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FORM AND INDIVIDUATION IN ARISTOTLE

Jennifer E. Whiting

THERE is a traditional interpretation of Aristotle according to which matter is the principle of synchronic individuation—that is, matter is what individuates two simultaneously existing members of the same *infima species*.¹ This traditional view—hereafter the TV—is usually supported by appeal to Aristotle's claim that Socrates and Callias are the same in form, but different on account of their matter (Met. 1034a5-8). The main tasks of this paper are to argue (1) that matter cannot be the principle of individuation and (2) that Aristotle must introduce individual forms if he is to provide principles of individuation.²

I

The claim that matter is the principle of individuation can be interpreted either as an epistemological, or as a metaphysical, thesis.³ As an epistemological thesis its point might be that matter is what enables us to distinguish one individual from another of the same species. In other words, material differences enable us to tell Callias and Socrates apart; one has brown, the other blue, eyes. But because Aristotle does not rule out the possibility that there are two simultaneously existing co-specific individuals whose matter is the same in the sense that it is qualitatively indistinguishable, matter is not very well suited to serve this epistemological function. So if matter is supposed to answer an epistemological question, it must be the question of how we can tell when there are two (or more) simultaneously existing members of the same species.

In this case, matter might provide us with a primarily ostensive way of distinguishing two individuals. We might be able to distinguish *this* man here from *that* one over there, and so to say that there are two numerically distinct individuals, even if we cannot tell them apart in some non-ostensive way. Here, however, we would presumably be relying on a metaphysical claim that matter is what *makes* two individuals to be numerically distinct in the sense that certain material characteristics (e.g., being composed of non-overlapping portions of matter) are somehow sufficient⁴ (either causally or logically) for the numerical distinctness of two simultaneously existing co-specific individuals. This justifies taking the TV to be committed to the metaphysical thesis that matter is what

makes two simultaneously existing members of the same species to be distinct.

Like the epistemological version of this thesis, the metaphysical version can be interpreted as referring either to qualitative or to numerical distinctness. But here too, the qualitative version suffers from the possibility that there might be two numerically distinct individuals whose matter is qualitatively indistinguishable. So the metaphysical thesis is best interpreted as claiming that matter is what makes Socrates numerically (rather than qualitatively) distinct from Callias. For although Aristotle believes that material differences often result in qualitative ones, there is no evidence that he thinks this must always be so. The idea is that even if there are no qualitative differences between Callias and Socrates, they would still be numerically distinct on account of their matter. In what follows, then, both the traditional view (that matter is the principle of individuation) and the alternative view (that form is the principle of individuation) will be interpreted as metaphysical rather than epistemological theses.

At this point it is worth noting a *prima facie* objection which applies to each of these views—namely, that each only shifts the location of the problem. For just as we can ask the TV to account for the differences of matter which are themselves supposed to individuate Callias and Socrates, so we can also ask the alternative view to account for the differences between individual forms which are themselves supposed to individuate.⁵ And if (as I argue in II-IV) the proponent of the TV must appeal to form to account for the requisite material differences, and (as he might argue) I must appeal to matter in order to account for the requisite formal differences, then perhaps we ought to conclude that each must help to individuate the other. But there is a conception of individual forms which offers Aristotle a way out of this circle; if individual form somehow includes the matter which is necessary for individuation, then it can be sufficient for (and hence *the* principle of) individuation.⁶

II

Perhaps the best way to understand the TV is to ask why it maintains that matter must be the principle of individuation. The first thing to notice is that the TV does not regard matter as the principle of individuation in all cases. Matter is supposed only to individuate *simultaneously* existing members of the *same species*. But I think that it is the restriction to cospecificity (rather than to simultaneity) which does most of the work. Let me explain.

The TV thinks that there is a special problem with the individuation of cospecific individuals primarily because it maintains that Aristotle recognizes the existence of only one form for each species.⁷ So Socrates and Callias are the same in form not in the sense that each of them possesses a numerically distinct form of the same type, but rather in the

sense that there is only one form (for the species Man) which is said of many individuals at the same time and is thus a universal.⁸ On this view, Socrates and Callias have the very same form and so any differences between them, including their numerical distinctness, must be explained by appeal to their matter.

This appeal to matter is not necessary in individuating members of different species. A man and a horse have different forms and this, at least when they exist simultaneously, is sufficient for their being distinct individuals. Furthermore, given certain essentialist claims to which Aristotle is committed, having different species forms will be sufficient for the distinctness of two individuals existing at different times.⁹ So according to the TV, form is the principle of individuation for members of different species and this is true both at and across times. This supports my claim that it is cospecificity rather than simultaneity which does most of the work.

That claim receives further support from the fact that the problem which the TV has with the synchronic individuation of cospecific individuals arises equally for their diachronic individuation. The parallel between synchronic and diachronic individuation emerges from the following consideration. If form is to be the metaphysical principle of individuation, then having a certain form must be what makes an individual existing at t_1 to be the same as (or distinct from) an individual existing at t_2 . But because the TV recognizes only one form for each species, Socrates' form at t_1 cannot be what makes him the same individual at t_2 and distinct from Callias at t_3 . For not only do Socrates at t_1 and Socrates at t_2 have the same form, but each of them also shares that form with Callias at any t at which he exists, with Coriscus at any t at which he exists and so on.

This is simply another version of the problem which arose in trying to individuate *simultaneously* existing members of the same species. Just as in accounting for synchronic diversity within a species, so also in accounting for diachronic identity, the inadequacy of species form forces the TV to appeal to matter. It must account for synchronic diversity by picking out one and the same species form in *different pieces of matter*, and for diachronic identity by picking out the same species form in the *same piece of matter*.¹⁰ To trace Socrates' career is to trace the form of Man as it occurs in "the particular piece of matter that constitutes Socrates' body."¹¹ To trace Callias' career is to trace the very same form in a different piece of matter—namely in that which constitutes Callias' body.

