of things. Insofar as he is inclined to make the distinction between a heap and a unified composite whole, he seems to place some distance between his view and an unrestricted mereology. To the extent that he is willing to make the distinction, moreover, he seems to reject Compositional Nihilism. Can we see him as occupying a *media via*? Perhaps we can to some degree view Aristotle as an Organicist. In any case, I will argue that Aristotle finds the unity of an organism and its matter, indeed, its form and matter, to be the result of the goal-directedness of its nature.

The Puzzle of Unity

Perhaps the best way into the problem is by means of a puzzle concerning unity. Aristotle's *aporia* is set up in the following way. We seem to take the ultimate subjects of predication to be substances:

Further, it is because the primary substances are subjects for everything else that they are called substances most strictly. (*Categories* 2b35–3a1)

And so we must first determine the nature of this; for that which underlies a thing primarily is thought to be in the truest sense its substance. (*Metaphysics* VII.3 1028b33–1029a1)

So here is a principle: S_c Substances are thought to be primary or basic beings.

But if substances are the most basic entities, it would seem that they should not have proper parts. Were they composed of such parts, so the argument runs, the parts would be more basic, *per impossibile*, than the most basic *ousiai*. Hence:

- (1) No entity with proper parts can be a substance.

Aristotle seems, moreover, to have Organicist leanings. He maintains, on the one hand, that only those things that are formed by nature can qualify as paradigm substances (*Metaphysics* VII.17 1041b28–30):

[W]hile some things are not substances, as many as are formed naturally and by nature, their substance would seem to be this nature, which is not an element but a principle.

However, the paradigm cases of things that are formed by nature and naturally are things that are alive (*Metaphysics* VII.7 1032a15–20):

Now natural comings to be are the comings to be of those things which come to be by nature; and that out of which they come to be is something which exists naturally; and the something which they come to be is a man or a plant or one of the things of this kind, which we say to be substances if anything is.

The text for the last clause of Ross's translation is: *ha dê malista legomen ousias*. Plants and animals are "that which we claim to be realities most of all." Indeed, he seems to take it that the parts of animals, and that which is thought to compose these, are merely potentially substances (*Metaphysics* VII.16 1040b5–19):

Evidently even of the things that are thought to be substances, most are only potentialities—e.g. the parts of animals (for none of them exist separately; and when they are separated, then they too exist, all of them, merely as matter) and earth and fire and air; for none of them is one, but they are like a heap before it is fused by heat and some one thing is made out of the bits.

As a result, commentators have taken Aristotle as maintaining that it is living beings that have full ontological status. If this is the case, then Aristotle is committed, at the very least, to the following:

- (2) Living beings are real substantial beings.

However, propositions (1) and (2) appear to be inconsistent with a third commitment of Aristotle's. As the reader is by now well aware, living organisms are composites of matter and form (1034a5–8):

And when we have the whole such and such a form in this flesh and in these bones, this is Callias or Socrates; and they are different in virtue of their matter (for that is different), but the same in form; for their form is indivisible.

- (3) Living beings are composed of matter and form.

Aristotle's hylomorphism, his view that *ousiai* are basic entities, and his view that living beings are paradigmatic *ousiai*, seem, then, to generate a contradiction. And some commentators believe, not only that Aristotle is sensitive to this *aporia* in *Metaphysics* VIII.6, but that a solution to the difficulty is therein found. Living organisms exhibit a unity despite their hylomorphic analysis.

The Popular Strategy

The popular strategy for dealing with the puzzle has been to qualify the sense in which matter and form are distinct. For if matter and form can be said, ultimately, not to be distinct, that which composes a living substance will not be a proper constituent. Commentators point to *Metaphysics* VIII.6, where Aristotle seems to be concerned with issues of composition. He states (*Metaphysics* VIII.6 1045a7–17):

In the case of all things which have several parts and in which the whole is, as it were, not a mere heap, but the totality is something besides the parts, there is a cause [of unity]; for as regards material things, contact is the cause in some cases, and in others viscosity or some other such quality. And a definition is a formula which is one not by being connected together, like the *Iliad*, but by dealing with one object—What then is it that makes man one, and not many (e.g. animal and biped), especially if there are, as some say, an ideal animal and an ideal biped?

There is considerable debate over whether the object whose unity is primarily at issue is the form man or the composite man.² Perhaps he is, to some extent, treating both. And to the extent that he can be seen as concerned with the unity of a composite living thing, commentators have pursued a common strategy in alleviating the tension involved in the Puzzle of Unity. That an answer is being offered by Aristotle is suggested in the following remarks (1045a21–31):

Clearly, then, if people proceed thus in their usual manner of definition and speech, they cannot explain and solve the difficulty. But if, as we say, one element is matter and another is form, and one is

potentiality and the other actuality, the question will no longer be thought a difficulty. For this difficulty is the same as would arise if “round bronze” were the definition of cloak; for this name would be the sign of the definitive formula, so that the question is, what is the cause of the unity of round and bronze? The difficulty disappears, because the one is matter, the other form. What then is the cause of this—the reason why that which was potentially is actually—what except, in the case of things which are generated, the agent?

Phrases such as “the difficulty disappears” and “the question will no longer be thought a difficulty” suggest that Aristotle is offering a kind of deflationary solution to the problem of composition. And that solution will in some way rely upon the distinctions of matter and form and potentiality and actuality. Later, in VIII.6, Aristotle seems to diagnose precisely where those who proceed and define in their usual manner seem to go wrong (1045b16–21):

The reason is that people look for a unifying formula, and a difference, between potentiality and actuality. But, as has been said, the proximate matter and form are one and the same thing, the one potentiality and the other actuality. Therefore to ask the cause of their being one is like asking the cause of unity in general; for each thing is a unity, and the potential and actual are somehow one.

Let us now turn to consider some of the more persuasive proposals for understanding precisely what the solution is. Perhaps the most radical proposal has been that matter does not really exist.

Eliminativism

Richard Rorty once maintained that the question concerning the unity of the definition and the question concerning the unity of substance are intimately related. And it is on the basis of this relation that he reads Aristotle as answering the Puzzle of Unity. The contours of Rorty’s approach to the puzzle can be seen in the following.³

I shall claim that the plausibility of saying that substance is form only appears when this is taken together with the claim that proximate

matter and form are identical. I shall be arguing, further, that to understand this latter claim one needs to take Aristotle's claim that genus is matter more seriously than it is usually taken. Roughly, I construe Aristotle as saying that the unity of the genus and differentia in the definition somehow mirrors the special sort of unity which is the unity of form with proximate matter, and that appreciating this fact clears up the puzzles of Zeta.

The puzzle is going to be solved by maintaining that the form and matter in the hylomorphic analysis are, in a way, identical, and thus, not components of a living substance. The first step in the process is going to involve an identification of matter with the genus of a genus-differentia definition. If there is a unity with respect to the genus-differentia definition, and we expect *rerum natura* to mirror our accounts, there will also be a unity with respect to living substances.

The claim that Rorty believes needs to be taken more seriously, moreover, is Aristotle's apparent identification of matter with genus. In the 29th chapter of Aristotle's philosophical lexicon, *Metaphysics* Book V, Aristotle says that one of the ways the *genos* is spoken of is, in fact, in terms of matter (1024b6–10):

Genos then is used in all these ways, (1) in reference to continuous generation of the same sort, (2) in reference to the first mover which is the same sort as the things it moves, (3) as matter; for that to which the differentiae or quality belongs is the substratum, which we call matter.

Herein, we are told that genus is spoken of as matter. And we are informed that the reason for this, for this tendency to speak of genus as matter, is that differentiae and qualities belong therein, much in the way that qualities belong in a substrate. Similar remarks are made at *Metaphysics* VII.12, where Aristotle says the following (1038a3–9):

And in general it makes no difference whether it includes many or a few terms—not, therefore, whether it includes few or simply two; and of the two, the one is differentia the other genus, e.g. in “two-footed animal” “animal” is genus, and the other is the differentia.

If then the genus absolutely does not exist apart from the species which it as genus includes, or if it exists but exists as matter (for the voice is genus and matter, but its differentiae make the species, i.e. the letters, out of it), clearly the definition is the formula which comprises the differentiae.

We find Aristotle here discussing the components of a formula that will comprise the differentiae. Letters are said to further differentiate voice. And voice would seem to be the substrate that underlies various syllables and words that are specified by the letters. So, also, the idea seems to be that “two-footed” is going to, belong in, or differentiate, say, an animal. At least that is the way that the scholars who accept the identification of genus and matter would prefer to read the passage, though it is difficult to see precisely how “animal” is going to be identified with matter. At *Metaphysics* X.7, 1058a21–6, the text reads:

Evidently, therefore, with reference to that which is called the genus, none of the species which belong to the genus is either the same as it or other than it in species (rightly so, for the matter is indicated by negation, and the genus is the matter of that of which it is called the genus, not in the sense in which we speak of the genus of the Heraclidae, but in that in which we speak of a genus in nature), nor is it so with reference to things which are not the same in genus, but it will differ in genus from them, and in the species from things in the same genus.

Given the apparent identifications (or apparent analogical relations) between matter and genus, Rorty believes that Aristotle takes the referent of “animal” in the definition “Two-footed animal” to pick out a kind of *aoriston zoiôn*, an animal goo, as he calls it, that could be, potentially, say, a man or a horse.⁴ Now, once matter is understood as genus, genus will be reduced to species-form:

What I want to argue is that Aristotle thinks that we can get matter into the form by taking the genus, which on anybody’s account is a component in the definition, as representing the matter of the composite.⁵

The reduction of genus to species-form comes about in the following way. Animality in horses is something quite different from animality in men. There is, Rorty maintains, really nothing in common between the matter of Secretariat and Socrates. Their respective matters are too informed by this point. And he takes the fact that there really is not anything in common to reflect the idea that the material cause of these substances is really not “a this” at all. He takes, for example, “two footed” and “animal,” in a definition of man, to refer to the very same qualities.⁶ The idea, furthermore, seems to be that once animal goo is differentiated it no longer exists as such—we might say it is, by this time, animal-two-footed. And with the reduction in place, Rorty believes he has Aristotle’s answer to the Puzzle of Unity:

[W]e may think of Aristotle as saying: this only appears to be a problem because people think of the matter in the composite as forming a substrate of which the essence is predicated, but we have now seen that matter (a) was never a this in the first place and so never had an essence and (b) doesn’t exist any more anyway, since it was only what the substance was potentially . . . He then says one or the other of two things . . . either that the material isn’t a this at all, but merely a potentiality or that perhaps the material cause was a full-fledged substance, it now, having perished in the genesis of the new substance, does not exist.⁷

In a sense, it is fair to say that Rorty’s Aristotle, not only reduces talk of matter to potentiality, but, eliminates matter—at least matter as substrate—at its expense. The term “matter” either picks out a mere potentiality, which is not a “this,” and so does not exist, and, so is not a proper part of anything. Or, “matter” picks out the predecessor of an actual living substance, a predecessor which no longer exists once actualization has taken place—perhaps akin to a larval material that will no longer exist by the time the organism has wings.

What then is one to make of form? According to Rorty, to say form is actuality is simply to point out that an ancestral stage has been replaced. “Form” seems to be the description of the current actuality—an actuality which may, in turn, be a potentiality for a subsequent

stage or actuality. To speak of the actuality of the larval material is to speak of the stage, or the counterpart, that will replace the larval stage, the stage where, say, the member of *drosophilae* takes flight. The unity of a living being at a given stage is, then, not something in need of explanation. Rorty's interpretation straightforwardly deals with the Puzzle of Unity in a deflationary way: (1) matter is identified with genus, and, (2) genus form is reduced to species-form, and, (3) form is identified with the structure of a specific organism.

Rorty's deflationary approach is in some ways attractive, but it does have several shortcomings. First, it invites the question of how it is that Aristotle could consistently take substances to be unanalyzable throughout the middle books, and, still have the *aporia* occur to him.⁸ That is, if Aristotle thought of living substances as unanalyzable, why is he so concerned with identifying the substances of concrete objects throughout the middle books?

And what are we to make of Aristotle's view that matter is the principle of individuation under Rorty's interpretation. Aristotle says that Callias and Socrates are the same in respect of form but different in virtue of their matter. On Rorty's view, it seems, once two *drosophilae* take flight, their matter has been jettisoned—which is to say there is nothing in virtue of which they are different. But Aristotle, moreover, maintains that they are, as we have seen, different in virtue of their matter. Rorty is moved, then, to maintain a thesis, concerning individuation, that is somewhat puzzling.⁹

My view is that he probably thought . . . that the fact that a thing was made out of some kind of sensible matter automatically meant that it had to have some accidents within a given range . . . This necessity would be, so to speak, the *contribution of the genus to the composite*.¹⁰

But what can the genus—which is really not a “this”, on Rorty's view, and would not exist any more even if it were—contribute to the composites?¹¹ One way to describe matter, on his view, is, simply, as the privation of form. But what is the *ex quo* going to be on Rorty's view. Once the substrate for change is eliminated, and is not “a this,”

it looks as if Aristotle's theory of change is no longer endurantist. And many will find that interpreting Aristotle's views on change as perdurantist, or as stage-theoretical, should be resisted as anachronistic.¹²

One might, however, be moved to distinguish kinds of matter. One might countenance, on the one hand, a kind of matter for all the entitative work that Aristotle seems to want matter to do, and, on the other, a kind of matter that can, in some way, be identified with the proximate matter. Perhaps the matter referred to in *Metaphysics* VIII.6 is something different from the matter of change. To this view I now turn.

The Identity Thesis

A similar strategy for dealing with the Puzzle of Unity does not directly suggest the elimination of matter, but, nevertheless, identifies it with form. In this way, if the matter and form of Socrates are not numerically different, as matter is potentiality, form is actuality, and potentiality and actuality are the same thing, we seem to have a solution to the Puzzle of Unity. Form and matter compose the paradigm instances of substance—but only as “indistinct parts,” given their identity.

Potentiality, identity, and actuality

But what about the passages wherein Aristotle talks about the substrate of change—the object that has the potentiality to take on contraries? Aryeh Kosman finds Aristotle making a distinction between kinds of potentiality. The cornerstone of this distinction is *Metaphysics* IX.6 1048a31–b8. Here is Kosman's translation:

Energieia is a state of affairs obtaining (*to huparchein to pragma*) not in the way we mean when we say something is potentially, for example, as a Hermes is in the wood and the half-line in the whole, since they can be taken out, and we say that a person understands something even without thinking of it, if he is able (*dunatos*) actually to think of that thing. What we mean to say will be clear by reasoning from particular examples, and we must not look for a definition of each term, but rather grasp the following analogy: as that which is building is to that which is able to build, as that which is awake is to that

which is asleep, as that which is seeing to that which is not seeing but has sight, as that which has been shaped out of the matter is to the matter, as the wrought is to the unwrought: let one number of this antithesis be defined as *energeia* and the other as potentiality. *Energeia* is not spoken of in every case in the same sense, but by analogy; as this is to this or in relation to this, so that is to that or in relation to that.¹³

The contrast that Kosman finds in this passage is that of, on the one hand, a relation of potentiality to actuality wherein the latter replaces the former, and, on the other hand, a relation such that the latter does not replace, but, rather “preserves and makes manifest . . . a latent . . . potentiality . . . that is the same being as it.”¹⁴ Kosman understands the first kind of relation as that which obtains in certain cases of motion. The block of wood wherein the sculptor fashions the Hermes has a certain shape, call it *F*, at the beginning of the process. By the time the statue has been unveiled, however, *F* is no longer present in the statue. This type of change stands in stark contrast to another kind of change. A mathematician knows the Pythagorean Theorem. The Theorem we say is present in the mathematician even when she is not thinking about it. Or perhaps we are better off saying that the capacity to think of the theorem is present in her, when we say she has latent knowledge of the Theorem. Call this capacity *C*. When, however, she begins to use the Theorem, when the Theorem is actually being entertained by her, we do not say that she no longer has *C* present in her, or, moreover, that she no longer has the capacity in her even while she is demonstrating it. And this goes to show that the relation of potentiality to actuality can be said in a number of ways. For ease in exposition, I will refer to the first kind of transition as *Ordinary Transition*, or OT, and the latter as *Transition Proper*, or TP.

Armed with this distinction, Kosman can account for several things. In the first place, he can account for those places where Aristotle does speak of matter as the *ex quo*. These are cases of OT. Secondly, he is able to suggest a reason why artifacts do not stack up in the category of substantial being:

We may phrase this fact in terms of matter and form; the oak beam which is a lintel is an entity which can be removed from its position,

and it is that very oak beam which, in the proper position, will be a lintel. This does not allow us to say that a lintel is an oak beam; it is oaken, made out of oak, but not oak. But that which is a lintel nevertheless has a being independent of its being a lintel. But there is nothing, that is, there is no third thing which is the matter of a human being, for the flesh and bones of a human being are themselves the human being. Substances, we might say, are form all the way down.¹⁵

When we look at the case of the lintel, we see that it has some matter or stuff, and that the wood, which is associated with it, and which has, in its own right, an essence or being that is independent, is separable from the lintel itself. As such, the lintel has distinct constituents associated with it and cannot be said to possess the unity required for a substantial kind of being. When, however, we come to living things, their matter is not stuff which can have an existence independently. Similar to the suggestion of Rorty, once the living being has come to be, its generative matter no longer exists—only the constitutive matter remains, and this matter does not have an identity apart from the form. Kosman relies here upon, the, by now, familiar remarks in *De Anima* II.1 to the effect that an organ cannot lose its capacity to function and remain in existence. And, on Kosman's view, the matter of a living being is simply the potentiality, in a TP, to live its life. And this is also the form. And this explains why there is a unity with respect to living things which is lacking with respect to artifacts. Artifacts have material constituents that can have an independent existence. The bronze composing a statue can survive the destruction of the statue. But the matter of a living being cannot survive the death of the organism. The matter of a living being has persistence conditions contemporaneous with the organism. And in this way, matter and form are unified for the paradigm cases of substantial being.¹⁶

Of course, if there is a unity of matter and form, then the Puzzle of Unity has a solution. Matter will constitute a living being. But this matter is numerically identical to form. Matter and form, at best, are improper constituents, if "constituent" is even the right word, of the living organism. Indeed they are different descriptions of the same thing, namely the organism.

The term "matter" refers to entities taken in a certain way; matter is a *principle of being* or nature and not a *category of entity* in nature.

The word does not divide up into instances of matter and form; matter and form are ways of thinking about the entities of the world relative to an explanatory or descriptive context.¹⁷

The matter in question, that is, the matter that is to be involved in the unity that is required for substances is, it appears, distinguished from form only intentionally. Our language concerning matter reflects one way of thinking about a substance, and form reflects another way of thinking about the same thing. But there is no ontological division made when one speaks of the matter of, say, the instance of *drosophilae* and its form. It is rather like distinguishing, perhaps, between the Morning Star and the Evening Star, where one understands the names as something akin to descriptions.

One immediate difficulty, however, with Kosman's approach, pointed out by Michael Loux, is that *De Anima* II.5, to which Kosman appeals in making the distinction between TP and OT, does not seem to line up in the way his interpretation requires.¹⁸ If we follow the examples that Kosman relies upon, we will need to take the organic body to be the first actuality that is preserved or manifested by the soul which corresponds to the second actuality. The knower, who is not currently knowing, is usually taken to be in a state of first degree actuality, which will later become more actual, that is, become a second degree actuality, when the knowledge is exercised. Aristotle, however, seems fairly explicit in maintaining that the soul is the first actuality (*De Anima* II.1 412a27):

That is why the soul is an actuality of the first kind of a natural body having life potentially in it. The body so described is the body which is organized.

As a result, Kosman is led to say that the examples of TP transition, which Aristotle provides, are merely models of the way that Aristotle would like to think about body and soul. But in saying they are mere models, of course, we are recognizing that there is a disanalogy as well.¹⁹ He goes on to say:

[M]atter is form in the same way that (the power of) sight is seeing. And just as eye, sight, and seeing are bound together in the complex unity of the sightful organ of sight, so, in general, matter, form,

and being are bound together in the complex unity of an actual substance.

The original idea seemed to be to characterize the relation between matter and form in such a way that substances could be considered basic unities. Kosman's move was to mark a distinction between kinds of transitions. TP transitions would allow potentialities to remain even when actualized. They are transitions from first actuality to second actuality—and, for the sake of argument we can say that, as one is the exercise of the other, they are two sides of the same coin. But when it turns out that the body and soul are explicitly said not to fit into this kind of transition, we are told, nevertheless, that “in general matter, form, and being, are bound together in the unity of an actual substance” in the way that “eye, sight, and seeing, are bound together in the complex unity of the sightful organ.” But the problem is not whether we can in fact view certain things as making up a unity, it is how we can understand form, matter, and the *ousiai* they are said to compose, to result in a unity.

