

3 Concrete particulars I

Substrata, bundles, and substances

- Substratum and bundle theories
- An objection to the bundle theory – subject-predicate discourse
- Another objection to the bundle theory – the Identity of Indiscernibles
- An argument for the substratum theory
- Problems for the substratum theory
- Aristotelian substances

Overview

When philosophers have tried to give an ontological analysis of familiar concrete particulars, they have frequently assumed that they are wholes made up of metaphysically more fundamental constituents and have endorsed either of two opposed positions – the substratum theory or the bundle theory. On the former view, a concrete particular is a whole made up of the various properties we associate with the particular together with an underlying subject or substratum that has an identity independent of the properties with which it found – a bare particular; and the claim is that the bare particular or substratum is the literal exemplifier of those properties. On the latter view, there are no underlying substrata; ordinary particulars are constituted exclusively by the properties associated with them; they are just “bundles” or “clusters” of those properties.

Empiricists have typically found the idea of an underlying substratum objectionable and have been bundle theorists; but substratum theorists have argued, first, that bundle theorists cannot account for the fact that there are true, yet informative subject-predicate claims and, second, that the bundle theorist is committed to the truth of a false principle known as the Identity of Indiscernibles, the claim that it is impossible for numerically different concrete particulars to have exactly the same properties. To overcome these difficulties, they claim, we must posit bare particulars or substrata as constituents of concrete particulars. The difficulty is that the notion of a bare particular is, as bundle theorists claim, incoherent; and the attempt to revise the notion of an underlying substratum in such a way as to remove the incoherence has the result that substrata are incapable of resolving the philosophical problems their introduction was meant to resolve.

The difficulties associated with the bundle and substratum theories have led some metaphysicians to reject the assumption that familiar particulars are wholes made up of metaphysically more basic constituents. One influential

form this denial takes is an Aristotelian substance theory, where familiar concrete particulars or some among them are ontologically fundamental entities. On this view, it is the concrete particular itself that is the literal exemplifier of the universals associated with it. Some of those universals are external to the essence of the particular and are only contingently exemplified by it; whereas others – the substance kinds under which the particular falls – mark the particular out as the thing it is and are essentially exemplified by it.

Substratum and bundle theories

The distinction between a concrete particular and the attributes it has or possesses plays a pivotal role in metaphysical thinking. As we have seen, not all metaphysicians recognize the distinction. The austere nominalist insists that in the strict sense there are no attributes; but for those philosophers, metaphysical realists and trope theorists alike, who recognize the distinction, it is an important distinction, one between what appear to be two irreducibly different ontological categories. So far, we have examined the distinction from the side of attributes, but debate over the nature of concrete particulars has been every bit as heated as that over the nature of attributes. I want to begin our discussion of this debate by considering two different theories about the nature of concrete particulars. Our discussion will lead us to consider a third theory; but by focusing on the dialectical opposition between the first two theories, we will come to appreciate the difficulties that confront us in the attempt to provide a metaphysical account of the concept of a concrete particular.

We have relied on examples to convey what is meant by ‘concrete particular.’ We have said that concrete particulars are the sorts of things the non-philosopher thinks of as “things” – individual persons, animals, plants, and inanimate material objects. It would be a difficult task to provide rigorous criteria for the use of the term to cover all these examples; but without doing so, we can give content to the label by pointing to features the standard examples tend to share. First, they are all obviously particulars – they are all things that cannot be exemplified, but they all have or exemplify many attributes. Furthermore, they are things with temporally bounded careers: they come into existence at a time, they exist for a certain stretch of time, and then they pass out of existence at a time. Accordingly, they are all contingent beings, things that exist, but whose nonexistence is possible. They are also things whose temporal careers involve alteration or change: at different times in their careers they have different and incompatible attributes. They are also things that have, at each moment in their careers, a determinate position in space; and unless they are physical simples, they have physical parts that likewise occupy a determinate region of space.

Our task is to provide an account of the nature or ontological structure of these things. But what exactly is that and why should it be necessary? We can make some progress towards answering these questions if we note that the

task we have set ourselves is not one that occupies the attention of austere nominalists. Since they deny that there are such things as attributes, the austere nominalists see concrete particulars as unanalyzable entities, as things that have no ontological structure. The austere nominalist will concede that a concrete particular can be described in different ways, but will deny that the concrete particular incorporates a distinct and separate entity corresponding to each of the descriptions we can provide. As the austere nominalist sees things, there is just the concrete particular. On this view, concrete particulars are what David Armstrong appropriately calls “blobs” – completely unstructured wholes.¹ They are, of course, things that can have a plurality of distinct physical parts; but, for the austere nominalist, those physical parts are like the wholes whose parts they are in being utterly opaque to metaphysical analysis.