So just as the TV must explain synchronic individuation (within a species) by appeal to matter, it must also appeal to matter in order to explain diachronic individuation. The main problem for this view is to explain the requisite sameness and difference of matter without introducing form. This is precisely what I will argue that the TV cannot do.

III

The main problem with the TV can be explained clearly in terms of Lloyd's distinction between a *principle of unity* (i.e., what makes this one thing rather than so many limbs, organs, and bits of flesh) and a *principle of individuation* (i.e., what makes this man the same as or different from that one). Lloyd claims that form is the principle of unity and that unity is "prior to and implied by individuation." "The flesh and the bones have to have made one man, the metal one penny, before either can be or not be the same man or penny as another."¹²

Lloyd's point, that unity is prior to individuation, can be applied both to synchronic and to diachronic individuation. This matter has to make up one thing before it can be the same as (or different from) another individual at a time. It also has to make up one thing at each of t_1 and t_2 in order for it to be the same (or a different) thing at each of t_1 and t_2 . In a way, this priority of unity should be obvious. For we are asking when one individual (i.e., a unity) is the same as or different from other individuals (i.e., other unities) both at and across times. There is thus a conceptual connection between unity and individuation; being an individual (and hence being the same or a different individual from another) is conceptually tied to having or embodying a certain form.

This priority of unity threatens the view that matter is *the* principle of individuation; if form is the principle of unity, and if individuation presupposes unity, then individuation presupposes form. This suggests that only informed matter can individuate and thus that form is at least a necessary condition for individuation.

IV

Someone might defend the TV by conceding that unity is prior to individuation and then by denying that form is the requisite principle of unity. He might argue instead that something like spatio-temporal continuity is the principle of unity. If he thinks that spatio-temporal continuity is purely a function of material characteristics and does not involve form, he may conclude that matter (by way of spatio-temporal continuity) is the principle of individuation.

This strategy for defending the TV is recommended both by the difficulty of denying the conceptual priority of unity and by Aristotle's claim that things are one in number of which the matter is one (*Met.* 1016b31-32). This passage suggests that Aristotle does appeal to some sort of unity of matter in order to account for something's being one in number or an individual. The problem is to see what this unity of matter involves and whether it does not belong to matter in virtue of that matter's relation to some form.

There is a *prima facie* case for thinking that this unity of matter does

depend upon matter's relation to form. It rests on two general Aristotelian views. First, Aristotle repeatedly claims that matter is not in itself an individual or a particular sort of thing (*DA* 412a7-8; *Met.* 1029a20-21; 1042a27-28). Matter is precisely what stands in need of individuation (or unification). Second, when matter is individuated (or unified) Aristotle says that form is that by which matter is some one thing (i.e., a unity or an individual) (*Met.* 1041b4-9). So Aristotle appears to say explicitly that form is the requisite principle of unity for matter. But perhaps the defender of the TV can defeat this *prima facie* case by showing that form is not the *only* principle of unity for matter. If he can show that there is another principle of unity for matter (for instance, spatio-temporal continuity), then he can argue that it is *not necessary* to appeal to form as the principle of unity for matter.

Aristotle distinguishes simple continuity from continuity by nature and not by touch and binding (*Met.* 1052a19-20). Simple continuity, unlike natural continuity, is roughly equivalent to spatial continuity plus some sort of dynamic cohesiveness.¹³ Since form is necessary for natural continuity¹⁴, we need to know whether Aristotle can account for the oneness (and hence for the numerical distinctness) of different pieces of matter simply by appeal to the requirements of simple continuity. First let's consider whether this is possible in the easiest case—that of synchronic individuation.

The proponent of the TV might argue that Aristotle thinks that Socrates' matter is one thing and Callias' matter is another, simply because each is a piece of a certain sort of stuff, the constituents of which are spatially continuous and which is not itself continuous with any other stuff of this kind which is not a part of it. But what would he (or Aristotle) say if he came upon Socrates and Callias wrestling and hence entangled with one another, or worse yet, if they were Siamese twins?

Aristotle sometimes explains the continuity involved in numerical oneness in terms of indivisibility of motion (*Met.* 1052a25-27). So he might say that although they are spatially continuous, Socrates and Callias each embody an indivisibility of motion distinct from that embodied in the other. Socrates can pull this way without determining which way Callias will pull; Callias can give Socrates the slip and so on.¹⁵ That this is how Aristotle would in fact respond is suggested by his discussion of Siamese twins in *GA*iv 4, where he says that it is the principle (or *archē*) which determines whether we count a monstrosity (where embryos have grown together) as one or as several. If it has one heart (where the heart is an efficient cause and so presumably a principle of motion) we count it as one; if it has more than one heart, as more than one. Furthermore, Aristotle sometimes suggests that the form of a living thing resides primarily in its heart and so that there is an important connection between the formal cause of an individual and his heart. So Aristotle may be saying that we need to count formal causes or forms in order to determine how many individuals of a given kind there are.

The problem is that Aristotle generally associates the indivisibility of motion characteristic of individuality with natural continuity (*Met.* 1052a25) and this introduces the forms we are trying to do without. In general, Aristotle is going to have trouble saying that the individual cars of a train (or lakes which are connected by rivers and channels) are numerically distinct because their matters are different, if he must explain this difference of matter by appealing exclusively to simple continuity. The problem is that simple continuity may be necessary, but is not sufficient, for oneness of matter.¹⁶ So it must be supplemented by sortal criteria—that is, by appealing to the forms which the matter embodies or instantiates.