Perhaps the idea is that in order for drosophilae to exercise their proper function, they will need to have, or perhaps it is hypothetically necessitated that they have, matter of a certain type. The fly will need to have wings to achieve this function, which will require a structure that will allow the wings to support its weight. In order for the wings to function, other organs will be required, and these too will need to exhibit a certain structure. Indeed, if something has a certain structure, we are inclined to say that it exhibits a certain form. And, so one may argue, insofar as the matter of the insect is structured, it is, “in a way,” identical to form.²⁰

A great deal would seem to hinge, here, however, on the locution “in a way identical.” To say that an organism has a characteristic form is to require that matter be structured in a certain way. Conversely, to say that matter is structured in a certain way is to say that it has a certain form. But in what way are the two identical? Would the mere co-instantiation of a specific kind of matter and specific kind of form be sufficient for identity? Needless to say, not even a necessary co-instantiation would be sufficient. Of course, “in a way identical”

is not strict identity, or numerical identity, but something short of strict identity. Perhaps it is identity in the “loose and popular sense.” But if the relation is not that of numerical identity, it seems one is moved to say that matter and form, strictly speaking, are distinct. And if they are distinct, then, one needs to explain how distinct entities can become unified in one basic substance. One might be moved to take “in a way identical” to capture the idea that the same thing can be considered under various modes of description: the material mode and the formal mode. This very projectionist, or constructivist, way of interpreting Aristotle may seem excessive. And one might push even a little further. Is the idea that matter is really just form being considered from the material perspective so that form is something real and matter is a way of describing it? Or is it, rather, the case that form is really nothing other than matter considered in the formalist mode?²¹ Or, is the view so radical as to say that form and matter are simply mental constructions.²²

Identity and reference

Heretofore, I have been pointing out some of the specific difficulties which accompany certain interpretations that I have placed under the heading of Identity Thesis. In the following, I want to argue that the Identity Thesis comes at too high an interpretive cost. On the face of it, the Identity Thesis does not do justice to Aristotle’s tendency to talk—with, perhaps, the exception of *Metaphysics* VIII.6—as if matter and form are distinct entities. Consider, moreover, *Metaphysics* VII.8, 1034a5–8:

And when we have the whole such and such a form in this flesh and in these bones, this is Callias or Socrates; and they are different in virtue of their matter (for that is different), but the same in form; for their form is indivisible.

Now suppose that, as the advocates of the Identity Thesis assert, Aristotle takes form and matter to be numerically identical:

IT Form and matter are identical.

And, further, suppose what the above section of text straightforwardly asserts, namely, that Callias and Socrates are the same with respect to form and different in virtue of their matter. Thus it follows:

- (1) Socrates and Callias are the same in virtue of their form.
- (2) Socrates and Callias are different in virtue of their matter.

Needless to say, if one is permitted to substitute co-referentially, on the basis of the terms which are found in IT, a number of unwanted consequences result. For (3) and (4), which are by all appearances inconsistent with (1) and (2), seem to follow:

- ∴ (3) Socrates and Callias are different in virtue of their form.
- ∴ (4) Socrates and Callias are the same in virtue of their matter.

The Identity Thesis seems, therefore, to saddle Aristotle with a number of contradictions.²³ And the difficulties do not depend simply on the interpretive commitments wherein one takes form to be a universal and matter the principle of individuation. There are a number of places where one finds Aristotle making direct comparisons of matter and form in ways that are very problematic for the advocate of the Identity Thesis. A particularly troubling contrast is the following (*Metaphysics* VII.10, 1035b11–21):

Therefore the parts which are of the nature of matter and into which as its matter a thing is divided, are posterior; but those which are parts of the formula, and of the substance according to its formula, are prior, either all or some of them. And since the soul of animals (for this is the substance of living beings) is their substance according to the formula, i.e. the form and the essence of a body of a certain kind . . . therefore the parts of the soul are prior, either all of them or some of them, to the concrete animal, and similarly in each case of concrete whole; and the body and its parts are posterior to this substance.

The above states quite explicitly that form is prior to the composite substance and the matter thereof. So if we take this as a principle,

combined with (5), the entailment is (6), which, in turn, seems to license (7), which, seems, on the face of it, quite absurd.

- (5) Form is prior to matter.
- ∴ (6) Form is prior to form.
- ∴ (7) Form is prior to itself.

And, as if this were not already too awkward, the advocate of the Identity Thesis takes matter and form to be identical, not only with each other, but, also, with the concrete living substances to which they refer. So one can infer, for example, on this view, that:

- ∴ (8) Socrates is prior to Socrates.

I take it that whatever one takes the sense of “prior” to be in (8), we are faced with a difficulty just as pressing as the Puzzle of Unity. The advocate of the Identity Thesis will need a way of preventing this outcome.

One strategy might be to maintain that while the matter and form of a substance are identical, the terms “matter” and “form” have different senses. We thereby distinguish between a “material vocabulary” and a “formal vocabulary” for talking about one and the same thing, substances. Terence Irwin might be gesturing at this when he says the following:

Aristotle recognizes three types of subject—matter, form, and compound—and claims that matter is a this potentially but not actually, form is a this and separable in account, and the compound is separable unconditionally and the proper subject of becoming and destruction (1042a25–31). These three descriptions are probably meant to be true of the same material substance and subject . . . The descriptions “matter”, “form”, “compound”, cannot always be substituted for each other, since they identify different features of the particular substance.²⁴

The suggestion here might be, then, that the terms “matter,” “form,” and “composite,” have the same referent, and, nevertheless, cannot

be substituted *salva veritate*. In this very way, the advocate of the Identity Thesis might maintain that the absurdities can be avoided so long as one recognizes that there are certain contexts, the so-called opaque contexts, which give rise to substitution failure. That is, one might be wary of the inference to (8), in a way similar to the way that one would be worried about the inference to (10) from (9).²⁵

(9) Phillip knows Cicero denounced Cataline.

(10) Phillip knows Tully denounced Cataline.

But of course we know, more or less, why the inference from (9) to (10) goes awry. When "Cicero" is replaced with "Tully" there is no guarantee that Phillip (concurrently) knows (11):

(11) Cicero = Tully.

The proponent of the Identity Thesis may want to claim that the formal and material descriptions are co-referential but not substitutable. But should one not also explain why these locutions issue in opaque contexts in some circumstances and transparent contexts in others? Presumably the advocate of Identity will not want to claim that any reference to matter and form whatsoever issues in an opaque context. Aristotle would be seriously hindered were he unable to reason validly about issues of matter and form in this way. In particular, the reasoning which leads to the "solution" to the problem of unity would seem to rely upon the substitutability of the terms "matter," "form," and "composite." So the advocate of the Identity Thesis will need to accommodate referentially transparent contexts, which contain the language of form and matter, as well. I take it that the advocate of the Identity Thesis prefers, for example, to take the following line of reasoning as valid:

(12) Proximate matter = potentiality.

(13) Soul = actuality.

(14) Actuality = potentiality.

∴ (15) Proximate matter = soul.

And to simply state that the terms are not substitutable without indicating why, or what it is about the context that makes the inference fail, in order simply to preserve the thesis, may seem a little procrustean.

Sally Haslanger has argued that it seems concerns about the failure of substitutivity can be set aside in certain contexts that seem problematic, nonetheless, for the Identity View. Her account begins with *Metaphysics* VII.17, 1041a14–24:

Now “why a thing is itself” is doubtless a meaningless inquiry; for the fact or the existence of a thing must already be evident (e.g. that the moon is eclipsed), but the fact that a thing is itself is the single formula and the single cause to all such questions as why the man is a man, or the musical musical, unless one were to say that each thing is separable from itself; and its being one just meant this. This however is common to all things and is a short and easy way with the question. But we can inquire why man is an animal of such and such a nature. Here then we are inquiring why something is predicable of something.

In the above, Aristotle distinguishes between two types of inquiry. He distinguishes between asking “what makes a thing a unity?” and “what makes a thing identical to itself?” And he takes the latter question to be an inquiry into nothing at all. One might only, and all too easily, offer a platitude that is common to all things altogether. Aristotle’s remarks might be captured in what I will call the triviality principle:

T_p To inquire into why x is numerically identical to x is to inquire into nothing at all.

However, a few Bekker lines later, Aristotle goes on to say (1041b5–10):

Since we must know the existence of the thing and it must be given, clearly the question is why the matter is some individual thing, e.g. why are these materials a house? That which was the essence of a house is present. And why is the individual thing, or this body

in this state a man? Therefore what we seek is the cause, i.e. the form, by reason of which the matter is some definite thing; and this is the substance of the thing.

Haslanger asks us to consider the following question:

Concerning some definite thing that is a man, and concerning this which is a body (and which we may assume is one with the definite thing), in virtue of what are this and the definite thing one?

If we accept that body = form = concrete substance, then Haslanger's question should be answered by means of a platitude—something that is common to all things. Perhaps it should not be answered at all. However, at 1041b5–10, it is explicitly clear that Aristotle would not take Haslanger's question to be trivial or an inquiry into nothing at all. Indeed, there is something that we are told to seek out which will answer the question in a nontrivial way. The explanation of the unity of body with substance calls upon nontrivial inquiry, as we are asked to seek out the form:

(16) The following question is nontrivial: Why is this body a man?

But notice that this argument does not require the substitution of any matter and form terms. Insofar as it does not require any substitutions, the advocate of the Identity Thesis cannot complain that it relies on the substitution failures endemic to opaque contexts. For the argument is simply that if we accept IT and T_p , then we should reject (16). But, of course, we should not reject (16).

The advocate of the Identity Thesis might respond that in the cases wherein the contrasts between form and matter are made, the contrast is, not between proximate matter and form, but, between some other kind of matter. Hence, the difficulties need not be met by appeal to referential opacity, for the difficulties in question contain straight forward equivocations. But this move is not available, I submit, in a number of cases. And it is certainly not available in the present case. For in (16), the question has to do with: why this body in this state is a man? And this can be plausibly taken as nothing other than the proximate matter.

Constituency as Adjectival Being

A recurring issue, with the interpretations considered heretofore, has been that they do not adequately consider or discount those instances in the Middle Books wherein Aristotle speaks as if form and proximate matter are distinct entities. Mary Louise Gill provides a reading designed to account for these locations, which, nevertheless, explains how it is that Aristotle, ultimately, came to identify the matter and form in question. Her account distinguishes two kinds of unity that are in apparent conflict with one another:

I will call the requirement for continuity through change a demand for “horizontal” unity, and the requirement for definable unity a demand for “vertical” unity. If matter persists throughout the generation, career, and, destruction of a composite, thus providing horizontal unity, then the matter has a nature distinct from that of the form whose temporary presence gives the composite its particular identity. But if so, then the composite lacks vertical unity: its nature is determined in two ways, by its form and by its matter, each of which is conceptually prior to it. Yet if composites are primary substances, they must be conceptually primary entities, and so must be vertical unities. Thus, the kind of unity needed to account for change conflicts with the vertical unity required for those entities that are primary substances. This is the problem I call the “paradox of unity.”²⁶

According to Gill, the requirement for horizontal unity is part and parcel of Aristotle’s answer to the Eleatic rejection of change.²⁷ Aristotle’s answer to the dilemma involves the introduction of matter, the substrate for change, which is a continuant that undergoes modification. And, furthermore, the reason that an organism such as a horse, a human, or *drosophila*, can be the same thing in the face of diachronic change is that there is something underlying the change, something which remains throughout. That underlying continuant is the material nature. Call this H_u :

H_u A material nature persisting through the generation and destruction of an organism provides a hylomorphic organism with its particular identity throughout time.

However, the nature that both survives and precedes a given substance will have a nature distinct from that form. Indeed, form and matter will have different persistence conditions. And a difference in persistence conditions results in numerical difference. Call this the distinctness criterion:

- (D) If x and y have different persistence conditions, then x and y are numerically distinct.

Of course H_u and D together seem to imply the contradictory of another claim that Gill takes Aristotle to accept:

- V_u Substances cannot have a definition involving distinct and separately definable entities.

According to Gill, the Middle Books of the *Metaphysics* are a dialectical interchange concerning the relationships between these three commitments. Aristotle is concerned to hold on to H_u , on her view, throughout Book VII and most of Book VIII, given the promise he takes H_u to have in resisting the challenge to the possibility of change. However, by the time he gets to the sixth chapter of Book VIII, he is, so runs the narrative, ready to jettison H_u in order to accommodate a position for V_u .

Although Z.17 and most of H still reflect the central vision of Z, which bars composites from strict definable unity, the final chapter of H takes up the problem of definition again. And this time Aristotle does not restrict definable unity to forms but claims that the unity of matter and form can be solved by the same solution. Thus H.6 seems to reject the earlier conclusion about composites and to offer a different answer. The argument from Z leads to an interim conclusion, which Aristotle will later deny.²⁸

That Gill finds Aristotle rejecting H_u in VIII.6 is unsurprising given the by now familiar approach of reading an identity thesis therein. In VIII.6, Aristotle is taken to be criticizing various proposals vis-à-vis the problem of vertical unity, in particular those attempts that seek

to unify the matter and form of living organisms in terms of a relation (short of identity). And, given that Aristotle is taken as rejecting any account that makes use of a relationship between matter and form (short of the identity relation), Gill concludes, Aristotle must be rejecting the H_u model where form is said to stand in the predication relation to its subject, i.e. its matter.

The conception to which Aristotle objects, according to which matter and form are viewed as distinct and then combined to yield a unified whole, is precisely the one that he himself used in his treatment of composites in *Metaphysics Z* . . . Aristotle's present proposal, which he states in his conclusion, and which apparently restates the earlier suggestion concerning the bronze sphere, is that the proximate matter and the form are one and the same—the one potentiality, the other actuality.²⁹

Vertical unity, then, is explained, or argued for, in greatest detail, in *Metaphysics IX.7*, where Aristotle discusses the difference between being a “this” and being “thaten” (1049a18–24). We speak of the statue not as being bronze, but brazen; the box is not wood, but wooden:

It seems that when we call a thing not something else but “of” that something³⁰ (e.g. a casket is not wood but of wood, and wood is not earth but made of earth, again perhaps the same way earth is not something else but made of that something), that which something is always potentially (in the full sense of the word) the thing which comes after it in the series. E.g. a casket is not earthen nor earth, but wooden; for wood is potentially a casket as is the matter of a casket, wood in general of a casket in general, and this particular wood of this particular casket.

Aristotle's point is that when a carpenter fashions a casket, he begins with a preexisting material. Indeed it is appropriate to refer to this preexisting material with the term “wood”. But it defies linguistic practice, and perhaps intuition, more generally, to refer to the finished product, the casket, simply as the wood. Rather, we should say that the casket is, not wood, but wooden. Gill's argument takes off

from here. If the preexisting matter survives as an actual subject within the generated product, then there should be no objection to calling the casket "wood." But it is objectionable. So we should not believe that the preexisting matter survives in the casket.

Furthermore, Gill maintains, Aristotle does not continue to speak of the survival of the preexisting matter, but, instead nods with approval at the linguistic practice of speaking about accidental properties and matter as being "of something" or, in Aristotle's idiom, "thaten," since these are indeterminate (1049a36–b2):

And it is only right that the "of something" locution should be used with reference both to the matter and to the accidents; for both are indeterminates. We have stated then when a thing is said to be potentially and when it is not.

On the basis of these remarks, Gill's view bears some similarity to the view of Rorty, as she seems to argue that the original wood has become indefinite. With respect to the casket, the wood no longer actually exists but has been transformed into an entity higher up on the scale. The preexisting matter, on the one hand, is, in a way destroyed as it is no longer the definite subject. On the other hand, the preexisting matter is present in the higher product as something potential or indefinite. And, as something indefinite, it exists, albeit merely potentially, in that which is generated. However, because it is something indefinite at this point, and survives only potentially, it is appropriate to call the product "thaten" when talking about it.³¹ Thus, Gill reads Aristotle as providing a solution, on the basis of this distinction, to the problem of vertical unity. The drosophila would not be a unity were its matter also a subject, or a this. Because, however, its matter is not a subject, not what Aristotle would call "a this," but is, rather, ontologically subordinated to "thaten," the insect does not need to compete, so to speak, with its matter for subjecthood. As a result, vertical unity is procured.

What is more, Gill takes Aristotle to have at his disposal a solution to the problem of horizontal unity. Aristotle is now seen as revising his view with respect to H_u . The matter of a living thing was formerly "a this" but is now merely adjectival being: "thaten." This matter survives in just the way that VIII.6 seems to suggest it does, as potentially

“a this.” For, were the living substance to die, the matter would again become “a this.” Here is how Gill puts it:

[T]he preexisting matter, though at the outset a separate and identifiable stuff, survives at the lower level but only as a set of properties . . . and although the same properties are sufficient to determine a simpler body again, once the high-level complex has been destroyed, they do not contribute to the nature of the higher object but merely account for certain aspects of its behavior . . . The interpretation of horizontal unity as the survival of something potential (generic or indefinite) enables him to accommodate continuity throughout change, but without prejudice to the vertical unity of the generated whole.³²

While Gill’s account involves some impressive philosophical footwork, several important questions need to be asked. The first has to do with the suggestion that there is a dialectical build up, given the tensions between H_u and V_u , which culminates in *Metaphysics* IX.7, where Aristotle uses the “this” and “thaten” distinction to explain why H_u is being discarded and why form and matter are really identical. For the distinction is one that Aristotle uses in the *Physics*, where one might expect H_u to occupy a central role (245b9–16):

For when anything has been completely shaped or structured, we do not call it by the name of its material: e.g. we do not call the statue “bronze” or the candle “wax” or the bed “wood,” but we use a paronymous expression and call them brazen, waxen, and wooden.

Of course the concept of paronymy extends back to the first chapter of the *Categories* (1a12):

When things get their name from something, with a difference in ending, they are called paronymous. Thus, for example, the grammarian gets his name from grammar, the brave get theirs from bravery.³³

So the suggestion that Aristotle works his way dialectically up to a distinction that relies on the paronymous nature of expressions is

a suggestion that one might feel some apprehension over. At the very least, one might expect an explanation concerning why it is that in IX.7 Aristotle is developing a theory of persistence in contrast with the other passages where the distinction is explained. Indeed, what one does not find in either VIII.6 or IX.7 is a statement that is by any means explicit to the effect that H_u is being discarded or revised. And one might find it difficult to believe that Aristotle would discard a principle fundamental to the dialectic of the Middle Books—a principle that on Gill's view is a major *raison d'être* of the middle books—without any indication.

Secondly, the proposal for the Puzzle of Unity that Gill offers on Aristotle's behalf seems to invite a further question. An entity, namely matter, is said to persist despite the fact that its categorial being changes from that of subject to accident. But one might take subjecthood to be an essential property for the very persistence of something that is said to be a subject. Of course, Gill maintains that the matter of a living thing is no longer a subject. The same entity it seems can undergo a process whereby at one point it is a subject and at another time it is not. Would subjecthood be a contrary? Of course, a great deal of effort is made in the *Categories* to establish the claim that subjects are the very entities that admit of contraries, and, as such, are not, themselves, contraries.

But suppose that there is an entity that prior to the generation of a living being exists as something that actually exists. After the generation of the living being we are told that it does not actually exist but will again exist after the living organism perishes. The matter seems, therefore, to have what contemporary philosophers are frequently skeptical about—a “gappy existence.” More pressing is the fact that Aristotle, as I have argued, seems himself to be very skeptical about “gappy existences.”³⁴

Toward a Relational Unity

All of the accounts that have been considered heretofore rely upon, in some way or another, the idea that there is really no distinction between proximate matter and form. The recurring difficulty, however,

with views of this kind, is that the instances where Aristotle contrasts proximate matter and form, particularly those instances where form is taken as prior to matter, are not taken seriously. Taking this deficiency into consideration, one might attempt to understand the unity of matter and form as a relation that is weaker than identity. To say that the relation in question is simply the relation of composition would not be sufficient, as there are different ways of understanding composition. For example, the unrestricted mereology of the Universalist, where any two items compose a third, will be too permissive and excessively gruesome for Aristotle. He will likely call these accidental, rather than substantial unities. Aristotle is, of course, well aware of the problems that involve composition. In *Metaphysics* VII.17, for example, he grapples with the following difficulty (1041b11–30):

As that which is compounded out of something so that the whole is one—not like a heap, however, but like a syllable—the syllable is not its elements, *ba* is not the same as *b* and *a*, nor is flesh fire and earth; for when they are dissolved the [wholes], i.e., the flesh and the syllable, no longer exist, but the elements of the syllable exist, and so do fire and earth. The syllable, then, is something—not only in its elements (the vowel and the consonant) but also something else; and the flesh is not only fire and earth or the hot and the cold, but also something else. Since, then, that something must be either an element or composed of elements, if it is an element, the same argument will again apply; for flesh will consist of this and fire and earth and something still further, so that the process will go on to infinity; while if it is a compound, clearly it will be a compound not of one but of many (or else it will itself be that one), so that again in this case we can use the same argument as in the case of flesh or of the syllable.