The metaphysical realist and trope theorist, by contrast, hold that for each nonequivalent description we can give of a concrete particular there is a distinct entity – a property or trope – that we say the concrete particular exemplifies or has; and both hold that the attributes associated with a concrete particular are centrally involved in the particular’s being the way it is. So on both views, concrete particulars seem to be things that have a kind of complexity of structure. Their “being” involves a complex of different items structured in some way. To give an ontological characterization of concrete particulars is to provide an account of the general form this structure takes.

Metaphysicians have frequently invoked a special vocabulary to talk about the kind of structure associated with a concrete particular. The core idea is that certain fine-grained entities go together to make up the coarse-grained entity that is a familiar concrete particular. However, the relationship between fine-grained entity and concrete particular is obviously not that of physical part to physical whole nor that of a material stuff to the material whole it makes up or composes. To bring out the special relationship at work here, metaphysicians have spoken of *constituents* and *wholes*. Concrete particulars are taken to be wholes or complexes that have as their constituents ontologically less complex or simpler items, and the claim is that to provide an ontological characterization of a thing is, first, to specify each of the entities that function as its constituents and, second, to identify the sorts of relationships these entities bear to each other. Accordingly, to provide an ontological characterization of the concept of a concrete particular is to identify the kinds or sorts of things that function as the constituents of concrete particulars and to indicate the general form of relationship such things bear to each other in any concrete particular whose constituents they are.

But, then, what kinds of things function as constituents of concrete particulars? We have already mentioned the attributes – properties or tropes – that are associated with a concrete particular as its constituents. Is there anything else that enters into the constitution of a concrete particular? One influential view insists that among the constituents of any concrete particular there is a quite different sort of thing – something that is not an attribute,

but functions as the literal bearer, possessor, or subject of the attributes associated with the concrete particular. On this view, then, there are two different kinds of entities that enter into the constitution of any concrete object: the various attributes associated with the concrete object and something that functions as the literal bearer or possessor of those attributes.

Initially, the view might strike us as puzzling; for we seem to think that it is the concrete particular itself that has or possesses the attributes associated with it. We speak of them as *its* attributes. If we are metaphysical realists, we say that *it* exemplifies them; and if we are trope theorists, we say that *it* has them. The proposal we are now considering entails that if they are taken literally, such claims are false; for the proposal is telling us that, in the strict and literal sense, it is not the concrete particular that is the subject for the attributes we associate with it, but some more fine-grained entity that, together with those attributes, functions as a constituent of the concrete particular. Why would anyone make this apparently counter-intuitive proposal?

Well, we believe that each of the attributes associated with a concrete particular has a bearer. Even if we are Platonists about attributes and hold that there are unexemplified attributes, we will agree that the properties associated with a concrete particular are *exemplified* properties. We will agree, that is, that they are exemplified by *something*. But an attribute and what has or possesses it are distinct and separate things. We distinguish the attribute from its possessor; we can, so to speak, set an attribute to one side and the thing that has it to the other. Philosophers who endorse the proposal we are considering take this fact to imply that whatever it is that is the literal bearer of an attribute, it is something that can be apprehended independently of that attribute. It is a thing such that its being what it is in no way presupposes or requires the attribute it bears or possesses. Now, the claim is that if we agree that the bearer of an attribute has an identity independent of that attribute, we are compelled to deny that it is the concrete particular that is the literal bearer or subject of any of the attributes we associate with it.

Consider a small red ball. We associate many different attributes with the ball – the color red, the spherical shape, a certain smooth texture, a weight, say, of 3 ounces, a diameter of 2 inches, and so on. The assumption about the independence of an attribute and its subject forces us to say that the subject of any one of these attributes is something with an identity independent of that attribute. Thus, what literally possesses the color red must be something that in itself is not red, something whose being what it is does not involve its being red. The familiar ball, however, is a whole or complex whose “being” includes that attribute, so the ball as we know it cannot be what literally has or is subject for that attribute. Likewise, what literally has the spherical shape must be something that in itself is not spherical, something whose being does not involve that shape. Our ball, however, is a whole that includes that shape, so the ball cannot be the subject of that attribute either. And obviously the same holds for each of the other attributes making up the ball; for each such

88 Concrete particulars I

attribute, what literally has that attribute is something whose being what it is does not involve the attribute. Since the ball's being what it is – its being the complex or whole that it is – does involve its having each and every such attribute as its constituent, the ball can be the literal subject or bearer of none of those attributes.