This is not to deny that there is a sense in which simple continuity is sufficient for the oneness and hence for the numerical distinctness of matter. The matter of all the cars of a train (or of a car and the trailer it pulls) constitutes an individual or one big piece of stuff. But this is not sufficient to show that these pieces are not further divisible into smaller pieces, each of which is one and indivisible in the sense that it embodies an indivisibility of motion conferred upon it by form, for instance the individual cars of the train or the car and the trailer. Relying exclusively on simple continuity does not provide us with adequate principles for counting objects and will often lead us to make deviant identity judgments.¹⁷ For it would have us count the car and the trailer it pulls as one object in much the same way as we would count the car and its bumpers as constituting one thing. This reveals the sense in which simple continuity is not sufficient and must be supplemented by sortal criteria. And this supports my claim that the traditional view can account for the differences of matter necessary for synchronic individuation only by appealing to form. Socrates and Callias are different on account of their having different matters. But it is a necessary condition of their having different matters that each of these matters is or constitutes a unity—i.e., that each embodies some form.

V

I deliberately stated the foregoing conclusion so as to leave open the question whether Socrates' and Callias' matters each embody the very same form (i.e., the species form of Man) or whether each embodies its own numerically distinct form (i.e., Socrates' soul and Callias' soul). Now someone who defends the TV probably won't be too worried by the need to appeal to sortal criteria or forms, for that is a relatively uncontroversial thesis accepted both by advocates of individual forms and by proponents of the TV. And the latter may be able to concede that only informed matter can individuate (and hence that form is a necessary condition for individuation), without also conceding that this commits Aristotle to the existence of numerically distinct individual forms. But he will succeed only if he can show that species form and matter are jointly sufficient

for individuation and so, that there is no need for individual forms.

The defender of the TV will presumably argue that there is one species form of Man and that this specifies the criteria for the existence (and the persistence) of individual men and is thus relevant to synchronic (and to diachronic) individuation. He can then argue that we can tell how many individuals there at (or across) times by counting how many pieces of matter instantiate the form of Man.¹⁸ This is supposed to show that species form and matter are jointly sufficient for individuation and so, that there is no need for individual forms.

Now we may wonder what these various instances of the species form are, if not individual forms. But as long as the proponent of the TV can deny that individual instances of the species form are themselves individual forms, or if he adopts the greatest impossibility view of the *Parmenides* (i.e., that the form as a whole, while being one thing, is in each of the many) then it looks as though he can admit that only informed matter individuates without also conceding the existence of individual forms. But this appearance results largely from concentrating primarily on the problem of synchronic individuation and this narrow focus is unwarranted. For the problem which the TV finds with the synchronic individuation of cospecific individuals arises equally for their diachronic individuation. And it is the problem of diachronic individuation which most clearly reveals the need for individual forms. Let me explain.

VI

If the TV were correct, then we could conclude that having the *same species form* in the *same matter* from t_1 to t_2 would be sufficient for having the same individual from t_1 to t_2 . Again, the problem is to explain the requisite sameness of matter without appealing to form. Suppose that in order to avoid individuating matter by appeal to form, we identify this matter as a piece of certain sort of stuff (e.g., bronze) with the following strict but apparently form-independent identity conditions: (a) it is identified in terms of its constituent particles and (b) these particles must be spatio-temporally continuous and dynamically cohesive with one another. It is like a Lockean body which need not have the shape or form which it actually happens to have. (*Essay*, II. 27.3)

On the TV, as long as this piece of bronze continues to instantiate the species form Statue, we must conclude that it is the same individual statue. But couldn't this piece of bronze constitute a statue of Hermes at t_1 and then (by being gradually reshaped but without ever losing a single particle or ceasing to embody the statue form) come to constitute a statue of the Discobolus at t_2 ? Wouldn't we be able to say that although we have the same species form in the same piece of matter, we nevertheless have a new statue, the Discobolus, which is a different individual and is thus numerically distinct from the original statue of Hermes? But if sameness of matter is explained as above, then it cannot be a difference of matter

which accounts for their numerical distinctness. Nor, by hypothesis, can it be a difference of species form which explains this difference. This suggests that diachronic individuation requires an appeal to individual forms.¹⁹

There seem to be three ways of defending the TV against this proposed counterexample. If the defender of that view accepts the intuition that the statue of Hermes and that of the Discobolus are two distinct individuals, he can try to account for this without abandoning the TV in either of two ways. (1) He can deny that the two statues have the same species form. Or (2), he can deny that they have the same matter. On the other hand, if he rejects our intuition, the defender of the TV will (3) simply deny that the statue of Hermes and that of the Discobolus are distinct individuals.

If anyone adopts the third alternative, we might attempt to get him to accept our intuition by asking him to consider modern abstract art rather than statues of Hermes and of the Discobolus. Suppose that Calder has decided that the large orange statue which he made for the city of Chicago ten years ago is really hideous. So he takes the piece of metal (i.e., the Lockean body) which constitutes the statue and twists and bangs it around in extreme ways. When he is finally satisfied and stands back to appreciate his work, he would presumably have some reason for saying that this is a much better statue than the other one was. And if the defender of the TV objects to these artificial examples on the ground that they rely implicitly on our willingness to recognize individual essences for works of art, we can ask him to consider whether it is inconceivable that the same living body should continuously embody the species form of Man while undergoing changes (of personality and experience memories) so radical that we may be justified in saying that it no longer is or constitutes the same person. For the artificial examples were introduced only as the simplest way of fixing the sameness of matter. But we can imagine an alternative case in which it seems reasonable to say that we have the same species form continuously realized in the same matter from t_1 to t_2 , but numerically distinct individuals at t_1 and t_2 .

Suppose that instead of receiving Brown's brain (for that would involve a change of matter), Robinson retains his own brain while his memory traces are systematically erased and replaced by those of Brown. Let's also suppose that through some process of brain state transfer, he is caused to acquire all of Brown's character traits and dispositions.²⁰ Leaving aside the question of whether the resulting individual is Brown, let's simply ask whether he is still Robinson. In other words, do we still have the same individual? Now even if the proponent of the TV does not agree, Robinson would surely have some reason for regarding this outcome as his destruction. And this supports the intuition that here (and in the Hermes-Discobolus case) there are two distinct individuals involved. So we should consider the other two replies to the proposed counterexample.