Aristotle's *explanandum* is the composite unity which is not a mere heap or an accidental unity. The *explanans*, we are told, will involve more than reference simply to the elements of the composite unity. For example, the syllable is not simply its elements, that is, the letters, nor is flesh simply fire and earth, for the syllable cannot exist without

letters, while the letters can exist without the syllable, and fire and earth can exist without flesh, while flesh cannot exist without fire. We can summarize this by saying:

- (1) The elements that compose real unities (not heaps) have persistence conditions that differ from that which they compose.

In order to understand why the elements form a unity, therefore, one will need to refer to something else in addition to the elements. But the problem with referring to something else is that the alternatives may seem limited, since everything, we are told is either an element or composed of an element.

- (2) Everything is either an element or composed of an element.

Of course, one cannot make use of that which is composed of the elements, as this is the *explanandum*. Similarly, one cannot refer to a further element, call it E , which is responsible for the unification of a number of elements, e_1, e_2, e_3 . For this will only invite the question of how it is that the nonaccidental unity consisting of several elements E, e_1, e_2, e_3 , compose a unity. And if we posit an E_2 , needless to say, we are off on an explanatory regress. Aristotle's answer to the dilemma involves a rejection of premise (2).³⁵

But it would seem that this is something, and not an element, and that it is the cause which makes this thing flesh and that a syllable. And it holds similarly in all other cases. And this is the substance of each thing; for this is the cause of its being; and since, while some things are not substances, as many as are substances are formed naturally and by nature, their substance would seem to be this nature, which is not an element but a principle. An element is that into which a thing is divided and which is present in it as matter; e.g., a and b are the elements of the syllable.

Elements are the items into which a unified whole is divided. However, an element is to be distinguished from a principle. And the principle is something. It is the substance of each thing and the cause of its being.

The substance of a thing, moreover, has just been said to be the essence of a thing (1041b4–8):

Since we must know the existence of the thing and it must be given, clearly the question is *why* the matter is some individual thing, e.g. why are these materials a house? That which was the essence of a house is present. And why is the individual thing, or this body in this state a man? Therefore what we seek is the cause, i.e. *the form*, by reason of which the matter is some definite thing; and this is the substance of the thing.

The principle in question is the substance of the thing and the cause thereof. This, we have seen, is the form and the essence. It is the reason why, Aristotle maintains, the matter is some individual thing, such as a house, a syllable, or a living substance. Form, therefore, occupies the role of conferring unity on the distinct material parts that compose, in a nonaccidental way, the generated product. Form, one might say, is the principle of composition for living substances. Of course, one might want to understand in what sense form is the cause of the unity. Thus far, the unity in question seems to be arrived at by very stipulative means.

Teleological Dependence as the Adhesive for Unity

The substantive role that form is intended to play in the question of unity is recognized by Frank Lewis.³⁶ Lewis refers to this role as the Content Requirement:

A form plays the role it does as the principle of unity among different parts of a given thing if, and only if, and just because, it is also the substance of the thing and the cause of its being [= the cause of its being a member of its lowest kind]

Having emphasized the role of form, and its priority over matter, and how this apparently places an ontological divide between matter and form, the problem becomes that of explaining how it is that Aristotle can consistently maintain that form and matter are a unity

in *Metaphysics* VIII.6. And, in order to do this, as we have seen, one is going to have to understand how it is that matter and form relate to potentiality and actuality. Lewis seems to take the relation between form and matter to be a kind of correspondence. And his explanation of why Aristotle believes himself entitled to refer to the correspondence in question as a unity has to do with his teleological commitments:

The matter stands in one relation or another of teleological dependence on the form or actuality as goal (*telos*), while the form is in one way or another teleologically dominant with respect to matter.³⁷

The claim that the needed unity is going to obtain in virtue of a teleologically driven dependence has an intuitive ring. The difficulty, according to Lewis, is that Aristotle seems to take teleology as basic or primitive.³⁸ So the very means of conferring unity is going to resist explanation.

Aristotle does, it seems, take the goal-directedness of living organisms as something of a brute fact. But I believe that something akin to an explanation of how unification obtains can be gestured at. The *drosophila*'s early, let us say, larval, material, cannot, one might argue, be fully understood, as such, without an understanding of the ends to which it serves. Insofar as this is the case, it is the *telos* or the "for the sake of which" that informs the nature of the *drosophila*'s matter. The nature of the matter, with living things, cannot be understood independently of the "what the matter is for." Put another way, the matter of a substantial being, cannot be identified independently of its function. The function is going to be essential to it. It is important to note here that final and formal cause (not to mention efficient) can be identical (*Physics* II.7, 198a20–24):

Now, the causes being four, it is the business of the student of nature to know about them all, and if he refers his problems back to all of them, he will assign the "why" in the way proper to his science—the matter, the form, the mover, that for the sake of which. The last three often coincide; for the "what it is" and that "for the sake of which" are one, while the primary source of motion is the same in species to these.

First of all, form and matter are pretty clearly considered distinct here. And in the case of living things, it is also pretty clear, that form and function are going to be instances of this identity (*De Anima* II.4, 415b9–11):

The soul is the cause of the source of the living body. The terms “cause” and “source” have many senses. But the soul is the cause of the body alike in all three senses which we explicitly recognize. It is the source of movement, it is the end, it is the essence of the whole living body.

Species-form and function are one and the same thing for living organisms. So this is how we see the bond between matter and form to obtain in a way such that they can be thought of as two sides of the same coin. A biological species has a nature. Its nature will describe a certain end, a certain way of living, that is appropriate for it. In order to understand its organic parts, one will have to understand what this nature is. One can only understand the proximate matter, the somatic parts of the organism, in terms of this end—the proximate matter is for this end, indeed, it is identifiable in virtue of this end. Insofar as its identity relies upon this end, it cannot be separated from this end, this form. Being separated thus will drive it out of existence. Indeed, as we have already seen, this is the idea of *De Anima* II.1:

For if an eye were an animal, [the capacity for] sight would be its soul and if this fails it is no longer an eye except homonymously, just like an eye in stone or a painted eye. We must now apply to the whole living body that which applies to the part. (412b 18–23)

The various parts of the organism, its proximate matter, are unified into a whole by the ultimate function or *telos* of the organism. What I want to stress at the moment is that the relationship between the matter and the form for the living substance is drawn very closely. Living bodies are essentially functional or essentially teleological. Indeed so firmly is body tied to form and function that the living matter cannot, as in the case of artifacts, enjoy an independent existence. Insofar as the proximate matter is incapable of independent existence,

this is all Aristotle needs to set aside the worry that matter could be a subject more basic and within a substance. Still, the living substance engages in motion. It is therefore essentially material on Aristotle's view.

One might object at this point that an account such as this does not do justice to *Metaphysics* VIII.6 where potentiality and actuality are said to be one and the same (1045b17–22):

But, as has been said, the proximate matter and the form are one and the same thing, the one potentially, the other actually. Therefore, to ask the cause of their being one is like asking the cause of unity in general; for each thing is a unity, and the potential and the actual are somehow one.

Indeed, Aristotle does seem to say that the proximate matter and shape (*morphê*) are one (*hen*) and the same (*tauta*). It bears mentioning, however, that the term *hen* is omitted in the E, J, and Γ, manuscripts. And he goes on to say that the one is potentiality and the other actuality. But he does not simply identify potentiality and actuality. He says that they are “in some way” one. Identity is not a relation that holds in a certain way, moreover. No one says that Socrates and the son of Sophroniscus are identical in some way. But one might be inclined to say that form and matter, actuality and potentiality, are in a way one—in the way that they are a unity, or a whole, rather than a mere heap, in the way that the latter depends on the former for its identity.

Still and all, one might argue that if the proximate matter and the form really are distinct, then the Puzzle of Unity has no clear solution. Does the distinction between matter and form violate Aristotle's principle:

S_c Substances are thought to be primary or basic beings.

How might matter jeopardize S_c? Matter would have to be more basic than the substance itself. The substance would need to have the material be more primary and basic than itself. When, however, we understand matter to depend, for its identity, upon what it can

do for the organism, the living substance, we see that substances are more basic, on Aristotle's view, than matter. For Aristotle, the substance, one might say, has more formal reality. The scale of being is top-down. When it comes to form, the lesson from *Metaphysics* VII.17 was that form is not to be thought of as a constituent but that which unites constituents into a unity.

Finally, one might take this view to meet with the objection that it bears a resemblance too similar to the views that Aristotle seems to be rejecting, namely, those that:

[S]peak of participation, and raise the question, what is the cause of participation and what is it to participate; and others speak of communion, as Lycophron says knowledge is a communion of knowing with the soul; and others say life is a composition or connexion of soul with body. Yet the same account applies to all cases. (*Metaphysics* VIII.6, 1045b7)

On the received view, Aristotle is criticizing views that posit independent *relata*. Aristotle, however, is thought to believe that a regress will occur once a connecting relation is thrown in the mix.³⁹ So Aristotle prevents the regress before it can start by denying that matter and form were ever, in the first place, distinct. Of course on the view I favor form and matter are not entirely distinct. And they are in a way one. So the present account fairs not worse than the received view on this score. Indeed, given the qualification, moreover, signaled by "in some way" it meets up with the text of VIII.6, on the whole, a great deal better. Any deflationary tone that one reads into the passage might be understood as Aristotle's reticence to explain the brute nature of teleology.

Conclusion

Aristotle's hylomorphism is in the end really committed to matter and form. This is important for the major theme of this work, for, were there really no distinction between matter and form, there would be no Puzzle of Simple Composition. But such a "solution" is not available to the reader, who takes seriously the use of matter and

form in Aristotle's ontology. And as I have argued, there is reason to believe that Aristotle found matter and form indispensable. In arguing against the Identity Thesis, and its close relatives, I have continued to emphasize the tight relationship between matter and form. Indeed, it is the very close relationship between these entities, as I maintained in the last chapter, which provides an answer to the Puzzle of Simple Composition.

Chapter 4

Particularities and the Puzzle of Composition

Haecceities

Is there a “*what it is to be you*” or as Aristotle would say a “*to soi einai?*” If so, in what respect does *it* differ from a “*what it is to be Socrates,*” a “*to Sôkratei einai?*”¹ Many commentators believe that Aristotle answers the former question in the affirmative. They understand Aristotle as countenancing particular forms, forms of individuals, which are not shared by other individuals. With regard to the latter question, how is it, or in what way is it, that these particular forms differ? Trivially, particular forms, if there are such things, differ numerically. But it is difficult to put one’s finger on an explanation of how such particular forms will, necessarily, differ. What would the advocate of formal particularity say about the metaphysical possibility of identical twins? Would their forms be peculiar and nevertheless shared mutually? Might they then be the same person? Perhaps the particularity of form is explanatorily basic? Of course, this does not seem to be Aristotle’s view in, the by now familiar, last remaining lines of VII.8 of the *Metaphysics*:

And when we have the whole such and such a form in this flesh and in these bones, this is Callias or Socrates; and they are different in virtue of their matter (for that is different), but the same in form; for their form is indivisible.

It seems that we are told in this passage that Socrates and Callias do not have particular forms. They are the same in form.

Of course, if Aristotle did believe that the form of Socrates is different from the form of Callias, a fairly straightforward solution to the Puzzle of Simple Composition would present itself. Universal Form, upon which the puzzle relies, would simply be false:

F UF: It is necessary that any two cospecific substances have the same form.

We may call any view that denies UF Particularist. I will argue that the Particularist Interpretation is a view upon which the solution to the Puzzle of Simple Composition should not rest. Toward that end, in this chapter, I will begin by providing a few remarks on the nature of the debate between realists and nominalists concerning universals. Thereafter, I will set up a philosophical and exegetical problem that may be called the Zeta problem. In short, this is the apparent inconsistency that results from the idea that Aristotle argues that (i) no universal is a substance, (ii) form is a universal, and (iii) form is a substance. The idea that Aristotle would accept (i) surfaces at VII.13 of the *Metaphysics*. And, as a result, a slogan has been attached to that chapter: no universal is a substance. Given that Aristotle seems to take form to be a substance, this has suggested to commentators that form is not a universal. And this has motivated some commentators to accept what I am referring to as the Particularist Interpretation. Having set up the Zeta problem, I will turn to comment on the four most promising arguments of VII.13. My view is that, on the whole, these arguments are not very refined; and that one should not, as a result, rest thereupon a solution to the Puzzle of Simple Composition.

The Problem of Universals

A few remarks concerning the debate over universals are fitting in order to provide some clarification and context for the arguments to come. We may begin by noting that there are fundamentally three kinds of questions that one may ask about universals. The first and foremost kind of question is the ontological question. This is the question that concerns precisely what it is that corresponds, in *rerum natura*, to universal concepts. For example, the ontologist desires to

know what it is, if there is anything at all, that corresponds to the underlined phrase in the following sentence:

- (1) Both objects have the attribute of being five grams.

A question that is different in kind to these ontological questions concerns what we might call psychology. How is it that universals are formed in the mind? Are they abstracted from particulars or are we acquainted with them in some other way? The last type of question that is worth mentioning is epistemic in nature. Certain philosophers have been interested in the question of how it is that we come to know universals. (Because the psychological and epistemological questions—though interesting—do not meet up directly with the Puzzle of Simple Composition—that puzzle being ontological in nature—we may set them aside and restrict our focus to the ontological questions.)

There are three main ways of approaching the problem of universals. The Realist believes that universal attributes would exist even if there were no minds to comprehend them. And Realists believe that different objects can instantiate the same property. Put another way, the numerically same property may be repeatable or exemplified by a number of objects. One can distinguish, in turn, two main types of Realism. The advocate of *ante rem* realism is said to believe that there can be universals such as being a winged quadruped, even if there are no particulars entities that have such a property. Universals, on this view, can exist even when uninstantiated. This view is sometimes thought to be that of Plato. The other kind of realism is *in rebus* realism. The defender of this view countenances properties that are multiply exemplified, while rejecting the idea that there exists any uninstantiated universals. This has traditionally been thought to be the view of Aristotle. In the *Categories*, for example, Aristotle is thought to say that were there no primary substances, such as Socrates or Secretariat, there would be no properties thereof (2b5): “So if primary substances did not exist it would be impossible for any of the other things to exist.”

Those who reject Realism are frequently motivated by the idea that entities of this sort—entities which can be, for example, “located” in

two objects that are in different places—are queer indeed. For realists have been pressed to admit that either the same universal can be found in two places, or universals are not in space in time.² Both alternatives invite some difficult questions.

An alternate view is that of the Conceptualist. According to the Conceptualist, universals are mind-dependent entities. (Perhaps it is thought that this move helps to circumnavigate the problem the Realist faces concerning the location of universals.) On this view, universals exist so long as we are thinking about them. And the reason that we call entities by a common name is that they are thought of in terms of a common concept. Strictly speaking, however, the idea that the property of being five grams is numerically the same in a plurality of objects is taken to be a mistake. And the Conceptualist seems committed to the claim that the property of being 5 grams can go in and out of existence as it is being thought of and otherwise.

The last approach to universals is that of the Nominalist. Nominalists usually believe that even though our language seems to commit us to universal attributes, with the aid of paraphrase, wherein we capture the truth conditions of our statements, while, at the same time, eliminating the language that is thought to refer to universal attributes, we can avoid such commitments. There are mainly two kinds of Nominalists. The Austere Nominalist maintains that there are red houses, red sunsets, and red tomatoes; but this does not mean there is some extra thing such as the attribute of being red.³ The fact that the house is red is simply a brute fact, which, of course, admits of no further explanation.⁴ The second kind of Nominalist is the Trope-Nominalist. The Trope-Nominalist maintains that abstract entities are particulars. Each of the tomatoes in a basket, for example, has its own, numerically distinct, redness.

It bears mentioning that one might, with consistency, accept abstract particulars and universals into one's ontology. A number of philosophers, however, have found such a hybrid view unattractive. A preference for simplicity would seem to require making do with either, but not both. For it would seem that one multiplies kinds of entities beyond necessity, were one to admit both, when either entity may be thought to do the work required for understanding statements with abstract terms.

It also bears mentioning that those who accept the Particularist account seem to come close to attributing a hybrid view such as this to Aristotle. For if there is a unique “what it is to be Socrates,” this will, it would seem, be an abstract particular. On the other hand, it is difficult to uphold the view that Aristotle does not countenance some universals.

The problem with Austere Nominalism seems to be that it does not account for the way we speak about things. The Austere Nominalist may be able to paraphrase out reference to abstract entities in a sentence such as (2) by means of (2a):

- (2) The house has the attribute of redness.
- (2a) The house is red.

But will she be able to paraphrase the abstract entities out of (3) and (4)?

- (3) Some species are cross-fertile.⁵
- (4) Socrates prefers triangularity to circularity.⁶

The main difficulty with Trope-Nominalism seems to be that the fact that two objects are said to be red is explained by the suggestion that each has a unique red trope. And each red trope is said to resemble the other. (Resemblance is needed in order to account for the reason why we classify things as belonging to the “same” group.) Of course, it would seem that the property of resembling such-and-such is itself an attribute in need of explanation. And, the Trope-Nominalist will be moved to maintain otherwise. The relation of resemblance will be said to be a brute fact.

Considerations such as these make realism seem fairly reasonable. This is not to suggest that we have seen decisive argumentative support for realism. By the same token, to attribute a realist view to Aristotle is to attribute to him a respectable ontological theory.⁷

The Zeta Problem

The Zeta Problem can be summarized in terms of three of Aristotle’s putative commitments. The first of these is that form is, in an important

sense, a universal. Aristotle does, after all, maintain that Socrates and Callias are the same in terms of form (1034a5–8):

And when we have the whole such and such a form in this flesh and in these bones, this is Callias or Socrates; and they are different in virtue of their matter (for that is different), but the same in form; for their form is indivisible.

However, Aristotle, in *Metaphysics* VII.13, seems to suggest that no universal is a substance (1038b35):

If then, we view the matter from these standpoints, it is plain that no universal attribute is a substance, and this is plain also from the fact that no common predicate indicates a “this.” If not, many difficulties follow and especially the third man.

In addition, he seems to be committed to the view that form is that which is most truly substance.

1032b2 By form I mean the essence of each thing and its primary substance.

1041b6 Therefore what we seek is the cause, i.e. the form, by reason of which the matter is some definite thing; and this is the substance of the thing.

As a result, Aristotle’s readers face a putatively inconsistent triad:

- (1) The Form of Socrates is a universal.
- (2) If something is a universal, then it is not a substance.
- (3) The Form of Socrates and Callias is most truly their substance.

In what follows, I will first lay out the various ways that this exegetical problem has been faced. Subsequently, we may look at some of the difficulties that arise for each view. Thereafter, I will discuss a few reasons for finding one of these alternatives preferable to the others.

Predicated and preciated universally of

Some scholars have argued that Aristotle rejects the second of these three propositions.⁸ In place of (2), Aristotle is thought to accept something rather like (4):

- (4) If something is a universal, then it is not the substance of what it is predicated of.

On this reading, the relevant form in (1) and (3) is species-form, or, in the case of Socrates and Callias, that of being *Homo sapiens*. Indeed, species-form satisfies the antecedent and consequent of (4). And, when (2) is replaced by (4), we no longer face a contradiction. Here is why. Take the form Man. Man is a universal and it is in fact the substance of Socrates and Callias. Man, however, is not predicated of Socrates and Callias. Instead, so the argument runs, it is predicated of their matter.

One might take the move here to be somewhat *ad hoc*. But consider the following kinds of statements:

- (5) The statue is statue-shaped.
 (6) This man is a man.
 (6*) Socrates is a man.

The advocates of this view maintain that, according to Aristotle, (5) is not really a predication, as one cannot identify the statue without relying upon the fact expressed in the predicate, i.e., that it is shaped as a statue. Thus, “statue-shaped” really does not say anything about the subject. It would, however, say something informative about the matter of the statue:

- (7) The clay is statue-shaped.

And the same is said to go, *mutatis mutandis*, for the predicate Man. It does not really say anything about Socrates and Callias, for it is inextricably tied up, we might say, with their being. As such, Man is the substance of Socrates and Callias, but it is predicated of their matter rather than them.

Your form and mine

An alternate view finds Aristotle recognizing particular forms, or something akin to tropes or haecceities, along with universals. Species-form in the relevant sense of (1) is a universal. However, species-form is not the primary substance that is referred to in (3). That role is occupied by a particular form, the form that belongs uniquely to Socrates, for example, and which is numerically different from that of Callias. In support of this view, scholars cite a couple of texts (1022a25):

Therefore “in virtue of itself” (*kath’ hauto*) must have several meanings. It applies to (1) the essence of each thing, e.g. Callias is in virtue of himself Callias and the essence (*to ti hên einai*) of Callias.

That Aristotle seems to refer to the essence of Callias as that in virtue of which Callias is Callias carries the suggestion, some have thought, that there is a unique and particular essence of Callias. In addition, scholars have noticed Aristotle saying the following (1071a21):

For while man is the cause of man universally, there is no universal man, but Peleus is the cause of Achilles and your father of you . . . and those of things in the same species are different, not in species, but in the sense that the causes of different individuals are different, your matter and form (*sê hulê kai eidos*) and moving cause being different from mine, while in their universal formula they are the same (*tô katholou de logô tauta*).⁹

The suggestion that you have a form that is, well, yours, and I have a form that is mine, suggests that we have our own, particular, forms. And, if there are indeed particular forms in addition to those which are universal, and the former are the substances of particular individuals such as Socrates and Callias, then we may rewrite our triad in the following consistent manner:

- (8) The species-form of Socrates and Callias is a Universal.
- (2) If something is a Universal, then it is not a Substance.
- (9) The particular-form of Socrates and Callias is their primary substance.

Contradiction, moreover, may be avoided, as the difficulty is seen to be the result of an equivocation on the term “form.”

Substance is said in many ways

A further way by which one might attempt to render Aristotle's locutions consistent is to note that Aristotle countenances different kinds of substances. At 1039b20, for example, he says:

Since substance is of two kinds, the concrete thing and the formula (I mean that one kind of substance is the formula taken with the matter, while another kind is the formula in its generality), substances in the former sense are capable of destruction . . . but there is no destruction of the formula.

Given that Aristotle is willing to make a distinction between substance as form and substance as concrete particular, one might attempt to understand the triad as follows:

- (1) The Form of Socrates and Callias is a Universal.
- (10) If *something* is a Universal, then *it* is not a concrete substance.
- (11) The Form of Socrates and Callias is their primary substance.

On this view, Aristotle is willing to take universals to be abstract substances. And when he argues in VII.13 that no universal is a substance, he means to say that no universal is a concrete substance.

Some putative drawbacks to the three interpretations

Every one of these interpretations invites question. With respect to the first of these, one may fairly ask why Aristotle would rely upon such a distinction, and, nevertheless, neglect to mention it in *Metaphysics* VII.13. With that said, we have seen Aristotle making the distinction between real and pseudo predictions in *Metaphysics* VII.17, 1041a14–24. So it is not as if the scholars who accept this view are without textual support.

With respect to the second interpretation, it seems very easy to take Aristotle's remarks about your form and mine as mere façon de parler. Certainly we can speak of your water and mine without taking

there to be something peculiar and unique about the essence of what you and I are drinking. And, what is more, it is perfectly reasonable to understand Aristotle's reference to the essence of Callias, in 1022a25, as referring to *Homo sapiens*, rather than any particular haecceity. The view, one can fairly say, is underdetermined by the text.

As for the third interpretation, many will find it hard to square with the text of VII.13. And it would seem to visit a certain equivocation on Aristotle. Again, one might expect Aristotle to introduce the distinction more explicitly, if he is indeed relying upon it.

The standard argument against the particularist view

Aristotle does appear to argue, in *Metaphysics* VII.13, that no universal, in some sense of the term, is a substance. As I will later argue, as it seems to me, the arguments of Zeta 13 are very difficult to recognize as such—they often read as mere counter-assertion—and might be thought poor candidates for reconstructing Aristotle's views on substance. Be that as it may, it is important, at present, to note that a number of commentators read Aristotle as arguing merely that no substance is a *generic* universal.¹⁰ Hence, one can accommodate the idea that substances are considered universals, those of the *species infimae* variety, in Zeta 13.

This is advantageous, as I see it, as Aristotle continually speaks as if form is a substance and a universal. At *Metaphysics* VII.10, 1035b31–1036a1, for example, he says:

A part may be a part of the form (i.e. the essence), or of the compound of the form and the matter, or of the matter itself. But only the parts of the form are parts of the formula, and the formula is of the universal (*ho de logos esti tou katholou*).

What is more, the Particularist's reading is thought to press Aristotle, on the one hand into contradictions, and on the other hand, too far in the direction of skepticism.¹¹ Suppose, with the Particularist, that we take the following claim both literally and seriously.

- (1) No substance is a universal.

Substances, however, on Aristotle's view, are the only things that are definable. Particulars, as we know, are simply not definable (*Metaphysics* VII.5 1031a1–14):

Clearly, then, only substance is definable . . . Therefore in one sense nothing will have a definition and nothing will have an essence, except substance . . . Clearly, then, definition is the formula of the essence, and essence belongs to substances either alone, or chiefly and primarily and in the unqualified sense.

If, then, we understand Aristotle to be committed to (2), he will, likewise, be committed to (3):

- (2) All things definable are substances.
- [1,2] (3) No definable thing is a universal.

Naturally, this result is unfortunate. For Aristotle maintains that if something is definable, it is a universal (*Metaphysics* VII.15 1039b30–1040a2):

If then definition involves knowledge, and if, just as knowledge cannot be sometimes knowledge and sometimes ignorance, . . . clearly there can neither be definition nor demonstration of individuals.

So the Particularist's account would seem to license the following line of reasoning:

- (4) All definable things are universals.
- (5) There is something *d* which is definable.
- [3,4,5] (6) There is something *d* which is both universal and not a universal.

Indeed, knowledge is, for Aristotle, directly linked to definition. So if substantial form is particular, knowledge, with respect to the things which exist, will be—not merely elusive—but impossible (*Nichomachean Ethics* 1140b31–34):

Knowledge is belief about things that are universal and necessary, and there are principles of everything that is demonstrated and of all knowledge (for knowledge involves reasoning).¹²

Aristotle, moreover, believes that “knowledge apprehends universals” (*De Anima* II.5 417b23–4). Thus:

- (7) The objects of knowledge are universals.
- [1,7] (8) The objects of knowledge are not substances.

The *Particularist's* account, therefore, seems to drive a wedge between what is most real and what Aristotle would prefer most to understand. One might, therefore, question the return on any attempt to solve Aristotle's difficulties by appealing to particular forms.¹³

A question about particular forms

We have seen some epistemic reasons for questioning whether Aristotle accepts the claim that particular forms are substances in the primary sense. But are there other Aristotelian reasons for taking particular forms to be problematic? We tend to distinguish between the necessary and the contingent. I am contingently wearing a blue shirt at the moment. Certainly we can suppose otherwise. We may not, however, suppose that seven and five does not equal twelve. For the claim that seven and five amount to twelve is necessarily true. In addition, one might suppose that there are contingent beings. One can imagine a world wherein, for example, Callias does not exist. Callias, in contrast perhaps to God, is, then, a contingent being. Now suppose that Callias has a particular form. Forms are not material, for, as we have seen, Aristotle contrasts form with matter. But it would seem that it is only material things that decay. Callias decays, for Callias is, in part, a particular thing. The particular form of Callias, if there is one, being immaterial, would not seem to decay after Callias had perished. If this particular form does not perish, it would seem to continue on, existing uninstantiated, after the death of Callias. This might not be a strange result for the individual who takes an *ante rem* view of things. One who takes such a view will allow abstract universals to exist uninstantiated. And, such a theorist, were she to countenance particular forms, might be able to accommodate the idea of an uninstantiated form of Callias. Such a view, however, would not seem to fit well into Aristotle's way of thinking. Were Aristotle to countenance a particular form of Callias, he would have to suppose Callias's form to perish

with Callias. And, yet, it is unclear how a form might perish. It is also true that, given Aristotle's *in rebus* tendencies, that he would not accept the idea that Callias' particular form may predate Callias. Were Callias to have a particular form, it would have to come to be when Callias does. However, Aristotle tells us that forms do not undergo generation or destruction (1033b5–b20):

Obviously then the form also, or whatever we ought to call the shape of the sensible thing, is not produced, nor does production relate to it, i.e. the essence is not produced . . . It is obvious then from what has been said that the thing, in the sense of form or substance is not produced but the concrete thing which gets its name from this is produced, and that in everything which comes to be matter is present, and one part of the thing is matter and the other form.

It is worth noting that one cannot marshal the same objection against the view that takes Aristotelian essence to be a universal. On that view, when Callias dies, his essence, that of being *Homo sapiens*, will not go out of existence. For Socrates, or some other *Homo sapiens*, will instantiate that very essence, well after Callias dies.

No Substance is a Universal

We have seen that there is ample reason for caution when it comes to understanding Aristotle as countenancing particular forms. In this section, I turn to consider some of the key arguments in the 13th chapter of *Metaphysics* VII, where Aristotle is thought to argue that no universal is a substance. The position that I will occupy herein is the following. It is indeed difficult to understand the arguments of VII.13 as plausibly sound. And where one can locate a plausible inference, the inference in question does not provide sufficient support for the view that Aristotle thought particular forms to be the substance of individuals such as Socrates and Callias.

We can begin with the following question: What is the motivation behind saying, in *Metaphysics* VII.13, that no universal is a substance? What does Aristotle mean by "universal?" And what is a substance?

The latter question is the perennial one. So let us take up the former. Aristotle says the following (*De Interpretatione* 7, 17a39–17b2):

Now of actual things some are universal, others particular (I call universal that which is by its nature predicated of a number of things, and particular that which is not; *man*, for instance, is a universal, Callias a particular). So it must be of a universal that one states that something holds or does not, sometimes of a particular.

So why is it that “that which is of such a nature as to be predicated of many subjects” is not a substance? In order to be in a better position to offer an answer to this question, it is necessary to look at the arguments that Aristotle provides for this claim. Any number that one might annex to the chapter as the number of arguments therein is bound to be controversial. I will treat four arguments (as there are four I can recognize as such). And while anything that one has to say on this chapter is bound to be met by disagreement, there is some agreement that the chapter returns to the project outlined in the third chapter of Book VII—that of determining what substance is. *Metaphysics* VII.13 is thought to provide opposition to Plato’s theory of forms, by considering and rejecting the candidacy of the universal. Advocates of the Particularist Interpretation have, with some frequency, read this as a straightforward argument for the particularity of substantial form. However, as Myles Burnyeat (2001) has pointed out, the term “form” does not make a single appearance in the entire chapter.¹⁴ Furthermore, Aristotle’s conclusion with respect to the status of the universal does not resound as an incontrovertible truth. His language seems rather more cautious (1038): “For it seems impossible (*eiōke gar adunaton*) for any of the things which are predicated universally to be substance.”

The peculiarity argument

There is a fair amount of dispute over precisely what the first argument—the argument found at 1038b9–14—is supposed to be. The argument resists interpretation. Here is the text:

The universal also is thought by some to be in the fullest sense a cause, and a principle; let us therefore attack the discussion of

this point also. For first it seems impossible that any universal term should be the name of a substance. For in the first place the substance of each thing is peculiar to each thing, which does not belong to anything else; but the universal is common, since that is called universal which naturally belongs to more than one thing. Of which individual then will this be the substance? Either of all or of none. But it cannot be the substance of all; and if it is to be the substance of one, this one will be the others also; for things whose substance is one and whose essence is one are themselves also one.

To begin with, it is unclear what the desired conclusion of this argument is supposed to be. The argument reads like a *reductio ad absurdum*, but it is not readily manifest what the *refutand* is. One would have thought, on the basis of the chapter's slogan, that it would be the following:

P Universals are substances in the primary way.

And, yet, it is not P that is directly refuted but a claim that is, I suppose, simply taken as a corollary or a consequence of P.

P* Universals are the substances of particulars.

This is the way in which W. D. Ross, for example, seems to have understood the argument:

What will the universal be the substance of? Either all of its particulars or none of them (for there is no reason why it should be substance of one any more than of the others); but it cannot be substance of all (since, as we have seen, I.10, the substance of a thing is particular to it. It follows, then, that it is the substance of none of its particulars.) If we try to avoid the conclusion and treat it as the substance of one of them, then (since the universal will be no less the substance of its particulars, and things that have the same substance are identical) this one will be the others.¹⁵

On Ross' view, the Platonists are going to have to satisfy the condition that the universal be peculiar to a single thing of which it is the

substance, that is, the substance of one of its particulars.¹⁶ However, we are informed that:

- (1) The universal will be the substance of all of its particulars or none of its particulars.

And we are also told that the substance of a thing is peculiar to it. This claim, music to the Particularist's ears perhaps, is traditionally referred to as the Uniqueness Requirement.¹⁷

U The substance of a thing is particular to it.

From U, the denial of the first disjunct in (1) is thought to follow. And by the elimination of the disjunct the claim that the universal is a substance of one of its particulars is derived.

- ∴ (2) The universal cannot be the substance of all of its particulars.
 ∴ (3) The universal is the substance of none of its particulars.

Furthermore, on Ross' view, if one should attempt to resist (3), by maintaining *per impossibile* that the universal is the substance of one of its particulars, then a contradiction follows. In order to understand the universal as a substance, the Platonist, moreover, is going to need to understand it as the substance, then, of one of the particulars with which the universal in question is associated. For example:

- (4) *F* is the substance of Socrates.

However, and this appears to be a contribution to the argument and not a claim found in the text, the universal has an equally good claim to be the substance of any of the other particulars with which it is associated. Hence:

- (5) *F* is the substance of Callias.

Of course, this is an unfortunate consequence because we are told, moreover, that:

- (6) Those things in which the substance and essence are one are also one.

By (4), (5), and (6), the unpleasant conclusion that Socrates and Callias will be one, in some sense of the term, seems to follow.

Ross' reconstruction has been criticized as being fairly stipulative in nature. It seems to consist merely of counter-assertion. Why should a Platonist, someone who takes the *ante rem* view, accept that a universal will need to be a substance of all or none of the particulars in question. It might be thought that universals play a role in the being of some particulars, those that instantiate, participate, or partake, in them? The advocate of the *ante rem* view, moreover, may countenance uninstantiated universals. These need not be the substance of any particular.

Harold Cherniss attempted to improve on Ross' interpretation by understanding the argument in such a way that (1), for example, is not merely posited.¹⁸ Cherniss preferred to read "if it is to be the substance of one, this one will be the substance of the others also" to be supportive of the statement "the universal must be substance of either all or none of the particulars." Thus (8) is going to be thought to follow from (7):

- (7) Every universal u associated with a set of particulars, such that u is the substance of at least one of the particulars, will be the substance of all the particulars.
- ∴ (8) Either, every universal u , such that u is associated with a set of particulars, is the substance for all of the particulars thereof *or* every universal u such that u is associated with a set of particulars, is the substance of not one of the particulars thereof.

It is unclear whether Cherniss' interpretation improves upon Ross' reconstruction or not, for it is not clear that (8) really follows from (7). The universe of discourse for the inference can be constructed as follows:

UD: Universals and the particulars with which they are associated.

Fxy: x is the universal associated with y

Sxy: x is the substance of y

Now consider an alternative universe of discourse:

UD: The Kirby children (Helena, George, and Don).

Fxy: x is a sibling to y (where $y \neq x$)¹⁹

Sxy: x is a sister to y

The claim made in (7) may be thought of as syntactically analogous to this:

T (7*) Every Kirby child who is a sibling u , such that u is a sister (Helena) to at least one Kirby child (George), is a sister to every Kirby child (besides her self of course).

It might be preferable to interpret (8) as two distinct disjuncts (both of which will be shown to be false). Thus (8a*) will be false because, for example, Don is a sibling to every Kirby child and not a sister to every Kirby child. Whereas, (8b*) is false since Helena is a sibling to every Kirby child and a sister to George and Don.

F (8a*) Every Kirby child who is a sibling to every Kirby child is a sister to every Kirby child.

F (8b*) Every Kirby child who is a sibling to every Kirby child is a sister to not one Kirby child.

Hence, if the argument is defective on Ross' interpretation, it has not been fully repaired by Harold Cherniss' attempt either.²⁰

Myles Burnyeat takes the argument in a direction that seems more promising, though he ultimately seems to take the argument as setting up some preliminary or stage-setting remarks:²¹

The first argument depends on a generally agreed semi-technical understanding of both "substance" and "universal," and should not be pressed too closely. Its function is to indicate in a preliminary manner why it is that any identification of substance and universal seems out of the question.

The idea that the argument is not to be pressed too closely seems correct, to the extent that it does not seem to hold up to close inspection. Burnyeat's own reconstruction of the argument turns on the logic of "every" and finds external justification in *Metaphysics* V.9, where Aristotle says (1018a3–4):

For Socrates and musical Socrates are thought to be the same; but "Socrates" is not predicable of more than one subject, and therefore we do not say "every Socrates" as we say "every man."

We can say "every man" perfectly well, so runs the argument, but it is meaningless to say "every Socrates." "Man" is going to refer to something that is common to a plurality of individuals. But this is not the case with "Socrates". Suppose that "man" did function like "Socrates" and we could not say "every man." If man is legitimately predicated of two particulars x and y , x and y will have to be the same in a way that is analogous with the way in which x and y would be identical, were we to say that x is Socrates and y is Socrates. On the basis of this understanding of 1018a–3, Burnyeat reads the first argument as follows:

Whose substance will it be? It will be the substance either of every individual or of none. But [on the assumption that we try to make it the substance of every individual] then "every" would be impossible. If it is the substance of some individual, the "others" will be that one.

The bracketed claim is an explanatory expansion of the argument and the rest is Burnyeat's own translation. On this view, the assumption for *reductio ad absurdum* is the claim that a universal is a substance.

(9) Suppose the universal u is a substance.

But such a claim as (9) is simply going to issue in the question "A substance of what?" So the universal will need to be a substance of something.

∴ (10) u will need to be the substance of some individual.

From the claim that the universal will need to be the substance of something, we are apparently committed to the view that the universal will be the substance of every individual or not a single individual.

- ∴ (11) u will be the substance of every individual or of not one individual.

We begin the dilemma by taking up the ramifications of the universal being the substance of every individual. But we see that we will no longer be permitted the use of the term “every.”

- (12) Suppose that u is the substance of every individual.
 ∴ (13) Given that u will need to function like “Socrates” if it is substantial and we cannot say “every Socrates,” we will not be able to use (what we can indeed use, namely) the term “every.”

This consequence is too costly. So one cannot maintain that u is the substance of every individual. But it is all or nothing. So, by (14) and (11) the consequence is (15), which, of course, contradicts (10), which is thought to follow from the refutand.

- ∴ (14) u is not the substance of every individual.
 ∴ (15) u is the substance of not one individual.

There are a number of questions that one might ask at this point. But the most important difficulty seems to be that the inference from (10) to (11) does not seem to be straightforwardly valid.

- T (10*) u is the elder sibling of at least one individual.

From the claim that the universal will need to be the substance of something, we are apparently committed to the view that the universal will be the substance of every individual or not a single individual.

- F (11*) u will be the elder sibling of all or none of her sisters and brothers.

And it is difficult to see how one is going to bridge the gap. Perhaps one could maintain that if a universal is associated with a particular in some certain way C , then it is associated with every other particular it is associated with in way C . Call this the (C) principle.

- C If u is a universal to x , and it is true of x that u is to x in some way C , and u is also a universal to y , then it is true that u is to y in way C .

This might legitimize the inference from (10) to (11). Thus, if it is true that a universal is a substance of some particular, it will be true that it is the substance of every other particular of which it is a universal. The problem with C seems to be that it is unmotivated. I might say that being a sibling is a universal that belongs to George in the sense that George is a middle child. But I would not want to say of Don that it is true that he is a middle child.

There is also a lacuna in the inference from (9) to (10). We will need to take the term “individual” to mean something like “sensible particular” to get the argument off the ground. But the principle of Self-Predication, which is made use of in the infamous argument of the Third Man, would require that the description asserted of a universal will be true of the universal itself.²² The Platonist, *ex hypothesi*, takes the universal to be an *ousia*. Will not the universal be a substance of itself and not some sensible particular? Of course, Aristotle will maintain that it is unclear how the universal can have a substance peculiar to itself when it is not peculiar. But this is part and parcel of the *Third Man* objections that we find referenced to later on in the chapter. It might be summed with the slogan: how can Platonic forms be individuals. But I take it that the first argument is supposed to stand on its own without the usual *Third Man* consequences.²³

I believe more difficulties can be found in addition to these. But what has been said seems unhappy enough. And, as a result, I think we might accept the suggestion that it not be pressed too closely.

Subjective and predicative criteria

The next argument to be considered is found at 1038b15–16:

Further, substance means that which is not predicable of a subject (*eti ousia legetai to mê kath' hupokeimenou*), but the universal is predicable of some subject always (*to de katholou tinos legetai aei*).

The argument appears to be a straightforward contrast. Take (3) and (4) as premises, and, by Leibniz Law, S_{uu} must be accepted.

- (3) Substances are not ever predicable of a subject.
 - (4) Universals are always predicable of some subject.
- $\therefore S_{nu} \quad x$ is a universal only if x is not a substance.

It should be clear, however, that the Particularist does not land a decisive blow here. For as we have seen, some have thought that throughout VII.13, Aristotle is simply maintaining:

$S_L \quad x$ is a substance only if x is not predicated universally of what it is predicated of.²⁴

There are, moreover, ways of maintaining—and these seem to hold up to some extent throughout Zeta 13—that Aristotle can consistently believe that species-form is a substance that is exemplified by the members of a population, and is wholly present in each member, even though, *strictu sensu*, he is not willing to call it *to katholou*.