First, someone might object that we do not have the same species form

continuously realized from t_1 to t_2 because it is not Statue which is the relevant species, but rather Statue-of-Hermes and Statue-of-the-Discobolus. In other words, Statue would be to Statue-of-Hermes and to Statue-of-the-Discobolus roughly as a genus is to its various species. For Statue-of-Hermes is clearly a type of which there can be a plurality of tokens.

This objection raises a number of important questions about Aristotle's criteria for being a universal, but I doubt that it will serve the proponent of the traditional view as he intends. For it is not clearly consistent with Aristotle's conception of species forms. In *Met.* x 9 Aristotle argues that not every qualitative difference entails a difference in species, for some qualitative differences belong to matter rather than to form. But let's suppose (for the sake of argument) that qualitative differences do entail specific ones and so that *pace* Aristotle, black and white man, and male and female, along with Statue-of-Hermes and Statue-of-the-Discobolus all constitute sub-species. This leads towards the conclusion that even more refined qualitative differences constitute sub-species and so, that there might be distinct forms for Callias and Socrates which, although logically repeatable, may in fact be uniquely instantiated.²¹ On this account, it seems that as long as there are qualitative differences between them, we individuate Socrates and Callias by appeal to their forms in much the same way that we can individuate dogs from men by appeal to standard Aristotelian species forms. For having different forms in this sense will be sufficient (even if not necessary) for the existence of numerically distinct individuals. So given Aristotle's conception of species form, the Hermes-Discobolus case raises a genuine problem.

At this point, someone might suspect that it is the qualitative differences between the statues of Hermes and of Discobolus (and between Robinson and the person with his body and Brown's psychological traits), which account for our intuition that we have (in each of these cases) two numerically distinct individuals at t_1 and at t_2 . If so, and if (as I am arguing) it is the presence of numerically distinct individual forms which accounts for the presence of numerically distinct individuals, then it may seem as though I am relying on a conception of individual forms according to which such forms are qualitatively distinct. Moreover, it may seem that these forms must be *essentially* qualitatively distinct, if they are to serve as principles of individuation. However, although I am willing to allow that individual forms may be accidentally qualitatively distinct in virtue of differences in the matter which belongs (accidentally) to them²², I do not suppose (nor do I wish to suppose) that my argument depends upon essential qualitative differences between numerically distinct individual forms. For I think we can imagine cases in which we have the same species form continuously realized in the same matter from t_1 to t_2 and numerically distinct but qualitatively indistinguishable individuals in that matter at t_1 and t_2 .²³

There remains one further response to my proposed counterexample.

That is (2), to deny not that we have the same species form, but rather that we have the same matter in the relevant sense. The proponent of the TV can object that the appeal to Lockean bodies in the artificial examples is unwarranted because this is not how Aristotle understands sameness of matter. For in speaking of the body as matter, Aristotle admits different criteria. These criteria presumably allow for the displacement of the matter's constituent particles.

I agree that these criteria (rather than those for Lockean bodies) provide the correct account of sameness of matter, but they are not going to help the TV. For what enables us to think of the body as one thing which persists throughout the displacement of its constituent particles is that we think of it as a whole having certain shape and form. We think of it as a thing constituted, rather than as constituent stuff.

At this point it is worth noting Aristotle's distinction between the body as proximate matter (i.e., the ensouled body) and the body as non-proximate matter (i.e., the heap of flesh and bones or perhaps the heap of elements which constitute the flesh and bones). The body as non-proximate matter is what underlies and survives the loss of soul. But it is a mere heap and not an individual or a unity in the sense required for individuation (*Met.* 1040b5-10). Because non-proximate matter is not a unity and so is not strictly an individual which survives material displacement, we must turn instead to proximate matter for the requisite account of sameness of matter. But proximate matter (or the ensouled body) is individuated by form (or soul) and so survives only as long as it is informed (or ensouled). This is the body of which the soul is the form or the essence (*DA* 412b11, 415b11). The body as proximate matter is the same at t_1 to t_2 only insofar as it embodies the same form (or soul) continuously from t_1 to t_2 .

Once again the TV might concede that only informed matter can individuate, but attempt to deny that this requires the existence of numerically distinct individual forms. The real issue is how to interpret the claim that the body remains (numerically) the same only insofar as it continuously embodies the same species form. Is a body (numerically) the same because it continuously embodies the same species form? Or is it the same because it embodies the same individual form (or soul)?²⁴

The proponent of the TV will presumably say that a body is (numerically) the same insofar as it continuously realizes the same species form. But this leaves him unable to distinguish the statue of Hermes from that of the Discobolus, or Robinson from the successive person with his body and all of Brown's character traits and experience memories. Here, too, deviant identity judgments result from attempting to operate without adequate criteria of identity. For although species form and spatio-temporal continuity of matter may seem to be jointly sufficient for synchronic individuation, they are not clearly adequate for diachronic individuation. Unless we are prepared to deny that the statue of Hermes and that of

the Discobolus are numerically distinct, and to deny that the same body might successively embody two distinct persons, we must concede that the problem of diachronic individuation calls for numerically distinct individual forms. Once we have ruled out the three foregoing replies, it seems natural to say that the statue of Hermes at t_1 and that of the Discobolus at t_2 are numerically distinct because each of them has or embodies a numerically distinct individual form. Similarly, Socrates at t_1 is numerically the same as Socrates at t_2 because each embodies the same individual form or soul.