Regardless of how one might decide to interpret Aristotle concerning the way he distinguishes between universal and form, it seems to me that one cannot take the second argument any more seriously than the first. If the first argument appears to be mere counter-assertion, the second is, *a fortiori*, question-begging. Consider (3):

- (3) Substances are not ever predicable of a subject.

The Platonist is going to take substances to be forms. Take, for example, the form of a horse. What is standing in the way of the Platonist's assertion that *Equus caballus* is predicated of Secretariat? This "argument" seems no more troubling than the first.²⁵ So the question I would end this section with is similar to the first. Does one hang an interpretation of the nature and essence of substantial form on an argument such as the one we have been considering?

The substance within a substance

The next argument seems to be concerned with the incapability of substance to be in two things. Universals, of course, have no such

incapability. Given the contrast, one might be inclined toward the Particularist Interpretation. At 1038b29 Aristotle says:

Further, in Socrates there will be a substance in a substance, so that there will be a substance in two things (*eti tô Sokratei enuparxei ousia ousia, hôste duoin estai ousia*).²⁶

The remark is cryptic as it stands and the apparatus indicates that the manuscripts vary a great deal. At least one commentator, who is not unfriendly to the Particularist Interpretation, declines to speculate on the passage and says that the text is insecure.²⁷ Ross is a little more sanguine, taking the argument to be that if a universal, say that of being an animal, is a substance in Socrates, as it will presumably need to be, then the same thing will be the substance of Socrates as well as that of the class of animals. The relationship it would bear to the disparate kinds of being would presumably violate the requirement of uniqueness.

Whereas Ross seems to take it that the problem is that the universal animal will be the substance of both Socrates and the class of animals, St. Thomas offers an alternative reading.²⁸ Aquinas' interpretation accounts for why it is that Aristotle is worried about a substance being a substance within Socrates.

He says that if universals are substances, it follows that Socrates will have a substance in his substance; for if all universals are substances, then just as man is the substance of Socrates, in a similar fashion animal will be the substance of man; and thus these two substances, one of which is man and the other animal, will exist in Socrates. His conclusion is "and therefore it will be the substance of two things," i.e. it therefore follows that animal is substance not only of man but also of Socrates. Hence, one substance will belong to two things. Yet it has been shown above that one thing has only one substance.

On Aquinas' view, I take it, animal will be the substance of, say, *Homo sapiens*, on the one hand, and, Socrates, on the other. So if *animal* is taken to be a substance, it will, *per impossibile*, belong to two

different things. And this, Aquinas seems to assume, is going to violate the requirement of uniqueness.

Michael Woods could not disagree more. He takes the argument to belong to Aristotle's dialectical Platonist:²⁹

It cannot be an objection to regarding something *kathaolou legomenon* as a substance that it would have to be the substance of two things; for in that sense the species *man* is the *ousia* of two things, viz. the class of men and also Socrates. Regarded as an argument used by the Platonist, it makes sense. Just as the *eidos man* is the *ousia* of the class of men and, derivatively from that, of Socrates, so the genus animal is the *ousia* of the class of animals and also, derivatively from that, of Socrates. Considered as member of the class of men, the *ousia* of Socrates is the species *man*; considered as a member of the class of animals, his *ousia* is the genus *zôon*.

And, of course, if Woods is right, this is one less argument in support of the Particularist View. The difficulty here seems to be that the phrase "*hôte duoin estai ousia*" (so there will be two substances) seems like an instance where an objectionable consequence is being drawn. And there is no reason to believe that the Platonist, as it were, is going to be raising objections, in this context, to his own view. Some have conjectured that the consequence has something to do with the requirement of uniqueness.³⁰ But a decision over whether to accept the Particularist View or not, given this passage, is not determined, I submit, by the text.

The Tritos Anthropos

Importantly, VII.13 makes reference to the Third Man Argument. The Third Man argument is thought to be a regress argument whereby it is argued that given the characteristics of Platonic forms, if there is one, there are infinitely many. The argument is discussed in the *Peri Ideon*, which is an essay by Aristotle that survives only in fragments preserved in the writing of Alexander Aphrodisias. It also appears in Plato's *Parmenides*.³¹ Here, then, is a prominent text, from the *Peri Ideon*, for reconstructing the Third Man Criticism.³²

84.21 The third man is also proved in this way: If what is predicated truly of some plurality of things is also some other thing apart from the things of which it is predicated, being separated from them (for this is what those who posit the Ideas think they prove; for this is why according to them, there is such a thing as the man itself, because the man is predicated truly of particular men [OM], these being a plurality, and it is other than the particular men)—but if this is so, there will be a third man. For if [the man] being predicated is other than the things of which it is predicated and subsists on its own [NI], and [if] the man is predicated both of the particulars and the Idea [SP], then there will be a third man apart from the particular and the Idea. In the same way there will be a fourth [man] predicated of this third [man], of the Idea, and of the particulars, and similarly also a fifth, and so on to infinity.

Scholars traditionally discuss three principles that seem to launch the theory of forms into an infinite, vicious, regress:

One Over the Many:	OM	If any set of things are <i>F</i> , there exists a unique Form, <i>F</i> -ness, in virtue of which each is <i>F</i> . ³³
Self-Predication:	SP	The Form in virtue of which a set of things have a character itself has that character.
Non-Identity:	NI	<i>x</i> 's being <i>F</i> cannot be explained by appealing to <i>x</i> . ³⁴

The regress is standardly represented in the following way:³⁵

- (1) *x*, *y*, and *z* are all *F*.
- (2) There is a unique Form, call it Form₁, in virtue of which *x*, *y*, and *z* are all *F*. [1, OM]
- (3) *x*, *y*, and *z*, and Form₁, are all *F*. [1,2 SP]
- (4) There is a unique Form, call it Form₂, in virtue of which *x*, *y*, and *z*, and Form₁, are all *F*. [3,4 OM]

- (5) $\text{Form}_1 \neq \text{Form}_2$ [4, NI]
- (6) x, y, z, Form_1 and Form_2 are all *F*. [4,5 SP]
- (7) There is a unique Form, call it Form_3 , in virtue of which x, y, z, Form_1 , and Form_2 are all *F*. [6,7 OM]³⁶

Because the regress is thought to be vicious, one would, needless to say, like to disentangle Plato by jettisoning one of the above principles. The rejection of each principle, however, comes at some cost. If one gives up SP, forms will no longer be paradigmatic examples of things having the property ascribed to various particulars. Giving up on NI seems to pave the way for circularity. (Why is the form Large itself large? Because it participates in itself?) The denial of OM will leave, it would seem, the theory of forms incomplete. If everything gets its name from some form, except the forms, how do the forms get their names?

Having set out the criticism of the *Tritos Anthropos*, we may ask in what way this argument supports the idea that no universal is a substance? Which of the principles would Aristotle himself reject? Aristotle, it would seem, would target OM. Aristotle seems to take the Platonist to be treating forms as unique individuals and universals at the same time. Insofar as they are individuals, some form must explain the nature of that form. But then, however, the same goes for the new form that has been introduced. Were the forms understood, not as *ante rem*, but *in rebus*, then they may be understood as merely adjectival beings rather than entities that can stand on their own. Entities that can stand on their own, so the argument may run, require explanation vis-à-vis their nature. The natures themselves, which are common to individuals, and, thus, are universals, are not in need of explanation. Aristotle's diagnosis of the regress arguments, then, would be that the Platonists, insofar as they treat forms, i.e. universals, as nominal kinds of being, things that can stand on their own, commit themselves to explaining what they cannot. So they should not have taken the forms to be, *ante rem*, i.e., items that can stand on their own.

At first glance, the state of affairs so described would seem to provide a fair amount of support for the idea that Aristotle takes the slogan "no universal is a substance" fairly seriously. Of course, as we have seen, the view that Socrates and Callias have particular forms does not follow

directly from that claim. And, as we have seen, were primary substances particular forms, those objects—the very objects which are most real and of primary concern—would be epistemically elusive, as knowledge is of the universal. Indeed, as we will see in the next section, Aristotle ends VII.13 with this very recognition—the recognition that taking the slogan literally leaves one at an impasse.

The aporia that follows

The arguments on behalf of the slogan no universal is a substance, which we have been examining heretofore seem either fairly elliptical or inconclusive. One might be fairly skeptical, therefore, concerning their effectiveness in terms of support for the Particularist Interpretation. And there is, perhaps, further reason for doubt once one considers that these very arguments are punctuated with an astounding concession at 1039a14–23:

The consequence of this view involves a difficulty. If no substance can consist of universals because a universal indicates a “such” and not a “this,” and if no composite substance can be composed of actual substances, every substance would be incomposite, so that there would not even be a formula of any substance. But it is thought by all and has been previously stated that it is either only, or primarily, substance that can be defined; yet now it seems to be in this way not even substance can. There cannot, then, be a definition of anything; or rather in a sense there can be and in a sense there cannot. And what we say will be plainer from what follows.

With respect to the claim that no universal is a substance, the reader, therefore, of VII.13 finds Aristotle raising the very same objection that we noted in the previous section. Knowledge is of definition. Particulars are indefinable. So knowledge does not have for its object particulars. But if we go along with the Particularist and maintain that there are particular forms which are most truly and primarily substances, we drive, straightaway, a wedge between what is most truly real and what we may know. The price seems a little high.

There is, as one might expect, a strategy that the Particularist can pursue, wherein one distinguishes between kinds of knowledge.

When Aristotle maintains that knowledge is not of the particular, we may understand him as saying, P-Knowledge is not of the particular. This might leave room for another variety of knowledge, A-Knowledge, which has for its objects particulars. Indeed, Aristotle seems to suggest that there are two kinds of knowledge (1087a15–21):

For knowledge like knowing is spoken of in two ways—as potential and actual. The potentiality, being, as matter universal and indefinite, deals with the universal and indefinite; but the actuality, being definite, deals with a definite object,—being a “this” it deals with a “this.” But *per accidens* sight sees universal color, because this individual color which it sees is color; and this individual A which the grammarian investigates is an A.

Can one maintain that Aristotle believes—when he says that knowledge is limited to the universal—that he is merely saying that one cannot have potential knowledge of the individual?³⁷

The first thing to notice is that it seems that the Particularist Interpretation now comes at the cost of an additional epicycle. One advantage that it seemed to have over its competitors was that it could take the claim, in VII.13, i.e., “no universal is a substance,” very straightforwardly and literally. The competing views required the appeal to distinctions in terms of substance, on the one hand, or universals and things predicated universally, on the other.

Secondly, the view faces certain textual challenges. In *Metaphysics* VII.15, Aristotle says the following (1040a5):

Therefore when one of those who aim at definition defines any individual, he must recognize that his definition may always be overthrown; for it is not possible to define such things.

We are asked to suppose that A-knowledge of Callias' individual form is possible, despite Aristotle's claim that it is not possible to define individual things. A-knowledge, as it were, would be an epistemic state weaker in terms of justification than P-knowledge, as the account of the individual may be overthrown. Perhaps this is what Aristotle is

alluding to in the *Posterior Analytics*, when he suggests in the following that there might be a weaker form of knowledge (I.2 71b9):

We think we understand something simpliciter (and not in the sophistical way, or incidentally) when we think we know that the cause which explains the thing in question is its cause, and that it is not possible for it to be otherwise . . . Now whether there is also another type of knowledge we shall say later. But we can at any rate say now that there is knowledge through demonstration. By demonstration I mean a scientific syllogism, i.e. a syllogism such that one who has it has scientific knowledge of something . . . If then scientific knowledge is as we were saying, it is necessary for demonstrative knowledge to depend on premises which are true and primitive and immediate, and more familiar than, and prior to, and explanatory of the conclusion . . . Without such premises there may well be a syllogism, but it will not be a demonstration, since it will not produce scientific knowledge.

In light of some of the passages we have seen, it begins to look as though, were Aristotle to countenance another type of knowledge, that knowledge would concern things that might be otherwise. An account of any individual, and therefore any individual form, would seem to be among the things that may be otherwise. There are two more passages that bear on this view, and are, therefore, deserving of our attention. The first is found in *Metaphysics* VII.3, at 1029b1–10:

For it is an advantage to advance to that which is more intelligible. For learning proceeds in this way—through that which is less intelligible by nature to that which is more intelligible; and just as in conduct our work is to start from what is good for each and make what is good in itself good for each, so it is our work to start from what is more intelligible to oneself and make what is intelligible by nature intelligible to oneself. Now what is intelligible and primary for particular sets of people is often intelligible to a very small extent, and has little or nothing to do with reality.

We are told that learning proceeds from what is intelligible to us, to what is more intelligible by nature. And that which is intelligible to the individual, we are informed, is intelligible to a very small extent. We are even told that it has little or nothing to do with reality. P-knowledge, on the Particularist Interpretation, will have to be knowledge of universals. This is, moreover, the kind of knowledge that is said to be lacking with respect to individual essences. But consider what Aristotle says in the *Posterior Analytics* I.2 (71b33–72a6):

Things are prior and more familiar in two ways; for it is not the same to be prior by nature and prior in relation to us, nor to be more familiar and more familiar to us. I call prior and more familiar in relation to us what is nearer to perception, prior and more familiar *simpliciter* what is further away. What is most universal is furthest away, and the particulars are nearest; and these are opposite each other.

The clear suggestion is that knowledge of universals, or P-Knowledge, is vastly superior to A-knowledge, or knowledge of particulars. Indeed, the suggestion at 1029b10 is that the latter may contain “little or nothing of reality.” Now suppose that—accepting a Particularist account—one were to rely on the distinction between A-knowledge and P-knowledge, to accommodate knowledge of particular essences. The former kind of knowledge will be vastly inferior in terms of real intelligibility. And, as one might argue, the conclusion that what is most real is vastly less intelligible does not seem to be a significant improvement. Indeed, matters seem further frustrated by the fact that Aristotle seems to think a decline in natural intelligibility involves a decline in reality. If we suppose that particular essences are the primary substances, we assume that they are the most real substances. If, however, they are less intelligible, being the objects of mere A-knowledge, they will be thought to be precisely what they cannot be: less real.

Conclusion

The arguments in *Metaphysics* VII.13 are more difficult and cryptic than usual. The interpretations of a given argument are not merely

numerous and sundry—the difference is that of night and day. Most interpretations will be underdetermined by the evidence. But the alternatives vis-à-vis *Metaphysics* VII.13 seem, to me, to be particularly impoverished. What is more, a rejection of the Particularist Interpretation appears textually adequate. And the traditional view of form is consistent with the view that various members of a population exemplify a property that is numerically identical. Indeed, Aristotle can be seen to consistently argue that *infimae species* are indeed a special kind of universal, which is also a substance, while anything more generic will, *contra* the Platonist, not suffice. In addition, we have seen that Aristotle's conception of scientific understanding requires that primary substance not be particular. While that which is particular is indefinable, that which is indefinable is unknowable. And Aristotle does not want it to be a consequence of his view that primary substance is unknowable. Where an interpretation is not to be found in the text and is not demanded by theory it should, one may suppose, be set aside. The Particularist Interpretation is not determined by the text. And it is certainly in conflict with some aspects of Aristotle's epistemology, as well as his commitment to *in rebus* realism. As a result, I am not sure that there needs to be a "*to soi einai*" or a "*to Sôkratei einai*" in Aristotle's ontology.³⁸ The Particularist Interpretation is, at the very least, controversial. There is, therefore, reason to look elsewhere for a solution to the Puzzle of Simple Composition.

My view, of course, is that the Puzzle be resisted by recognizing the transitory existence of proximate matter, and that the matter of Callias could not *Migrate* so as to become that of Callias.

Conclusion

The Puzzle of Simple Composition Revisited

The Puzzle of Simple Composition poses a difficulty for Aristotle's metaphysical views. That difficulty finds its expression in a number of statements, which are thought to be jointly inconsistent, and are thought to be descriptions of views with which Aristotle would agree. At this point, I would like to revisit some of the more important conclusions that have been reached, and how they relate to the Puzzle of Simple Composition. Toward that end, we might consider the most important, or central claims composing the puzzle to be the following:

Migration: It is possible for two cospecific substances to exchange their matter, i.e. for the one at one time to be the same as the matter of the other at another time.

Strong Hylomorphism: It is necessary that any embodied substance is identical to the compound of what (at any time) is its form and its matter.

Universal Form: It is necessary that any two cospecific substances have the same form.

Take the matter of Callias to have *Migrated* to Socrates. Socrates is a substance. Hence, according to *Strong Hylomorphism*, Socrates is identical to his matter, let this be designated by *m*, and to his form, let this be designated by *f*. However, *m* and *f* are each numerically identical to the matter and form identical to Callias. For, *ex hypothesi*, *m* has migrated and *f* is not, given *Universal Form*, a particular (*f* is wholly present wherever it is present). By the symmetry of identity, and *Strong Hylomorphism*, *m* and *f* are identical to Callias. And by the transitivity of identity, we face the unpleasant conclusion that Socrates is identical to Callias.

Alternative Proposals for Resolving the Puzzle of Simple Composition

In this section, we may summarize the ways in which I take alternative proposals—competitors to the solution I favor—to be less effective. On the face of it, there are going to be eight main ways that one might approach the Puzzle of Simple Composition. Where A indicates an interpretation that Aristotle accepts a given view, and R indicates an interpretation where Aristotle rejects a given view, the number of initial possible alternatives can be enumerated thus:

	HM	UF	SH	
1.	A	A	A	Unpleasant Interpretation?
2.	A	A	R	Primitive Individuationism
3.	A	R	A	Simple Particularism
4.	A	R	R	Extreme Particularism
5.	R	A	A	My View
6.	R	A	R	Primitive Individuationism
7.	R	R	A	Weak Identity
8.	R	R	R	Strong Identity

The unpleasant interpretation

Does a commitment to *Migration*, *Universal Form*, and *Strong Hylomorphism* entail that Socrates and Callias will be identical. The answer, I believe, is the following: only given certain auxiliary assumptions. What condition will the matter of Callias need to be in, in order to be exported to Socrates? Callias will need to be fairly disintegrated before migration can occur. Insofar as he is disintegrated at all, he is dead. But once dead he cannot be resurrected and he cannot, on Aristotle's view, enjoy a gappy existence. So Socrates need not worry about sharing his identity with Callias. We see that the Puzzle of Simple Composition is therefore (at least this) elliptical for the following argument:

- (1) *Migration*: It is possible for two cospecific *substances* to exchange their matter, i.e. for the one at one time to be the same as the matter of the other at another time.

- (2) *Strong Hylomorphism*: It is necessary that any embodied *substance* is identical to the compound of what (at any time) is its form and its matter.
- (3) *Universal Form*: It is necessary that any two cospecific substances have the same form.
- (4) Either Resurrection is possible or gappy existences are possible.

∴ UC It is possible for Socrates to be identical to Callias.

As I have argued, however, Aristotle rejects (4). As a result, he can accept (1), (2), and (3) and still reject UC.

Primitive individuationism

The second alternative accepts *Universal Form* and rejects *Migration*. Aristotle, as I have argued, takes matter to be the principle of individuation. It is, at a minimum, a consequence of this view that:

I_{mp} Callias and Socrates cannot both have the same matter *m*.

One might attempt to argue that the falsehood of I_{mp} together with the repugnance of UC simply suggests that Aristotle would not take matter to be the principle of individuation. This would be tantamount to a rejection of *Strong Hylomorphism*, provided that Aristotle is taken to reject UC. And one might take this to be a proposal that is more plausible than the solution that I prefer. The alternative that rejects *Strong Hylomorphism* I take to be effectively blocked. For we have seen strong evidence for thinking that Aristotle really does believe that Socrates and Callias are different in virtue of their matter. This rejection of the second alternative will go *mutatis mutandis* for the sixth alternative, which also rejects *Strong Hylomorphism*.

Haecceity and simple composition

Another alternative is the simple denial of *Universal Form*. The view involving the denial of *Universal Form* and the acceptance of *Strong Hylomorphism* might be classified as *Simple Particularism*. One might wonder why one would accept both of these principles. If forms are particular, they might be thought to be able to individuate. And the

principle of individuation that comes with *Strong Hylomorphism* is therefore unnecessary. The alternative, the rejection of *Universal Form* with the rejection of *Strong Hylomorphism* might therefore seem appealing. As we have seen, however, the *Particularist Interpretation* is controversial. A solution that avoids commitment to particular essences would seem preferable.

My view

I believe that Aristotle accepts *Universal Form*, is committed to something like *Simple Composition*, but would reject *Migration*. A functional entity exists only if it possesses the characteristic capacity of the species to which it belongs. An entity dies when it loses its soul or its form. This is tantamount to losing a specific capacity for living. If Callias dies, then, his body loses its soul. Having lost the soul it loses its characteristic function. Without its characteristic function it no longer exists. And if it no longer exists, it cannot *Migrate*.

Identity Theses

The seventh alternative rejects *Migration* and *Universal Form*. This view would be something akin to my view with a rejection of *Universal Form*. But it approximates the Identity Thesis I targeted in Chapter 3. Therein, form, matter, and composite are taken to be identical with one another. Given that a composite is a particular, and form is identical to the composite, form too will be particular. We saw, however, that the Identity Thesis does not meet up with Aristotle's tendency to treat matter and form as distinct entities. And, to the extent that one is suspicious of the Particularist Interpretation, one should also be wary of the Identity View, which seems to be committed to Particularism. Of course, the eighth view might be the view that Aristotle identifies matter, form, and individual substance, while rejecting the view that something is identical to its matter and form. But this view is easily reduced to absurdity. Assume that Socrates is not identical to his matter and form. The Identity Thesis takes matter, form, and composite to be identical.

- (1) Matter m = form f = Socrates.

Assume that *Strong Hylomorphism* is false:

- (2) Socrates might not be identical to his matter and form.
- ∴ (3) Socrates might not be identical to Socrates.¹

The Puzzle of Transplantation

Of course, one might object to my view by insisting that *Migration* need not entail that Callias go out of existence for his matter to migrate. The case where even Socrates' organs are kept alive and transplanted by a skilled surgeon into Callias, systematically being replaced the one for the other, might pose a difficulty. Would Aristotle have a solution to the Puzzle of Transplantation? (Of course surgery, *a fortiori* organ transplantation, was, as a science, extremely undeveloped in his day.) As an initial, *tu quoque* response, one might point out that this difficulty does not belong uniquely to my view. The problem of Transplantation would seem to hold for those who hold the *Particularist* view, those who would deny *Strong Hylomorphism*, and those who would endorse the *Identity Thesis*. Indeed, one is not required to be an Aristotelian in order to wonder which resultant, after the operation is completed, is Socrates.

With respect to the Puzzle of Transplantation, however, it is possible to offer some conjecture which, nevertheless, relies upon the same principles my view rests upon. Aristotle is going to take Socrates' identity with himself and his difference with respect to Callias to be the result of his matter. "Matter" as I have argued is best thought of in terms of a functioning body. We can understand Socrates' functioning body to be made up of various organs. Denote these with the letters O, C, R, A, T, E, S. The organs of Callias can be denoted by C, A, L, L, I, A, S. The first organ transplant occurs. The first transplant that occurs involves the inter-transplantation of organ S of Socrates and organ S from Callias. Designate the resultants OCRATES and CALLIAS. Many philosophers will be inclined to say that Socrates is identical to OCRATES and Callias is identical to CALLIAS. The second transplantation involves organ E of Socrates and organ A of Callias, call the resultants: OCRATAS and CALLIES. The operations continue in succession in the following way:

Operation Three:	OCRAIAS	CALLTES
Operation Four:	OCRLIAS	CALATES
Operation Five:	OCLLIAS	CARATES
Operation Six:	OALLIAS	CCRATES
Operation Seven:	CALLIAS	OCRATES

If Aristotle is going to take matter to be the principle of individuation, he is going to have to take Callias to go out of existence when enough of his functional body has been replaced. When does this point occur? It is difficult to say. When an initial, secondary, or tertiary particle is removed from a statue of David, the statue does not, we may assume, go out of existence. But this does not mean that whenever a particle is removed from a statue, it will remain in existence. And there is little in the way of hope for discovering precisely which particle will be responsible for the destruction. So it is no difficulty with Aristotle's theory that he cannot say when Callias goes out of existence. He nevertheless can say that if Callias has enough of the right kind of matter replaced he will no longer be Callias. If a sufficient number or your organs were replaced, the resultant might be very different from you—so different from you, that one might no longer think of it as you. But what does one make of the result at the seventh operation? Is Callias not **CALLIAS**? Aristotle's answer is going to be that Callias and **CALLIAS** are numerically different, for he rejects, on principled grounds, the possibility of an entity going out of and returning to existence. Of course, philosophers frequently require that objects correspond to a certain continuous stretch of reality, on the basis that not doing so leaves nothing to prevent arbitrarily combining stages of the careers of diverse objects.² So I would give Aristotle his intuition here, with the additional note that a philosopher might accommodate the similar ways we would feel about Callias and **CALLIAS** without taking identity to be what matters.³

Postscript

In this work I have tried to better understand Aristotle's metaphysics by pressing his work up against the Puzzle of Simple Composition. The interpretation that results is, I believe, an interesting one. I would

also add that it is a fairly traditional and conservative interpretation. Needless to say, many who would disagree with the view I have arrived at here, might say the same for their account. The view I have espoused, therefore, should not be thought of as the only interpretation. I hope to have made this clear, and it has been my aim to provide an (admittedly biased) introduction to some of the subtle metaphysical issues being spoken of in *Aristotelian Studies*, as well as an (admittedly biased) introduction to some of the literature on these issues. The scholarship on Aristotle's metaphysics has been particularly rich and interesting of late, and readers of philosophy should be encouraged to enjoy some of this fine work.

Notes

Introduction

- ¹ or the controversy concerning the first use of the term ‘metaphysics’ see Ross (1924: xxxi–xxxii).
- ² Quotes from Aristotle’s corpus are taken from Aristotle (1984), unless otherwise indicated.
- ³ Numbers in the margin, for example ‘[1,2]’ indicate a conclusion is being drawn from anterior premises, e.g., the premises that are numbered as (1) and (2) respectfully.
- ⁴ Aristotle writes in the *Poetics* (1449b5) that Epicharmus and Phormis invented comic plots. See Sedley (1982).
- ⁵ The two following examples are modifications of two arguments found in Frederick Doepke’s (1997: 18–23).
- ⁶ I first encountered the following puzzle in Fine, K. (1994).

Chapter 1

- ¹ This is chronicled in Cohen, S. M. (1984).
- ² See William Charlton (1972) and (1994).
- ³ As S. Marc Cohen argues (1984: 45), if we attribute this thesis to Aristotle, he would be committed to the extraordinary view that two shoes joined at the sole, would count as one shoe rather than two.
- ⁴ William Charlton (1994: 42–43).
- ⁵ William Charlton (1972: 244).
- ⁶ I take the example from Bertrand Russell (1966: 120–121).
- ⁷ S. Marc Cohen (1984: 49).
- ⁸ Edward Regis (1976: 160). It bears mentioning, that, nevertheless, Regis rejects the traditional interpretation on philosophical grounds.
- ⁹ Herbert Smyth (1920: 375).
- ¹⁰ White, N. (1971: 187).
- ¹¹ In what follows I rely upon Nicholas White’s (1971) and Fred Miller’s (1973).
- ¹² Miller, F. (1973: 484).
- ¹³ Matthews, G. (2006).
- ¹⁴ Donnellan, K. (1966).

- ¹⁵ Nicholas White has argued that Aristotle had a grip on The Indiscernability of Identicals at one point in his career, but was subsequently less mindful of it. Matthews, however, seems to find it puzzling that (2006: 230–231): “someone might go, indeed go rather quickly, from having a relatively good grasp of something like the notion of identity to having a poor grasp of that notion. It is especially puzzling if that someone is Aristotle.” Matthews, it bears mentioning, is unsure about the evidence that our *Topics* passage articulates Leibniz Law. But he does take Aristotle to have a grasp on the concept of identity.
- ¹⁶ This is the view of, for example, Mary Louise Gill (1994: 59) and William Charlton (1994: 56–72).
- ¹⁷ The following formulation of the problem is an adaptation of Mary Louise Gill’s treatment in (1994).
- ¹⁸ John Locke (1979: 221).
- ¹⁹ Immanuel Kant (1996: 368).
- ²⁰ Leibniz, G. (2000: 15).
- ²¹ Isaac Newton (1995: 79).
- ²² The argument runs as follows: We are asked to imagine a bucket, half-full of water that is suspended from a fixed point by a rope. The bucket is then rotated, by means of twisting the rope. Having twisted the rope as far as one can, the rope is released. The bucket, of course, begins to rotate in virtue of the untwisting rope. And, initially, the water does not rotate with the bucket (imagine a piece of paper floating on top of the water), and the surface of the water is flat. Subsequently, the water begins to rotate with the bucket, and, as it does, the surface becomes concave. Thereafter, the spin of the bucket will slow down, when the rope begins to twist in the opposite direction. And, now, the water spins faster than the bucket, as the surface remains concave. But why should the surface become concave. Presumably because the water is spinning, though it is not spinning relative to the bucket. As the friction between the water and the sides of the bucket has the two spinning together, without relative motion obtaining between the water and the bucket, the water on the surface is concave. When the bucket is no longer in motion the surface is concave. So we should not think that the concavity is the result of the spin of the water relative to the bucket.
- ²³ E. J. Lowe (2002: 266–267).
- ²⁴ See Gill (1994), whose article introduced me to this controversy. I should add: strictly speaking, Aristotle does not have a theory of space. He speaks not of space, but, rather, of place.
- ²⁵ On the present reconstruction, the argument may turn on a scope issue. See Ackrill, J. L. (1981). Consider the following argument:
- (10) There must be eternal and continuous motion [8,9]
 - (11) Whatever is in eternal and continuous motion is in circular motion
 - (12) There must be a case of eternal circular motion (the outer heavenly sphere) [10,11]

Premise (10) is ambiguous. It can be read as (10a) or (10b):

- (10a) There must be some thing or another at any time in motion.
- (10b) There must be some one thing (the outer sphere) at any time in motion.

In order to get to the conclusion that there is one primordial mover, Aristotle needs (10b). However, (10b) does not seem to follow from premises (8) and (9). For time might be eternal, and so too motion, even though the motion in question is not that of some one thing.

²⁶ The argument in this section follows a general outline that can be found Dancy, R. M. (1975) and Graham, D. (1987).

²⁷ Some scholars read Aristotle as taking the four elements as basic simples. See, for example Charlton, W. (1972). Montgomery Furth's account seems to be the most interesting among these interpretations. On Furth's interpretation, hot and cold serve as the continuant of the contraries. For example, one has fire when the hot attaches to the dry. If the dry is exchanged for the moist, one has water. While Furth's interpretation avoids some of the philosophical difficulties with prime matter, it seems hard to square with what Aristotle says at (329a29): "We must reckon a principle and as the primary that which underlies, though it is inseparable from the contrary qualities, for the hot is not the matter for the cold nor the cold for the hot, *but the substratum is matter for both.*"

We are here told that hot is not, then, matter, nor can it serve as the substratum, as something else occupies that role.

²⁸ Regis, E. (1976).

²⁹ Fine, K. (1994: 26–27)

³⁰ The translation here is my own.

³¹ Alexander of Aphrodisias was a philosopher who wrote close commentaries on Aristotle's work in the late second and early third century BCE. Most scholars view his exegetical work to be of a very high quality. Indeed, he became known as 'the commentator'.

³² Text is taken from Todd, R. B. (1976).

³³ Philoponus, J., also known as John the Grammarian, an Alexandrian philosopher, living circa 490–570 CE, was an early critic of Aristotle.

³⁴ Medieval Commentarian on Aristotle and an Islamic Theologian living from 1126 to 1198.

³⁵ Max Black (2001: 2006).

³⁶ While Black's article goes on to discuss parallel worlds and lives in much the same way as the MBW, the argumentation is less convincing, and the dialogue ends thereafter aporetically.

³⁷ See also: *Metaphysics* VII 1040b5–16, 1041b38–30.

Chapter 2

¹ Some philosophers might understand Resurrection to be essentially tied to the miraculous. My use of "Resurrection" need not carry such implications. A case where a Resurrection occurs, for present purposes, is simply a case where a substance goes out and re-enters existence.

² The main reason for my interest in Resurrection and much of what I can say thereof is Dancy, R. M. (1996: 271). I thought of Resurrection as the preferred way to handle the puzzle of simple composition prior to reading that article. I am now less sanguine, needless to say, with respect to Resurrection. Kit Fine (1994)

argues against Resurrection, though he calls it “Reinstatement.” I have argued elsewhere (proceedings of the Eastern Division of the American Philosophical Association, 2004) that his arguments are unsuccessful. But I now believe Resurrection to be out of the question for the reasons given in the following. Fine seems to have overlooked, as did I in responding to his arguments, Aristotle’s rejection of Resurrection.

³ Hicks, R. D. (1976: 238).

⁴ One difficulty with the argument, which I will not enter into, is that acceptance of the (2) lends a fair amount of support for (AR). Perhaps the way to consider this is as follows. One who accepted a Transmission-View of causation but who was not mindful of the arguments in *Physics* VIII.5, for example, might make this inference.

⁵ Trendelenburg, F. A. (1877: 202):

Verba non temere ea suspicione absolvenda sunt, proficisci a manu christiani lectoris carnis Resurrectionem ex Aristotelis propositionibus cupide concludentis. Adeo verba Christianum saeculum sapiunt. Fortasse ex ipsis commentatoribus, sui temporis placita respicientibus, redundarunt. (202)

⁶ The term *anestasi* is the perfect, indicative, active, form of *anistēmi* from which *anastasis*, as a noun, is formed.

⁷ Rodier, G. (1900: 83).

⁸ Hicks, R. D. (1976: 249).

⁹ Translation is Smyth, H. W. (1922: 645).

¹⁰ Irwin, T. H. (1988: 492).

¹¹ Dancy, R. M. (1975) provides illuminating (and amusing) commentary on this passage.

¹² Lovejoy, A. O. (1936).

¹³ Hintikka, J. (1973: 100).

¹⁴ If Aristotle believes that Resurrection is extremely improbable, the situation is rather similar to the Lottery Paradox, as it is reasonable to think of every death as permanent, taken severally, but not reasonable to believe every death permanent, taken collectively. For just as in the case of the Lottery Paradox, where a winning ticket is inevitable, so too, on the present line of reasoning, is Resurrection.

¹⁵ Sorabji, R. (1980: 100).

¹⁶ Dancy, R. M. (1980: 106).

¹⁷ Sarah Waterlow Broadie, for example, analyzes ($\diamond p$) as follows (1982: 31):

We have been examining the concept of relative temporalized possibility (RT-possibility) which Aristotle propounds and uses in the *De Caelo* I.12 proof. The rule for this (the RT-rule) lays it down that “p” even if false at t, is nonetheless possible then if and only if: the actual state of things at t is such that from a description of this, together with the supposition that “p” will be true at some later time, there follows no impossible consequence.

Broadie, in effect, avoids Plentitude as $\diamond p$ just means that were p false there would be no impossibility involved in the assumption that p were to occur at another time, though p need not. While this view would be convenient for

present purposes, the Sorabji–Dancy view seem preferable on the grounds that Aristotle really does believe the principle to hold—albeit only to eternal entities, as *Physics* III.4, moreover, seems to make clear.

¹⁸ Setting aside issues of authenticity, one might also cite *Problemata* XVII.2:

Just as the course of firmament and of each of the stars is a circle, why should not also the coming into being and the decay of perishable things be of such a kind that these again come into being and decay? This agrees with the saying that “human life is a circle.” To demand that those who are coming into being should always be numerically identical is foolish, but one would more readily accept that they were identical in kind . . . For Alcmaeon declares that men perish because they cannot link together beginning and end. (916a25–35)

¹⁹ Marcus, R. B. (1971: 190).

²⁰ Italics are mine.

²¹ Furth, M. (1978).

²² Fine, K. (1994).

²³ Van Inwagen, P. (1978: 116–117).

²⁴ Van Inwagen, P. (1978: 121).

²⁵ Zimmerman, D. (1999: 144). One certain difference between the views of van Inwagen and Aristotle is that the later rejects a “stuff” ontology.

²⁶ Translation is Richard Sorabji’s (2005).

²⁷ I owe the suggestion here to Josh Gert Spring Colloquium at the Florida State University Department of Philosophy.

²⁸ As I suggested in the last chapter, prime matter would seem to individuate synchronically.

²⁹ The phrase is Daniel Dennett’s (1978), who ultimately does not accept the view. Peter van Inwagen cites the phrase and approves of the message (1978: 169).

³⁰ The translation here (and a great deal of the argument of this section) is Dancy’s (1996: 276–277).

³¹ See also *Generation of Animals* 734b24, *Metaphysics* IX.7 1049a36–1049a3, *Metaph.* Z.10, 1035b24, (*De Partibus Animalium* I.1 640b31–641a6).

³² Kit Fine is sensitive to the possibility of equivocation. He says (16):

There is, however, a more successful way in which the charge of equivocation can be resisted . . . [T]here is a very general sufficient condition which may be given for two things to be of the same form. It is that they be qualitatively the same, i.e. that there be no qualitative differences between them, either of the relational or non-relational sort . . . Thus we may guarantee that the matters of Socrates and Callias are of the same form by supposing that they are qualitatively the same. Now, in general, the supposition of qualitative sameness will require that the universe be cyclic (both backwards and forwards). Socrates and Callias will be counterparts under two different cycles.

(1) \diamond (Socrates and Callias are qualitatively similar) \rightarrow \diamond (Socrates has the matter of Callias and Callias has the matter of Socrates)

Now, it is the antecedent of (1) that needs to be motivated. Recognizing that certain relational and historical features might make the matter of Socrates and of Callias qualitatively dissimilar, Fine suggests that the universe be considered cyclical. Callias, say, will be the counterpart to Socrates in a cycle, call it cycle_p, that is not the present cycle, and in that cycle Callias will be an object similar to Socrates in the relevant way. (For example, if Callias is tan in cycle_{np}, but he is similar to Socrates in every way relevant to getting a sun tan in cycle_p, then it is possible for Socrates to be tan.) Now, we determine whether the material description of Socrates in cycle_p can be true of Callias in cycle_{np}. If so, then the antecedent of (1) seems to be satisfied.

Precisely why Fine would want to understand the argument to turn on a counterpart analysis of modality is left unclear. One might wonder if it is not an assumption of enormous magnitude to suppose that Aristotle would understand the possibilities that obtain between Socrates and Callias in terms of a counterpart theory.

Chapter 3

¹ The suggestion does not derive simply from commonsense. Chemistry, for example, suggests that composition occurs.

² Ross, W. D. (1924) and Burnyeat et al (1979) maintain that the emphasis is primarily on composite man, where Gill, M. L. (1989: 138–144), Halper, E. (1989), and Lewis, F. (1994) occupy the position that emphasis is focused primarily upon unity of form.

³ Rorty, R. (1973: 394).

⁴ Rorty, R. (1974: 76–77).

⁵ Rorty, R. 1973: 407).

⁶ Rorty, R. (1973: 416) In his own words:

So the reason why a man is one thing, and why “two-footed animal” is the definition of one thing, is the same: that what looked like two “thises” (or worse yet, two “suches”) was really just one. “Two footed” doesn’t refer to one batch of qualities and “animal” to another. Rather, animality is different in horses and men . . . The fact that there isn’t anything in common reflects that the material cause of the substance was not a “this,” but undifferentiated animal goo. We only thought that there was a problem about the unity of definition and the unity of substance because we thought that “two-footed” stood to “animal” as “white” stands to “man”—but the former relation is actualization, which is not, like predication a dyadic relation between two things but a pseudo-relation between one thing and a non-thing.

⁷ Rorty, R. (1973: 416).

⁸ Loux, M. (1995: 252).

⁹ Rorty, R. (1974: 73–74). Adjacent to this passage, he also states:

[T]he claim that things differ solely in number differ solely in matter as means that (a) they differ by virtue of having different accidental properties, and (b) the reason why they have these properties is that the proximate matter of which they are formed has not been entirely mastered by the specific

form—the ἀόριστον material cause has not been quite ὀρισμένη so to speak. This view means that it is not, *pace*, to Miss Anscombe, the fact that they are made out of different pieces of flesh which differentiates Socrates from Callias. It is just the common place fact that, say, Socrates is bald and cultured and Coriscus in nonbald and uncultured.

¹⁰ My Italics.

¹¹ On this view it is unclear what Aristotle would make of the obvious suggestion that there could be such a thing as indistinguishable, identical twins. Furthermore, Rorty's view seems to get change wrong.

¹² The Endurantist maintains that objects endure through time (See Mark Hellar's "Temporal Parts or Four-Dimensional Objects" in Loux, M (2001)). The Perdurantist holds that objects are collections of spatio-temporal stages.

¹³ Kosman, A. (1984: 135).

¹⁴ Kosman, A. (1984: 135).

¹⁵ Kosman, A. (1984: 143).

¹⁶ Kosman, A. (1984: 144):

We have seen Aristotle's answer; matter is potential, form actual. I have suggested that in one sense matter is that out of which an entity is made or comes to be . . . But it is not in this sense that the matter of substance is potential . . . In this sense, potentiality and actuality are the same thing, present together in that full activity which is nothing other than the manifestation of the one entity that both are. And it is in this sense that matter is the potentiality of which form, as the being that matter is, is nothing other than the full actuality of that matter, and thus of that very being.