We could also apply this solution to synchronic individuation and say that Socrates and Callias are distinct (at a time) because each of them has or embodies a numerically distinct individual form or soul. The question is whether we ought to do so, for species form and matter did seem to be jointly sufficient for synchronic individuation. But I suspect that this appearance is due to the fact that the embodiment or realization of a species form in matter is sufficient for the existence of an individual form at a time. We can even say that the realization or embodiment of a species form in matter *is* an individual form.²⁵ And if we don't realize this then we may think that species form and matter are jointly sufficient for synchronic individuation. But if this is supposed to mean that individual forms are not necessary, then this is a mistake.

First, the bare existence of a species form and of some appropriate matter is not sufficient for the existence of any given individual; it is also necessary that the species form and the matter be related in certain ways; the species form must be embodied in a piece of matter or the matter must make up or constitute an instance of the species form. And on my view, this is just to say that species form and matter must be related in ways which are sufficient for the existence of an individual form.²⁶ So there is a sense in which species form and matter are jointly sufficient for synchronic individuation; species form and matter related to one another in certain ways are sufficient for synchronic individuation. But the ways in which they must be related (i.e., realizing or constituting individual forms) will not comfort the proponent of the TV.

Second, it is unlikely that we can isolate principles of synchronic from principles of diachronic individuation.²⁷ If the problem of diachronic individuation reveals that what makes an individual to be the same as (or different from) an individual existing at another time is their embodying or constituting the same (or different) individual forms, then it is reasonable to suppose that embodying or constituting the same (or different) individual forms is what makes simultaneously existing individuals to be numerically the same or different.²⁸ But this is a claim only about a metaphysical principle of individuation and is consistent with the claim that species form and matter are in some sense epistemologically sufficient for synchronic individuation. The previous paragraph suggests that someone could successfully count simultaneously existing conspecific individuals by counting embodiments or realizations of the species form in

matter without realizing that he was really counting individual forms. This intentional aspect of epistemological individuation does not show that individual form is not the metaphysical principle of individuation. Furthermore, it (along with the tendency to focus primarily on synchronic rather than diachronic individuation) helps to explain how the flaws of the TV have so often gone unnoticed. Although it explains why commentators have often denied the conclusion that (individual) form is the metaphysical principle of both synchronic and diachronic individuation, it provides no reason or justification for that denial.

VII

There is, however, an objection to the foregoing conclusion that individual form is the principle of both synchronic and diachronic individuation. If Aristotle really thinks that (individual) form is the principle of individuation, then why does he say that Socrates and Callias are the same in form and different on account of their matter?

The answer to this objection has two parts. First, we must show that Aristotle's claim that Socrates and Callias are the same in form is consistent with each having his own numerically distinct form. Second, we must recognize that having (or being realized in) some matter is at least a necessary condition for the existence of an individual form and furthermore, that this matter plays an important role in the form's capacity to individuate. This reveals a sense in which Socrates and Callias are different on account of their matter, but one which is compatible with the claim that form is the principle of individuation.

First then, we must read Aristotle as claiming that Socrates and Callias are the same in species (or species form) and that this is indivisible.²⁹ But this does not rule out the possibility that each also has his own individual form and that this individuates him from the other. For Aristotle apparently recognizes the existence of numerically distinct forms which, however, are the same in species (*Met.* 1071a26-29). Each of these—the individual and the species form—is one and indivisible. But only the individual form is one and indivisible in a way which can account for the numerical distinctness of Callias and Socrates.

The species (form) is one and indivisible not in number (for that would be Platonism), but because there is no contrariety in its account.³⁰ It is not further divisible into sub-species. But the individual form must be one and indivisible in a different way—namely, by being one and indivisible in place and time (*Met.* 1052a25-26). And a plurality of such individual forms can be the same in species because the account of what it is for each of them to be is the same. But the important point here—and this brings us to the second part of our answer—is that once we see what is necessary in order for individual forms to be one in movement and indivisible in place and time, it will be clear that matter too plays an important role in their capacity to individuate.

Initially we might wonder how an individual form can be one in movement and indivisible in place and time. For Aristotle says that movement is not in the form, but rather in the thing being moved (*Physics* 224b25). Furthermore, spatio-temporal characteristics are generally associated with material bodies and Aristotelian forms are supposed to be immaterial. But this is a supposition which is open to challenge. Ultimately, I think, it must be qualified.³¹

First, it is important to note what Aristotle says about soul in the *DA*. For as *Met.* 1042a25-26 reveals, it applies equally to the forms of other sensible objects. He says that soul is neither without a body nor a certain kind of body, but that it is something which belongs in a certain sort of body (*DA* 414a20-22). The general point is that the (individual) form of a sensible object cannot exist apart from some matter. And this matter plays a fundamental role in explaining how these forms can be one in movement and indivisible in place and time.

Aristotle allows that something can be moved in either of two ways—owing to another or owing to itself (*DA* 406a4-5). Something is moved owing to another (or accidentally) when it is in the thing being moved—for instance, as sailors in a ship are moved. So Aristotle can say that the soul in particular (and individual forms in general) are accidentally one in movement and indivisible in place and time—that is, that forms are one in this way on account of the spatio-temporal continuity of the matter in which they are embodied (*DA* 408a30-35).³² But this just means that individual forms will be one in number and thus individuals on account of the matter in which they are embodied. This in turn explains why Aristotle says that Socrates and Callias are different on account of their matter.

In order for Socrates and Callias to be numerically distinct, each of them must be some one thing—i.e., an individual. But form is the principle of unity and the spatio-temporal continuity of matter is a necessary condition for a form's being one in number. So there is a sense in which each of Socrates and Callias is an individual and hence numerically distinct from the other on account of the spatio-temporal continuity of his matter.