¹⁷ Kosman, A. (1987: 362).

¹⁸ Loux, M. (1995: 254–255).

¹⁹ Kosman, A. (1984: 145):

It is not therefore the case that matter is to be thought of as a first actuality of which *ousia* is a second actuality. In those beings that emerge in Aristotle's ontology as paradigm instances of *ousia*, it is as a matter of fact form (that is *psuchē*) that is first actuality, realized in the second actuality that is the entity's actually being that which the form determines it to be. The suggestion I have put forward is only that Aristotle means the relation between first actuality and second actuality to serve as a model for the relation between matter and form.

²⁰ Edward Halper, (1989: 192–193) seems to make a move similar in kind:

Let us follow Aristotle's standard example, suppose that the function that characterizes us is the capacity for walking on two feet. In order to have this function we need to have matter of a certain type. Obviously, we need two feet, and each foot must have a structure that enables it both to support weight and to move. We also need a heart to send blood to the foot, and we need lungs, a brain, and so forth. In short, we could not engage in our characteristic activity (our second actuality) unless our matter had the structure that it has. But insofar as our matter is so structured, our matter is, in a way,

identical to our form: both form and matter are potentially our second actuality. Proper matter is not earth or air; it is a matter that is already structured. In virtue of this structure it has the capacity for certain functions. But what is form other than the capacity for those same functions?

²¹ One difficulty with the identity thesis is, of course, that it seems to commit one to the view that form—indeed the species-form—has the ontological status of a particular rather than a universal. The proximate matter is an object that undergoes change. And that which undergoes change is a particular. Thus, if form and matter are numerically identical, and Leibniz' law is a sound principle, then form too will be a particular. As I will argue in the subsequent chapter that species-form should not be read as a particular, I will not pause over this consequence except to note that it has been seen as a welcome consequence by some scholars. A classic statement is perhaps that of Wilfred Sellars (1967: 118).

²² Theodore Scaltsas, in any case, seems to accept the bold thesis that matter and form are both, in some sense, not merely individuals, but, rather, simply constructions or projections. Scaltsas takes projectionism to a whole new level (1994: 5):

Finally, there is no ontological relation between the universal substantial form (e.g., human being) and the form in actuality (e.g., Socrates). More generally, for Aristotle, a universal form is not related to its subject by an ontological relation (e.g., by participation, communion, etc.), but it is separable from that subject by abstraction.

To suggest that that which Aristotle is willing to refer to with the term 'universal' is separable by abstraction, and bears no ontological relation to its subject, contains a hint of the proposal that Aristotle is placing his emphasis almost entirely on the epistemic nature of universals.

²³ This point is brought out well by Haslanger, S. (1994).

²⁴ Irwin, T. H. (1988: 251).

²⁵ See Quine, W. V. O. (2003).

²⁶ Gill, M. L. (1989: 6–7).

²⁷ See the Introduction for treatment of the Eleatic Challenge.

²⁸ Gill, M. L. (1989: 113).

²⁹ Gill, M. L. (1989: 143).

³⁰ Literally: "It seems that which we say to be not this but thaten" (ἐκεῖνενον).

³¹ Gill, M. L. (1989: 152–153).

³² Gill, M. L. (1989: 164). Gill might be taking a cue from St. Thomas Aquinas' *Commentary on Aristotle's Metaphysics* (1591): Now the answer . . . is that in one sense substance is composed of substances and in another it is not . . . for substances is composed of potential substances, not of actual ones.

³³ Acrrill's translation (1963).

³⁴ Loux, M. (1995: 261) criticizes Gill's view on the basis of some of Aristotle's commitment to change: Aristotle requires that anything that changes has matter. Furthermore, living things change. So they have matter. On the traditional view, the view found in *Physics* I.8, Aristotle responds to the Eleatics by claiming

that there is a continuity to change such that when some x comes to be, there is some y , such that $x \neq y$, and y exists before during and after x . Gill would prefer to understand Aristotle's mature view to understand matter in terms of its destruction and recreation. However, as Loux points out, this latter distinction provides little aid with respect to the Eleatic challenge: "for that problem derives from the intuition that nothing can be destroyed or created simpliciter."

³⁵ As we will see, he puts serious limitations on (1) as well.

³⁶ Lewis, F. (1995).

³⁷ Lewis, F. (1995: 239–240).

³⁸ Lewis, F. (1995: 241–242).

³⁹ See Scaltsas (1994), for example, 112–113 for a straightforward explanation of the view.

Chapter 4

¹ The locution what it is to be Socrates occurs in the *Metaphysics* VII.7, 1032a8.

² For a discussion of these issues see Armstrong, D. M. (1989: 98).

³ Michael Loux seems to have coined the term "Austere Nominalism". For a concise, and lucid, discussion concerning these problem of universals see his (2001: 3–13).

⁴ The locus classicus for this view is Quine, W. V. O. (1980)

⁵ The example is that of Quine W. V. O. (1980).

⁶ The example is given in Loux, M. (2001: 10). It would seem that Socrates might prefer triangularity to circularity without preferring triangular things to circular things in virtue of some feature the things have in question other than shape.

⁷ One problem the realist faces is explaining the instantiation relation. If it too is a universal, this would seem to initiate a regress difficulty. Most realists would rather take this as a brute fact. Otherwise, the following kind of argument results.

⁸ See Code, A. (1986) and Loux, M. (1979).

⁹ This role that the passage may have on the countenance of particular forms is discussed by Rogers Albritton (1957), who recognizes the limitations of the view.

¹⁰ Woods, M. (1967); Loux, M. (1979).

¹¹ The train of thought expressed here owes a great deal to Leshner, J. H. (1971).

¹² Consider also *Metaphysics* VII.1, 1028a30–1028b1:

And we think we know each thing most fully when we what it is, e.g., what man is or what fire is, rather than when we know its quality, quantity, or place; since we know each of these predicates also, only when we know what the quantity or quality is [of].

¹³ See Frede, M. (1987) especially 72–80, for an interesting view that opposes the one advocated here. See, also, Charlton, W. (1972).

¹⁴ Burnyeat, M. (2001). If it is read at 1028b23, as manuscripts J, A^b, and Al. have it, its sense is clearly that of species.

¹⁵ Ross, W. D. (1924: 208).

¹⁶ Jiyuan Yu (2004) has challenged the claim that it is the Platonists who are Aristotle's target of criticism in *Metaphysics* VII.13 on the basis of Aristotle's remarks in VII.14 to the effect (1039a24–26): “[I]t is clear *also* from these very facts what consequences confront those who say the Ideas are substances and can exist apart, and at the same time make the Forms consist of the genus and differentiae.” Because the arguments of VII.13 will also apply to the Plato, Yu maintains, they should not be thought to be directly targeting the Platonists. Insofar as Aristotle maintains explicitly that these arguments apply also to the Platonist, on the other hand, one might argue that they have been directed at the Platonist.

¹⁷ Woods, M. (1967).

¹⁸ Cherniss, H. (1962: 319).

¹⁹ One might worry that while Emily cannot be a sibling to herself, a universal might be self-predicative, and, as such, a universal *and* a substance to itself. But this kind of concern can be accommodated, so long as we are willing, for example, to suppose that there is only, say, one overseer, and that the overseer oversees herself:

T Every contributor who is associated with the project and who oversees someone, oversees everyone.

F Every contributor who is associated with the project is the overseer of everyone.

F Every contributor who is associated with the project is the overseer of no one.

And, if we allow universals to be the substances of themselves, then it is unclear how the mover from (9) to (10) will be made below.

²⁰ Admittedly, things are bit strange here because universals are being quantified over.

²¹ Burnyeat, M. (1979: 112). Strictly speaking, the *Notes on Zeta* are recorded by Burnyeat and Others. In the passage I am presently working Burnyeat seems to be speaking *in propria persona*.

²² I will have more to say on the Third Man below. Vlastos, G. (1954).

²³ Another promising reconstruction is that of Charlotte Witt, though I am concerned that her reconstruction of the argument may face some similar difficulties (1989: 155).

²⁴ Michael Loux (1979: 6) reads Aristotle as follows:

A substance-form, then, is predicated of its matter; but the proper expression for a substance form is the pure product sense of the appropriate substance-word, so that in its pure product sense a substance-word is properly predicated not of individual substances, but of something else—the matter making up those individuals.

²⁵ For an interpretation that is more sanguine than the one I have been offering, see Witt (1989: 158–159).

²⁶ *Revised Oxford Translation* (Barnes 1984) which is presumably Ross' translation has:

"Further, in Socrates there will be a substance in a substance, so that *he* will be the substance of two things." The use of "he" is puzzling. Barnes may have emended Ross' translation in light of the reading accepted by Frede & Patzig: "Further, it will be present in Socrates as his substance, so that . . ." In his note, Ross says (1924): Alexander has τῷ Σωκράτει οὐσία ὄντι ἐνυπάρξει οὐσία. The meaning is: "In Socrates there will be substance present in substance, and this will therefore be the substance of two things" (*sc.* the class of animals and also of Socrates).

²⁷ Bostock, D. (1994: 197).

²⁸ Aquinas, T. (1951).

²⁹ Woods, M. (1967: 214).

³⁰ Burnyeat, M. et al. (1979).

³¹ The relevant text in the *Parmenides* is the following (132aff):

I suppose that this is what leads you to suppose that there is in every case a single Form: When several things seem large to you, it seems perhaps that there is a single Form which is the same in your view of all of them. Hence, you believe that Largeness is a single thing . . . What then if you similarly view mentally Largeness itself and the other large things? Will not largeness appear once again in virtue of which all these appear large?

³² Translation Gail Fine (1993).

³³ See *Republic* 596a.

³⁴ (NI) was originally understood as: The Form in virtue of which a set of things have a certain character is not identical with any of them. And it seems to me that understanding (NI) in this way accords better with the text. The difficulty, however, is that so understood, (SP) and (NI) contradict one another. Taken jointly, the result would be that F-ness is not identical to F-ness. See Cohen, S. M. (1971: 277).

³⁵ See Gregory Vlastos (1954), Cohen, S. M. (1971), Sellars, W. (1955).

³⁶ This reconstruction owes much to Marc Cohen's: <http://faculty.washington.edu/smcohen/320/tmalect.htm>

³⁷ Charlotte Witt (1989) provides an interesting interpretation along these lines. My use of the phrases "A-knowledge" and "P-knowledge" correspond to her distinction between actual knowledge and potential knowledge. She says: So, the notion of generality provides an explanation for Aristotle's position that the universal—every universal—is indeterminate and, hence, the object of potential knowledge. Actual knowledge, by contrast, is individual and determinate, and its objects are individual and determinate. In his examples of actual knowledge, Aristotle is concerned to make clear that the universal is not the object of [actual] knowledge

³⁸ One is reminded of David Kaplan's now famous remarks (Loux, M. 1979: 216): "The doctrine that holds it does make sense to ask—without reference to common attributes and behavior—I call Haecceitism . . . The opposite view, Anti-Haecceitism, holds that for entities of distinct possible worlds there is no

notion of transworld beings.” One might wonder whether the intuitions that Kaplan is outlining are underwriting the debate on particular form.

Conclusion

¹ There may be another way of understanding position number eight. At any rate, I know of no commentator who occupies that position, so I will forego considering it.

² Hirsch, E. (1971).

³ See Parfit (1995).

Bibliography

- Ackrill, J. L., tr. and comm. *Aristotle's Categories and De Interpretatione*. Oxford: Oxford University Press, 1963.
- Aristotle the Philosopher*. Oxford: Oxford University Press, 1981.
- Essays on Plato and Aristotle*. Oxford: Oxford University Press, 1997.
- Albritton, R. "Forms of Particular Substances in Aristotle's *Metaphysics*." *Journal of Philosophy* 54 (1957): 699–708.
- Allaire, E. "Bare Particulars." In *Metaphysics: Contemporary Readings*. Ed. Loux, M., 114–120. New York: Routledge, 2001.
- Anscombe, E. "The Principle of Individuation." *Proceedings of the Aristotelian Society* 27 (1953): 1–63.
- Aquinas, St. Thomas. *Aristotle's De Anima in the Version of William of Moerbeke and the Commentary of St. Thomas Aquinas*. Trs. Foster, K. and Silvester, H. New Haven, CT: Yale University Press, 1951.
- Basic Writings of St. Thomas Aquinas*. 2 vols. New York: Random House, 1946.
- Commentary on the Metaphysics of Aristotle*. Tr. Patrick Rowan. Chicago, IL: H. Regnery Co., 1961.
- Aristotle. *The Complete Works: The Revised Oxford Translation*. 2 vols. Ed. Jonathon Barnes. Princeton, NJ: Princeton University Press, 1984.
- Armstrong, D. M. *Universals: An Opinionated Introduction*. Boulder, CO: Westview Press, 1989.
- Averroes, "Alexander of Aphrodisias on Aristotle's Coming-to-be and Perishing." In *Epitome of Aristotle on Generation and Corruption*. Ed. Sorabji, R., Tr. with notes by E. Gannage. London: Duckworth, 2005.
- Bergman, G. *Realism*. Madison, WI: University of Wisconsin Press, 1967.
- Berkeley, G. *Treatise concerning the Principles of Human Knowledge*. Ed. Dancy, J. Oxford: Oxford University Press, 1998.
- Black, M. "Identity of Indiscernibles." In *Metaphysics: Contemporary Readings*. Ed. Loux, M., 104–113. New York: Routledge, 2001.
- Bonitz, H. *Index Aristotelicus*. Berlin: Akademie-Verlag, 1955.
- Bostock, D., tr. and comm. *Aristotle's Metaphysics Zeta and Eta*. Oxford: Oxford University Press, 1994.
- Broadie, S. *Passage and Possibility*. Oxford: Oxford University Press, 1982.
- Burnyeat, M. *A Map of Metaphysics Zeta*. Pittsburgh, PA: Mathesis Publishing, 2001.
- Burnyeat, M. et al.—*Aristotle's Metaphysics: Notes on Zeta*. Oxford, 1979.

- Charles, D. "Aristotle on Identity." In *Unity, Identity, and Explanation in Aristotle's Metaphysics*. Eds. Scaltas, T. Charles, D., and Gill, M. L., 41–54. Oxford: Oxford University Press, 1994.
- Charlton, W. "Individuals and Individuation in Aristotle." In *Unity, Identity, and Explanation in Aristotle's Metaphysics*. Eds. Scaltas, T., Charles, D., and Gill, M. L., 13–40. Oxford: Oxford University Press, 1994.
- "Prime Matter: A Rejoinder." *Phronesis* 28 (1983): 197–211.
- "Aristotle and the Principle of Individuation." *Phronesis* 17 (1972): 239–249.
- Cherniss, H. *Aristotle's Criticism of Plato and the Academy*. New York: Russell and Russell, 1962.
- Aristotle's Physics Books I and II: Translated with Introduction and Commentary*. Oxford: Oxford University Press, 1970.
- "Aristotle on Identity." In *Unity, Identity, and Explanation in Aristotle's Metaphysics*. Eds. Scaltas, T., Charles, D., and Gill, M. L., 41–53. Oxford: Oxford University Press, 1994.
- "Aristotle and the Principle of Individuation." *Phronesis* 17 (1972): 239–249.
- Code, A. Aristotle: "Essence and Accident." *Philosophical Grounds of Rationality: Intentions, Categories, Ends*. Eds. Grandy and Warner, 411–439. Oxford: Oxford University Press, 1986.
- Cohen, S. M. "Aristotle and Individuation." *Canadian Journal of Philosophy* suppl. Vol. 10 (1984): 41–65.
- "The Logic of the Third Man." *Philosophical Review* 80 (1971): 448–475.
- Dancy, R. M. "On Some of Aristotle's First Thoughts about Substance." *Philosophical Review* 84 (1975): 338–373.
- "On Some of Aristotle's Second Thoughts about Substance." *Philosophical Review* 87 (1978): 372–413.
- "Keeping Body and Soul Together: On Aristotle's Theory of Forms." In *Aristotle's Philosophical Development*. Ed. William Wians, 249–287. Baltimore, MD: Rowan and Littlefield, 1996.
- "Aristotle and the Priority of the Actuality." In *Reforging the Great Chain of Being: Studies of the History of Modal Theories*. Ed. Knuuttila, S., 73–115. Dordrecht: D. Reidel, 1980.
- "De Motu Animalium 4.699b17–21: Aristotle and the Space Aliens." Presidential Address, Florida Philosophical Association, 1995.
- Dennett, D. *Brainstorms: Philosophical Essays on Mind and Psychology*. Cambridge: Bradford Books, MIT Press, 1978.
- Doepke, F. "Spatially Coinciding Objects." In *Material Constitution: A Reader*. Ed. Michael Rea, 10–24. Boston, MA: Rowan and Littlefield, 1997.
- Donnellan, K. "Reference and Definite Descriptions." *Philosophical Review* 75 (1966): 281–373.
- Fine, G., tr. and comm. *Peri Ideon*. Oxford: Oxford University Press, 1993.
- Fine, K. "A Puzzle concerning Matter and Form." In *Unity, Identity, and Explanation in Aristotle's Metaphysics*. Eds. Scaltas, T., Charles, D., and Gill, M. L., 13–40. Oxford: Oxford University Press, 1994.
- Frede, M. *Essays in Ancient Philosophy*. Minneapolis: University of Minnesota Press, 1987.

- Furth, M. *Substance, Form, and Psuche: An Aristotelian Metaphysics*. New York: Cambridge University Press, 1988.
- “Transtemporal Stability in Aristotelian Substances.” *Journal of Philosophy* 75 (1978): 627–632.
- Gill, M. L. *Aristotle on Substance: The Paradox of Unity*. Princeton, NJ: Princeton University Press, 1989.
- Gill, M. L. “Individuals and Individuation.” In *Unity, Identity, and Explanation in Aristotle’s Metaphysics*. Eds. Scaltas, T. Charles, D., and Gill, M. L., 55–72. Oxford: Oxford University Press, 1994.
- Gershenton, D. E. and Greenburgh, D. A. “Aristotle Confronts the Eleatics.” *Phronesis* 7 (1962): 137–151.
- Graham, D. “The Paradox of Prime Matter.” *Journal of the History of Philosophy* 25 (1987): 475–490.
- Halper, E. *One and Many in Aristotle’s Physics*. Columbus, OH: Ohio State University Press, 1989.
- Haslanger, S. “Parts, Compounds, and Substantial Unities.” In *Unity, Identity, and Explanation in Aristotle’s Metaphysics*. Eds. Scaltas, T., Charles, D., and Gill, M. L., 13–40. Oxford: Oxford University Press, 1994.
- Herodotus. *Herodoti Historiae*. Ed. Haiim Rosen. Leipzig: Teubner, 1987.
- Hicks, R. D. *Aristotle De Anima*. With Translation, Introduction, and Notes. New York: Arno Press, 1976.
- Hintikka, J. *Time and Necessity: Studies in Aristotle’s Theory of Modality*. Oxford: Clarendon, 1973.
- Hirsch, E. “Essence and Identity.” *Identity and Individuation*. Ed. Milton Munitz, 31–49. New York: New York University Press, 1971.
- Irwin, T. H. *Aristotle’s First Principles*. Oxford: Oxford University Press, 1988.
- Kant, I. *The Critique of Pure Reason*. Indiana: Hackett, 1996.
- Katayama, E. *Aristotle on Artifacts: A Metaphysical Puzzle*. New York: SUNY Press, 1999.
- Kosman, A. “Substance, Being, and Energeia.” *Oxford Studies in Ancient Philosophy* 2 (1984): 121–149.
- “Animals and Other Beings in Aristotle.” In *Philosophical Issues in Aristotle’s Biology*. Eds. Allen Gotthelf and James Lennox, 360–391. New York: Cambridge University Press, 1987.
- Le Blond, J. *Aristotle, Philosophe de la Vie: Le Livre Premier du traite sur les Parties de Animaux*. Paris, 1945.
- Leibniz, G. *The Leibniz Clarke: The Correspondence*. Ed. Roger Ariew. Indiana, Hackett, 2000.
- Lennox, J. G. *Aristotle’s Philosophy of Biology*. New York: Cambridge University Press, 2001.
- Leshner, J. H. “Substance and Universal: A Dilemma.” *Phronesis* 16 (1971): 169–178.
- Lewis, D. *A Plurality of Worlds*. New York: Blackwell, 1986.
- Lewis, F. “Aristotle on the Relation between a Thing and its Matter.” In *Unity, Identity, and Explanation in Aristotle’s Metaphysics*. Eds. Scaltas, T., Charles, D., and Gill, M. L., 247–277. Oxford: Oxford University Press, 1994.

- "Aristotle on the Unity of Substance." *Pacific Philosophical Quarterly* 76 (1995): 222–265.
- Locke, J. *An Essay Concerning Human Understanding*. Oxford: Oxford University Press, 1979.
- Long, A. A. and Sedley, D. N. *The Hellenistic Philosophers*. 2 vols. New York: Cambridge University Press, 1987.
- Loux, M. *Metaphysics: Contemporary Readings*. New York: Routledge, 2001.
- "Composition and Unity: An examination of H.6." In *Crossroads of Norm and Nature*. Ed. May Sim, 248–280. Maryland: Rowan and Littlefield, 1995.
- "Form, Species, and Predication in Metaphysics Zeta, Eta, and Theta." *Mind* 88 (1979): 1–23.
- The Possible and the Actual: Reading in the Metaphysics of Modality*. Ithaca, NY: Cornell University Press, 1979.
- Lovejoy, A. O. *The Great Chain of Being: A Study of the History of an Idea*. Cambridge, MA: Harvard University Press, 1936.
- Lowe, E. "Metaphysical Nihilism and the Subtraction Argument." *Analysis* 67 (2002): 286–292.
- Marcus, R. B. "Essential Attribution." *Journal of Philosophy* 64 (1971): 187–202.
- Mathews, G. "Accidental Unities." In *Language and Logos: Studies in Ancient Greek Philosophy Presented to G.E.L. Owen*. Eds. Schofield, M. and Nussbaum, M., 223–240. Cambridge: Cambridge University Press, 2006.
- Miller, F. "Did Aristotle Have the Concept of Identity?" *Philosophical Review* 82 (1973): 483–490.
- Newton, I. *Principia*. Amherst, MA: Prometheus, 1995.
- Nussbaum, M. "Saving Aristotle's Appearances." In *Language and Logos: Studies in Ancient Greek Philosophy Presented to G. E. L. Owen*. Eds. Schofield, M. and Nussbaum, M., 267–293. Cambridge: Cambridge University Press, 1982.
- Owen, G. E. L. "Tithenai ta Phainomena." *Aristote et les Problèmes de la Méthode*, 83–103. Symposium Aristotelicum. Louvain, 1962.
- Parfit, D. "The Unimportance of Identity." *Identity*. Ed. Henry Harris. Oxford: Oxford University Press, 1995: 13–46.
- Philoponus, J. *On Aristotle's Coming-to-be and Perishing*. Tr. C. J. F. Williams. Ithaca, NY: Cornell University Press, 1999.
- Plato. *Plato's Complete Works*. Eds. Cooper, J. and Hutchinson, D. S. Indianapolis, IN: Hackett Publishing, 1997.
- Quine, W. V. O., *From a Logical Point of View*. Cambridge, MA: Harvard University Press, 1980.
- Regis Jr., E. "Aristotle's Principle of Individuation." *Phronesis* 21 (1976): 157–166.
- Robinson, H. M. "Prime Matter in Aristotle." *Phronesis* 19 (1974): 168–188.
- Rodier, G. *Aristotote: Traite de l'ame*. 2 vols. Paris, 1900.
- Rorty, R. "Genus as Matter: A Reading of Metaphysics Z-H." *Phronesis Supp.* Vol. 1 (1973): 393–420.
- "Matter as Goo: Comments on Green's Paper." *Synthese* 28 (1974): 393–420.
- Ross, W. D. *Aristotle*. London: Methuen, 1923.
- Ross, W. D., ed. and comm. *Aristotle's De Anima*. Oxford: Oxford University Press, 1961.
- Aristotle's Physics*. Oxford: Oxford University Press, 1955.

- Aristotle's Metaphysics*. 2 vols. Oxford: Oxford University Press, 1924.
- Aristotle's Prior and Posterior Analytics*. Oxford: Oxford University Press, 1949.
- Russell, B. *Inquiry into Meaning and Truth*. London: Allen and Unwin, 1966.
- Scaltsas, T. "Review of Furth." *Philosophical Books* 30 (1989): 82–85.
- Scaltsas, T. *Substance and Universals in Aristotle's Metaphysics*. Ithaca, NY: Cornell University Press, 1994.
- Sedley, D. "The Stoic Criterion of Identity." *Phronesis* 27 (1982): 255–75.
- Sellars, W. "Substance and Form in Aristotle." *Journal of Philosophy* 54 (1957): 688–699.
- "Vlastos and the Third Man." *Philosophical Review* 64 (1955): 405–437.
- Simplicius. *On Aristotle's On the Soul* 1.1–2.4. Tr. Urmson, J. O. Ithaca, NY: Cornell University Press, 1995.
- Smith, J. A. "Tode ti' in Aristotle." *Classical Review* 35 (1921): 19–24.
- Smyth, H. W. *Greek Grammar*. Boston, MA: Harvard University Press, 1920.
- Tr. Aeschylus. London: Heinemann, 1922.
- Sorabji, R. *Necessity, Cause, and Blame: Perspectives on Aristotle's Theory*. Ithaca, NY: Cornell University Press, 1980.
- The Philosophy of the Commentators 200–600 AD: A Source Book*. Vol. 3: Logic and Metaphysics. Ithaca, NY: Cornell University Press, 2005.
- Stout, G. F. "On the Nature of Universals and Propositions." In *Studies in Philosophy and Psychology*. London: Macmillan, 1930.
- Themistius. *On Aristotle's On the Soul*. Tr. Todd, R. B. Ithaca, NY: Cornell University Press, 1996.
- Todd, R. B. *Alexander of Aphrodisias on Stoic Physics: A Study of the De Mixtione with Preliminary Essay*. Leiden: Brill, 1976.
- Trendelenburg, F. A. *De Anima Libri III Recogn. Comment.* Illus. Editio altera emendata aucta (a Christ. Belger) Berolini, 1877.
- Van Inwagen, P. *Material Beings*. Ithaca, NY: Cornell University Press, 1990.
- "The Possibility of Resurrection." *International Journal for the Philosophy of Religion*. 9 (1978): 114–121.
- Vlastos, G. "The Third Man Argument in the Parmenides." *Philosophical Review* 63 (1954): 319–349.
- Waterlow, S. *Passage and Possibility*. Oxford: Oxford University Press, 1982.
- White, N. "Aristotle on Sameness and Oneness." *Philosophical Review* 80 (1971): 177–197.
- Whiting, J. "Form and Individuation in Aristotle." *History of Philosophy Quarterly* 3 (1986): 359–377.
- Witt, C. *Substance and Essence in Aristotle*. Ithaca, NY: Cornell University Press, 1989.
- Woods, M. "Problems in Metaphysics Z, Chapter 13." In *Aristotle: A Collection of Critical Essays*. Ed. Moravcsik. Garden City, NY: Doubleday and Co., 1967.
- Yu, J. *The Structure of Being in Aristotle's Metaphysics*. Dordrecht: Kluwer, 2004.
- Zimmerman, D. "The Compatibility of Materialism and Survival." In *Philosophy of Religion: The Big Questions*. 376–386. Oxford: Blackwell, 1999.

This page intentionally left blank

Index

- absolutist versus relativist
 - controversy 24–30
- abstract entities 2, 104, 105
- accidental sameness 22
- accidental unities 20–4
- actuality 74–5
 - potentiality, identity and 76–81, 98
 - soul as first 79
 - transitions between 80
- adjectival being, constituency
 - as 87–92
- Aeschylus 48
- A-Knowledge 128, 130, 149n36
- Alcestis* (Euripides) 49
- Alexander of Aphrodisias 38, 141n31
- Alexander of Averroes 42
- anachronism 47–9
- anastasis 47–9
- Andronicus of Rhodes 1
- animality 74
- ante rem* realism 103
- aporia* 68, 70, 75, 127
- Aquinas, St. Thomas 123–4
- Argument for Mobility 46–7, 50
- Aristotle
 - absolutist versus relativist
 - controversy and 24–30
 - on coming into being 10
 - on composition 67–8, 70–1, 93
 - on concept of identity 19–24
 - Iota-Nine Passage 16
 - on knowledge 128–30
 - on matter and form 6–7, 37–8, 81–2, 87–92, 95–6, 99–100
 - on nature of change 3–4
 - on oneness 14, 14–15
 - on particular forms 101–2
 - Particularist Interpretation
 - and 108–12
 - on principle of individuation 12
 - on puzzle of unity 68–70
 - rejection of Migration by 63–5
 - rejection of Resurrection by
 - 45–60, 65–6
 - on the soul 46–7
 - on time 27–30
 - on underlying matter 30–4
 - on universals and substance
 - 113–30
 - on varieties of matter 35–40
 - Zeta-eight passage 15–18
 - see also specific works*
- On Aristotle's On Coming-to-Be and Perishing* (Philoponus) 40–1
- artifacts, versus living
 - organisms 54–5, 78
- attributes, universal 104
- Austere Nominalists 104, 105
- authenticity 58–9
- bearers of universals 3
- biological organisms *see* living organisms
- Black, Max 42–3
- Broadie, Sarah Waterlow 142n17
- Burnyeat, Myles 114, 118–19

- causa efficiens* 6
- causa finalis* 6
- causa formalis* 6
- causa materialis* 6
- causes, types of 6
- change
 - denial of 3
 - of matter and form 9–10
 - nature of 3–6
- characteristic capacities 64
- Charlton, William 16, 17
- Cherniss, Harold 117–18
- circular motion 29–30
- Cohen, S. Marc. 13, 14
- composite unity 93–4
- composition 67–8, 70–1, 93, 134–5
- Compositional Nihilism 67–8
- concepts, universal 102–3
- Conceptualists 104
- concrete entities 2
- constituency, as adjectival
 - being 87–92
- Content Requirement 95
- continuity 13–14, 60
- co-referentiality 82, 84

- Dancy, R. M. 52
- De Anima* (Aristotle) 39, 46, 47–9, 50, 57, 63–6, 97
- death 57, 64–5
- De Caelo* (Aristotle) 33
- De Interpretatione* (Aristotle) 52
- De Mixtione* (Alexander of Aphrodisias) 38
- Democritus 50
- De Motu Animation* (Aristotle) 50–1
- dia* 17–18
- difference
 - numerical 11, 12, 19, 35
 - qualitative 16–17, 17–18
 - Zeta-eight passage on 15–18
- distinctness criterion 88
- dualist philosophy 50

- efficient cause 6
- Eleatic philosophers 3, 5, 50
- Eleatic Puzzle 9
- elements 33–4, 94–5, 141n27
- eliminativism 71–6
- entities
 - abstract 2, 104, 105
 - concrete 2
 - mind-dependent 104
- Epicharmus 4, 5
- Equus caballus* 122
- essence 95
- essentialism 55–7
- eternality
 - essentialism and 55–7
 - of species 54–5
- eternal recurrence 53–5
- eulogon* 50
- Eumenides* (Aeschylus) 48
- Euripides 49

- final cause 6
- Fine, Kit 143n32
- formal cause 6
- formal vocabulary 83
- form(s)
 - actuality and 74–5
 - characteristics 80–1
 - and function 96–7
 - generation of 113
 - of living organism 39
 - and matter 6–7, 9–10, 70–1, 76, 78–84, 87–93, 95–100
 - particular 101, 108–9, 112–13, 127
 - persistence of 37–8

- species 73–4, 97, 107, 108, 122, 146n21
- and substance 106, 109, 122
- and unity 95–9
- Universal Form 7, 102, 132, 134, 135
- function, form and 96–7
- Furth, Montgomery 141n27
- gappy existences 8, 57–60, 92, 134
- general theory of relativity 26
- On Generation and Corruption* (Aristotle) 31, 32–4, 36–7, 49, 53–4
- generic universals 110
- genos* 72
- genus 72–6
- Gill, Mary Louise 87–92
- God, existence of 65
- Haecceities 101–2, 134–5
- Halper, Edward 145n20
- Haslanger, Sally 85, 86
- Hicks, R. D. 46, 48
- Hintikka, Jaakko 52
- horizontal unity 87, 90–1
- hylo-difference (HI) 7, 11
- Hylo-Migration 8, 40, 45
- hylomorphic analysis 70, 72
- hylomorphism 7, 8, 11, 36, 47, 70, 99
- identity 15
 - authenticity and 58–9
 - concept of 19–24
 - of matter 98–9
 - numerical 23
 - potentiality, actuality and 76–81
 - problem of shared 60–3
 - reference and 81–6
- Identity of Indiscernibles 25–6
- Identity Thesis 76–86, 100, 135–6
- imperishableness 56
- Indiscernibility of Identicals 22–3
- individuation
 - absolutist versus relativist controversy and 24–30
 - predication and 12–15
 - prime matter and 35
 - primitive 134
 - principle of 11, 12, 19, 24–5, 42–3, 82
 - qualitative differences and 16–17
 - Zeta-eight passage on 15–18
- inevitability 51–3
- inquiry, types of 85–6
- Iota-Nine passage 16, 17
- Irwin, Terence 83
- Kant, Immanuel 25
- Kaplan, David 149n38
- knowledge 111–12, 128–30, 149n36
- kooky objects 20–1, 23
- Kosman, Aryeh 76–8, 79, 145n16, 145n19
- Leibniz, G. 25–6, 28
- Leibniz Law 23, 121–2, 140n15, 146n21
- Lewis, Frank 95, 96
- living organisms 10
 - capacity of perception in 63–4
 - characteristic form of 80–1
 - goal-directedness of 96
 - matter and form of 39, 70–1
 - ontological status of 69–70
 - perishability of 55–7
 - persistence of 59–60
 - resurrection of 53–5
 - versus artifacts 54–5, 78

- Locke, John 25
 Loux, Michael 79, 147n3, 148n24
 Lovejoy, A. O. 51

Material Beings (van Inwagen) 59
 material cause 6
 material nature 87–8
 material objects, spatio-temporal
 properties of 35
 material vocabulary 83
 mathematicians 2
 matter
 continuity in 13–14
 and form 6–7, 9–10, 70–1, 76,
 78–84, 87–93, 95–100
 fresh 39–40
 genus and 72–3
 identity of 98–9
 and individuation 12–15
 migration of 40–2
 nonexistence of 71–6
 and numerical difference 11
 persistence of 40–1
 preexisting 90–1
 prime 34, 35, 35–6
 proximate 92–3, 97–8
 qualitative differences in 16–18
 somatic 35
 transmutation of 32–3
 ultimate, individual 18–19
 underlying 30–4
 varieties of 35–40
 Zeta-eight passage on 15–18
 Matthews, Gareth 20
 Mereological Essentialist 5
 metaphysicians 2
 metaphysics, concept of 1–2
Metaphysics (Aristotle)
 composition in 70, 93
 concept of unity in 20, 23–4
 genos 72–3
 knowledge in 129–30
 matter and form in 81–2, 98
 matter concept in 34
 Middle Books of 88, 92
 paradigm substances in 68–9
 persishability in 55–7
 subject matter of 1–3
 universals in 113–30
 vertical unity in 88–9
 VII.10 18–19
Migration 36–7, 39, 40
 arguments against 40–2
 Aristotle's rejection of 63–5
 problem of shared identity
 and 60–3
 Puzzle of Simple Composition
 and 132, 133
 rejection of 45
 Resurrection and 57–60
 soul 47
 mind-dependent entities 104
 motion 28–30, 46, 63, 98

 natural science 50
 necessity 50–1
 Newton, Isaac 26, 27
 Nominalists 104, 105
 non-double occupancy (NC) 8, 23
 non-identity (NI) 8
 nontrivial inquiry 86
 nothing, being from 9–10
 numerical difference 11, 12, 19, 35
 numerical identity 23
 numerical sameness 12
 numerical unity 21

 objects, authenticity of 58–9
 oneness 14, 14–15, 22
 one-place predicates 14–15

- ontologists 2
- opaque contexts 84
- Ordinary Transition (OT) 77
- Organicism 67, 68
- ousiai* 70, 80, 121, 124
- paradox 6–8
- paraphrase 104
- paronymy 91
- particular forms 108–9, 112–13, 127
- Particularist Interpretation 102, 108–12, 114, 122–4, 127–31, 135
- particularities 101–2
- part-whole relationship 12–13
- peculiarity argument 114–21
- perception 63–4
- Peri Ideon* (Aristotle) 124–5
- perishableness 55–7
- persistence
 - of organisms 59–60
 - theory of 92
- Philoponus, John 40–1
- physics 2
- Physics* (Aristotle) 1, 3, 26–7
 - continuity in 60
 - resurrection subject in 53
 - time concept in 27–8, 28–9
 - underlying subject in 31, 32
- P-Knowledge 128, 130, 149n36
- Plato 103, 114, 126
- Platonists 115–16, 117, 121, 122, 124, 126, 131, 148n16
- Plentitude 51–2, 53, 55
- possibility 51–3
- Posterior Analytics* (Aristotle) 129, 130
- potentiality 76–81, 98
- predication
 - individuation and 12–15
 - universals and 107
- predicative criteria 121–2
- preexisting matter 90–1
- prime matter 34, 35, 35–6
- Prime Mover 30
- primitive individuationism 134
- principle of individuation 11, 12, 19, 24–5, 42–3, 82
- Principle of Plentitude 51–3
- proximate matter 92–3, 97–8
- psychology 103
- Puzzle of Simple Composition 7–8, 11, 19, 23, 43, 57, 132
 - alternative proposals for resolving 133–6
- Particularist Interpretation and 101–32
 - response to 45–7, 60–1
- Resurrection and 63, 65–6
- Puzzle of Transplantation 136–7
- Puzzle of Unity 68–71, 92, 98
 - eliminativism and 71–6
 - Identity Thesis and 76–86
- Pythagoreans 50
- Pythagorean Theorem 77
- qualitative differences 16–18
- Realism 103–4, 105
- reality, nature of 2
- in rebus* realism 103
- reference, identity and 81–6
- Regis, Edward 17
- relational unity 92–5
- relativist thinking, versus
 - absolutist 24–30
- resemblance 105
- Resurrection
 - Aristotle's rejection of 45–60, 65–6
 - concept of 45, 141n1

- Resurrection (*Cont'd*)
 eternal recurrence 53–5
 gappy existences and 57–60, 134
 inevitability of 52–3
 migration and 57–60
 possibility of 51–3
 problem of shared identity
 and 60–3
 scientific and dialectical contexts
 for 49–51
 Rodier, G. 47, 48, 49[~]
 Rorty, Richard 71–6, 144n9
 Ross, W. D. 115, 116, 117, 123
 Russell, Bertrand 35

 sameness 20, 22
 Scaltsas, Theodore 146n22
 Scars Argument 42
 Self-Predication 121
 sentence-schemata 15
 shared identity 60–3
 Simple Particularism 134–5
 Smyth, Herbert 18
 Socrates the Younger 63
 somatic matter 35
 Sorabji, Richard 52
 Sorabji-Dancy hypothesis 53
 soul 39, 46–7, 57, 64–5, 79, 97
 soul migration (SM) 47
 space 25–6, 26–7
 spatio-temporal properties 24–30,
 35, 43
 species, eternity of 54–5
 species-form 73–4, 97, 107, 108,
 122, 146n21
Strong Hylomorphism 8, 36, 39, 132,
 134–5, 136
 structure 80
 subjective criteria 121–2

 substances 98–9
 and form 109, 122
 particular forms as 112–13
 substance within 122–4
 types of 109
 universals and 106, 110–30

 teleological dependence, unity
 and 95–9
telos 96, 97
 temporal properties 27–30
 thaten. *see* this/thaten distinction
 “The Identity of Indiscernibles”
 (Black) 42–3
 Third Man argument 121, 124–7
 this/thaten distinction 89–92
 time 27–30
Topics (Aristotle) 20, 21, 22–3
 Transition Proper (TP) 77, 78, 80
 transitions 80
 Transivity of Identity (TI) 7, 8
 Trendelenburg, F.A. 47–8
Tritos Anthropos 124–7
 triviality principle 85–6
 Trope-Nominalists 104, 105
 two-place predicates 14–15

 underlying matter 30–4
 uniqueness 35
 Uniqueness Requirement 116
 unity 12
 accidental 20–4
 composite 93–4
 form and 95–9
 horizontal 87, 90–1
 numerical 21
 relational 92–5
 teleological dependence as
 adhesive for 95–9

- types of 87
- vertical 87, 88–9
- see also* Puzzle of Unity
- universal 3
- universal attributes 104
- Universal Form (UF) 7, 102, 132, 134, 135
- universals
 - conceptualism and 104
 - generic 110
 - nominalism and 104, 105
 - peculiarity argument and 114–21
 - predication and 107
 - problem of 102–5
 - realism and 103–4, 105
 - species-form as 108
 - substances and 109, 110–12, 113–30
 - Zeta Problem and 105–13
 - unpleasant interpretation 133–4
- van Inwagen, Peter 57–8, 59
- vertical unity 87, 88–9
- vocabulary, material versus formal 83
- wholeness 12, 20, 23
- Witt, Charlotte 149n36
- Woods, Michael 124
- Yu, Jiyuan 148n16
- Zeta-eight passage 15–18, 35
- Zeta Problem 105–13
- Zeus 48–9