At this point, someone might object that if form is one and indivisible on account of the spatio-temporal continuity of its matter, then it is matter which ultimately deserves to be called the principle of individuation. But here it is important to remember that mere spatio-temporal continuity of matter is not always sufficient for individuation. It would have us count the statue of Hermes at t_1 and that of the Discobolus at t_2 as one and the same thing—and worse yet, as one and the same as the puddle of bronze into which either statue might be melted. So spatio-temporal considerations must at least be supplemented by sortal or formal criteria. But if we concede this point, our objector may argue that this is not sufficient to show that form is *the* principle of individuation. He may object that the only warranted conclusion is that each of form and matter

is a necessary condition for individuation (i.e., for the existence of something sensible which is one in number). So although each of form and matter is *a* principle of individuation, neither is *the* principle of individuation.

This objection combines two arguments—first, the TV's argument that matter individuates (or accounts for the plurality of instances of) form, and second, my argument that it is the form which unifies and thus individuates matter. It then concludes that neither form nor matter can be *the* principle of individuation. But this conclusion rests on a conception of form which must be challenged.³³ This is the traditional conception of form as something abstract and immaterial which, even if it must be realized or embodied in some matter in order to exist, does not itself contain or include any matter. On this account, form and matter are apparently two distinct things—one a universal and the other some sort of stuff—standing in certain relations to one another. But, Aristotle challenges this when he says that the proximate matter and the form are the same and one, the one potentially what the other is actually (*Met.* 1045b18-19). This suggests that form, because it is somehow the same and the one with its proximate matter, includes the matter necessary for individuation. On this account, form can be sufficient for, and hence, *the* principle of individuation.

This raises difficult questions about Aristotle's conception of the relationship between form and matter and what exactly he means by saying that the form and the proximate matter are one and the same. There are two salient possibilities. One is that Aristotle identifies the form with its proximate matter and that they are simply the same thing under two different descriptions.³⁴ Another is that the relationship between form and matter is one between a thing constituted and its constituent stuff.³⁵ On either account, we must think of form not as something abstract and immaterial (or more precisely, not as a universal realized in a particular piece of matter), but rather as a concrete thing constituted by or identified with some matter.

These alternatives are not exclusive. If we adopt Aristotle's distinction between proximate and non-proximate matter, then we can generally interpret the relationship between form and matter as that between a thing constituted and its constituent stuff, and so generally refuse to identify a form with constituent matter. But this leaves open the possibility that there is a special case of the form-matter relationship in which the form or thing constituted is identified with its constituent matter. This is the relationship between a form and its proximate matter.

Determining the exact nature of Aristotle's form-matter relationship requires further consideration of his application of the form-matter analysis to the relationship between soul and body, a project which I cannot now undertake. For now, the important point is that whether Aristotle identifies a form with its proximate matter or simply regards

it as constituted by its proximate (or non-proximate) matter, he does suggest an account of form which allows it to include the matter necessary for individuation. And this allows him to argue that form is the principle of individuation.

There remains one further objection to this account of form as the principle of individuation. This is that individual forms don't explain anything, but simply presuppose what (i.e., individuality) they are supposed to explain. In a sense this is obviously true, but how much it should concern Aristotle depends upon how he conceives his project and what he thinks a principle of individuation is.

"Principles of Individuation" is Scholastic, but the closest Aristotelian equivalent to "principle" is *archē*, which Aristotle often uses interchangeably with *aitia* ("cause"). And when we recall Aristotle's four causes I think we can see how he might deal with this objection. Form is not what makes something to be an individual in the sense that it is something distinct from that individual. Form is the formal cause—the what it is to be or the essence—of an individual. To be an individual is simply to be a certain form. And this is just what we should expect given Aristotle's identification of each thing with its form or essence.³⁶

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NOTES

1. See Eduard Zeller, *Aristotle and the Earlier Peripatetics*, (London: Longmans Publishers, 1897) pp. 83-96; G.E.M. Anscombe and K. Popper in "The Principle of Individuation," *Proceedings of the Aristotelian Society*, Vol. 27 (1953) pp. 83-96, 97-120; A. C. Lloyd, "Aristotle's Principle of Individuation," *Mind*, Vol. 79 (1970), pp. 519-529; Montgomery Furth, "Transtemporal Stability in Aristotelian Substances," *Journal of Philosophy*, Vol. 75 (1978) pp. 624-646. I follow these commentators in discussing primarily the individuation of sensible substances. But one virtue of my account over theirs is that making form the principle of individuation allows us to give an univocal account of the individuation of sensible and non-sensible substances.

2. The view that individual form is the principle of individuation is defended by W. Charlton, "Aristotle and the Principle of Individuation," *Phronesis*, Vol. 17 (1973), pp. 239-249. The primary purpose of this paper is to argue that Aristotle *must* admit individual forms if he is to provide principles of individuation. I have argued at length elsewhere ("Individual Forms in Aristotle," Ph.D. Thesis, Cornell University 1984) that Aristotle does in fact acknowledge the existence of individual forms. My arguments there include the following: (1) Aristotle explicitly says that forms are *tode ti* (*Met.* 1017b24-26, 1042a28-29, 1049a35-36, 1070a11-12, *GC* 318b32) and he believes that being one in number and a particular are necessary for being *tode ti* (*Cat.* 3b13-18, *Met.* 999b34-35, 1038b35-1039a1). (2) Aristotle's criteria for being a (primary) substance, especially the *tode ti* and separability requirements, require substances to be individuals and this—in conjunction with Aristotle's repeated claims that form is (primary) substance (*Met.* 1017b24-25, 1032b1-2,

1033b17, 1037a28-29, 1041b7-9, 1050b1-2)—shows that at least some forms (i.e., whichever ones are substances) must be individuals. Furthermore, the consistency of Aristotle's most mature work on the substance (i.e., the middle books of the *Metaphysics*) depends on his accepting the conclusion that substantial forms are individuals. (3) Aristotle's criticisms of Plato require (on pain of inconsistency) that substantial forms be individuals. (4) Aristotle is explicitly committed not only to the general claim that the cause of something's being F must itself be F (*Met.* 999b24-28), but also to the specific claim that the principles of particulars must themselves be particulars (*Met.* 1071a20-21) and the latter appears in a passage where Aristotle refers to forms (which are among the principles of things) which are numerically distinct but the same in species (*Met.* 1071a18-29). In addition to these arguments, I present an extended argument that Aristotle needs individual forms in order to defend a genuine and not purely conventional distinction between generation (or destruction) *simpliciter* and mere alteration. The purpose of this paper is to elucidate a further, but related philosophical motivation for Aristotle's commitment to individual forms.

3. See Charlton, *op. cit.*, pp.239-240.

4. There is some question about whether Aristotle thinks that being composed of different matter is also necessary (as well as sufficient) for the existence of numerically distinct individuals. It is sufficient because he rejects the notion of a scattered particular (*Topics* 103a7-25). But the question whether it is also necessary depends upon whether Aristotle allows the possibility of two things (each of which is constituted by the same matter) existing in the same place at the same time and on whether Aristotle admits the existence of "kooky objects" which are individuated by descriptions such as "pale Socrates" and "Socrates sitting." See G. Matthews, "Accidental Unities," in *Language and Logos*, ed. by M. Schofield and M. Nussbaum (Cambridge University Press, 1982) pp. 223-240.

5. See Popper, *op. cit.*, pp. 97-120.

6. See note 22.

7. There are various formulations of the TV and not all distinguish (as I do here) the species (which is something like a set or class) from the species form (which is something like a property in virtue of which things belong to a species). I choose to argue against this formulation because I believe that it represents the most plausible version of the TV.

8. J.A. Driscoll, "Eidē in Aristotle's Earlier and Later Theories of Substance," in *Studies in Aristotle*, ed. by D. O'Meara (Catholic University Press, 1981) pp. 125-159 argues that there is a sense in which the species form is an individual because he wants to explain how it can be a substance without violating the *Met.* vii 13 requirement that no universal be a substance. But the sense in which a species form is an individual is the broad sense in which it is the referent of a singular referring expression and which is not sufficient for it's not being a universal. So it will not be an individual in the sense in which Aristotle contrasts individuals with universals at *De Int.* 17a39-40.

9. Essential properties are those which an individual cannot lose without ceasing to exist; the species gives the *ti esti* (the what it is) or essence of a subject (*Cat.* 2b8-10). An individual cannot cease to belong to its species without ceasing to exist; the same animal cannot be at one time a man and at another time not a man. (*Topics* 125b25-30).

10. This does not require that we have the same set of particles and this, as we shall see, is part of the problem. For what enables us to think of it as the same piece of stuff throughout the displacement of its constituent particles is that we think of it as a whole

having a certain shape and form.

11. M. J. Woods, "Substance and Essence in Aristotle," *Proceedings of the Aristotelian Society*, Vol. 75. (1974-75), p. 179.

12. See Lloyd, *op. cit.*, p.519.

13. I borrow the term "dynamic cohesiveness" from E. Hirsch, *The Concept of Identity* (Oxford, 1982) p. 108. Hirsch describes this as an object's capacity "to hang together when subjected to various strains" and claims that it is related (as a necessary but not a sufficient condition) to separate movability, each of which I take to be closely related to Aristotle's notion of indivisibility of motion. The idea is roughly that a sugar cube, but not a heap of granulated sugar, would satisfy Aristotle's requirements for simple continuity.

14. In *Met.* x 1, Aristotle distinguishes (1) simple from natural continuity and (2) natural from artificial wholes. Since he allows that natural wholes are continuous in a way stronger than that afforded by the requirements of simple continuity (i.e., touch and binding), it looks as though the fundamental contrast is between simple continuity on the one hand, and wholeness (either natural or artificial) on the other. And what distinguishes wholes is that they have a certain shape and form. So form is necessary for natural continuity.

15. The reference to motion introduces questions of diachronic identity which reinforce my point that we cannot separate questions of synchronic and diachronic individuation. If we must individuate Socrates and Callias at a time by appeal to indivisibility of motion, then we must invoke diachronic considerations. And if these require reference to individual forms, then synchronic individuation must also involve reference to individual forms.

16. See note 4.

17. See Hirsch *op. cit.*, p.27.

18. This works across times in the following way: We can ask how many pieces of matter embody this form from t_1 to t_2 . But if we individuate pieces of matter by their constituent particles, then we will have to say that each change of particles brings about the existence of a numerically distinct piece of matter. And this will yield deviant identity judgments. So, as I shall argue below, Aristotle needs different criteria for sameness and difference of matter.

19. Michael Woods objects (in conversation) to this counterexample roughly that there is no evidence that this sort of problem ever occurred to Aristotle and so, that we cannot take it as evidence against the traditional view. But Aristotle's discussion (in *Physics* v 4) of an individual's health and whether it is the same before and after an illness, or even whether it is the same from morning to night, shows that Aristotle was concerned with these problems in the case of non-substance particulars. So there is no reason for saying that the general problem never occurred to him.

20. See S. Shoemaker, *Self-Knowledge and Self-Identity*, (Cornell University Press, 1963), pp. 23-25.

21. Actual unique instantiation is not necessary to the argument. Even if Socrates' form is multiply instantiated and is thus a universal, it could still be sufficient to individuate him from Callias as long as Callias' form was qualitatively distinguishable from Socrates'. For the fact that the form of Dog is multiply instantiated does not show that we cannot individuate dogs from men by appeal to form. The issue about unique instantiation has more to do with the ontological status of these forms—i.e., whether they are universals or particulars.

22. In "Individual Forms in Aristotle" (Chapter Four) I argue (by appeal to *Met.* vii10-11) that the individual forms of natural (as opposed to mathematical) objects *essentially* contain or include their proximate matter. I also allow that such forms *accidentally* contain the non-proximate matter which accounts for the qualitative differences between numerically distinct individuals belonging to the same *infima species*. So in this sense, I allow that individual forms are accidentally qualitatively distinct in virtue of the qualitative differences arising from differences in the non-proximate matter which belongs accidentally to such forms.

23. Suppose, e.g., that someone wishes to dispose of me without running the risk of being charged with (bodily) murder and so decides to use a brain-state transfer device to transfer gradually the states of someone else's brain into mine (and my brain states into her brain) without actually transferring any matter. The person whose brain states he chooses to transfer happens to be my twin sister and further, unbeknownst to him and by some fluke, she and I happen also to be psychological twins; we have qualitatively indistinguishable memories, personalities, and so on. In this case, when the brain state transfer is completed, it looks as though my original body and hers each embody an individual form which is numerically distinct not only from that embodied by the other, but also from the one it originally embodied. My body now has her numerically distinct but qualitatively indistinguishable form and her body now has mine. So in the case of each of these bodies, we have the same species form continuously realized in the same matter from t_1 to t_2 and numerically distinct individuals in that matter at t_1 and t_2 . This possibility supports the claim that my original counterexample and argument do not depend on essential qualitative differences between numerically distinct individual forms.

24. Sydney Shoemaker asks why we should take these two alternatives as exhaustive. In particular, he asks, why not appeal instead to a causal criterion of identity across time? I have two replies. First, I limit myself to these alternatives because I think that Aristotle assumes that he must solve the problem of individuation by appeal to form or to matter (or to some relationship between form and matter). Second, I do not think that these alternatives exclude causal considerations. We might allow that the appeal to individual forms resembles (or even involves) a causal criterion in the following way: x at t_1 and y at t_2 are numerically the same if and only if they have (numerically) the same individual form *and* the individual form of y at t_2 is numerically the same as that of x at t_1 if and only if the individual form of x at t_1 is causally responsible (in the appropriate ways) for the existence of the individual form of y at t_2 . These causal connections may of course be mediated by the matter which (as I argue elsewhere) belongs to these forms. The idea is roughly that if the form in this matter (i.e., this individual form) at t_1 is causally responsible (in the appropriate ways) for the existence of the form in this matter (i.e. this individual form) at t_2 , then these forms existing at t_1 and at t_2 are numerically the same and they are what make the individuals to which they belong, numerically the same.

25. Someone may object that the realization or embodiment of species form in matter (i.e., an instance of species form) is not an individual form, but rather a compound. But in "Individual Forms in Aristotle," I argue that there is a sense in which compounds are identical to individual forms, and so, that compounds and forms are simply the same things considered or described in different ways. If this is so, then the realization or embodiment of a species form in matter *is* an individual form if it is a compound. In conversation, Michael Woods allows that there are instances of the species form and even

concedes that speaking of these as being (in some sense) individual forms would allow proponents of the TV to explain much of what appears to be evidence that Aristotle admits the existence of individual forms without radically altering their views. In general, he thinks that there is less difference between my alternative and the TV than I often suggest. The difference comes not in admitting individual forms (for the TV can accommodate individual forms as instances or realizations of the species form in matter), but rather in admitting a particular conception of individual forms according to which they either include (or are constituted by) their matter. (See note 22.) This departs from the conception of form as an abstract universal which may be in things and admits form as a concrete (and perhaps even material) object.

26. The idea here is roughly that the matter should either constitute or be identified with an instance of the species form, which instance I take to be an individual form. (See below.) I cannot now say which of these two alternatives Aristotle would prefer. That would require further investigation of his application of the form-matter analysis to the relationship between soul and body.

27. M. J. Woods, "Identity and Individuation," in *Analytical Philosophy*, ed. by R. J. Butler, (Blackwell's 1962), pp. 120-130.

28. This reintroduces the question of whether it is not really individual form which individuates animals of different species. Here too, embodying different species forms may provide an epistemological principle of individuation simply because it is sufficient for the existence of different individual forms which are the metaphysical principles of individuation.

29. Aristotle clearly uses 'eidos' to refer both to individual forms and to species (or to species forms).

30. This is the point of *Met.* x 9. By "one in number" here I mean being an individual in the sense in which Aristotle contrasts individuals in *De Int.* 17a38-40, i.e., being something which cannot be in many things (or places) at the same time and so, something which cannot be spatially scattered.

31. See note 22.

32. In "Individual Forms in Aristotle," I argue that some of Aristotle's claims that certain properties (e.g., perishability and the capacity for movement) do not belong to forms *must* (on pain of inconsistency) be elliptical for claims that these properties do not belong essentially to forms. These properties may, however, belong to forms accidentally and in virtue of the matter in which they are embodied. (On the movability of the soul, compare *DA* 408b30-32 with 408a29-31.)

33. Here, as elsewhere, a particular conception of what Aristotelian forms must be can lead commentators to reject apparent evidence for the existence of individual forms. In this case, a conception of Aristotelian forms as abstract and immaterial may lead to the conclusion that form *cannot* be the principle of individuation. But if this conception of form is mistaken, then the argument fails.

34. See W. Sellars, *Philosophical Perspectives*, (Charles C. Thomas Publishers, 1976), pp. 73-124; E. Hartman, *Substance, Body and Soul*, (Princeton University Press, 1977).

35. See D. Wiggins, *Identity and Spatio-Temporal Continuity*, (Oxford Press, 1967), p.48; W. Charlton, *Aristotle's Physics*, (Oxford Press 1970), pp. 70-79.

36. I would like to thank Gail Fine, Terry Irwin, Elijah Millgram, Sydney Shoemaker and Michael Woods for discussing previous drafts of this paper with me.