But if the ball is not their subject, what is? Clearly, there is not a distinct and different subject for each of the attributes associated with the ball. They all have one and the same thing as their bearer. The fact that they have a common subject is what holds the attributes together so that they come to be associated with a single concrete object. And their joint subject is not something that bears no relationship at all to the ball – the number six, say, or the Eiffel Tower, or Old Trafford. The literal possessor of all the attributes associated with the ball must be something that is intimately related to the ball, and the kind of intimacy required here is secured only by something that enters into the constitution of the ball, something that is one of its constituents. So among the constituents of the complex or whole that is the ball, there is one that is the literal possessor or subject for all the other constituents, the attributes, making up the ball.

But what is this additional constituent like? Our argument shows that whatever its identity, that identity cannot involve any of the attributes for which it is the literal subject, any of the attributes that are, in fact, associated with the ball; but the argument actually shows more than this. It shows that no attribute that might have been but is, in fact, not associated with the ball can figure in the identity of that constituent of our ball that functions as subject for attributes. Call that constituent s , and consider some attribute (A) that is not associated with the ball, but could have been. Although s is not the literal bearer of A , it is possible that it be the subject of A . But, then, s must be ontologically prepared for that role. It must be something capable of being a subject for A ; and it can be a subject for A only if its identity is fixed independently of A . So whatever the identity of s , its having that identity cannot involve A . And the same is obviously true for any other attribute that is not, but could have been associated with our ball. The identity of s can involve none of those attributes.

So neither the attributes that actually are nor those that could have been associated with the ball can figure in the identity of s . Might some other attributes do so? If they do, they must be attributes related to s in the way that the attributes associated with the ball are related to the ball, as constituents to wholes. But, then, these new attributes need a subject or bearer; and just as the ball could not be a subject for the attributes that are its constituents, so s cannot be the subject for these new attributes. What we need, then, is a subject in our subject, a constituent of s that will function as literal bearer of the attributes that are supposed to fix s 's identity. But what attributes will fix the identity of our new subject (s')? Obviously, not the new attributes for which it is subject. It looks as though the only way attributes could fix the identity of s' is for s' to be a further whole made up of still further

constituents; and obviously we are off on an infinite regress, a regress that can be avoided only by conceding that there are subjects for attributes whose identity involves no attributes whatsoever. And since we must concede that subjects whose being the things they are involves no attributes make their appearance at some point in our analysis, we are best advised to make this concession for *s* itself and thereby eliminate the need for new and intrusive subjects like *s'* and its descendants. But if we do, we are committed to the view that each familiar concrete object is a whole whose constituents include, first, the attributes common sense associates with the object and, second, a subject for those attributes whose “being” or identity involves no attributes. Philosophers have given a special name to this subject; they have called it *bare substratum*.² The point of the label should be clear. The constituent in question stands under or supports attributes, but its being the thing it is involves no attributes.

So what we can call bare substratum theorists take familiar concrete particulars to have two categorically different kinds of constituents – attributes and bare subjects. If such theorists are realists, they will speak of properties exemplified by an underlying subject; if they are nominalists, they will speak of tropes had by that subject. But whatever language they use in providing the ontological description of familiar particulars, substratum theorists will insist that it is the relationship between the underlying subject and its attributes that provides the ontological “glue” binding the various constituents together to yield a single concrete object. So the substratum theorist who is a realist about attributes will say that it is because the bare substratum exemplifies each of the properties in question that we have one thing rather than a diffuse plurality of things, and the nominalist who defends a substratum analysis will say that a host of tropes and a subject constitute one thing because the latter has each of the former.

On this view, then, familiar concrete particulars do not turn out to be basic or underived entities. They are not, so to speak, among the basic building blocks of the world. It is the attributes we associate with concrete particulars and the bare items that function as their subjects that are ontologically basic. Familiar particulars are constructions out of these more basic entities. Furthermore, while the distinction between attributes and the things that have them remains an ultimate or irreducible categorical distinction on the bare substratum view, it does not appear where we had originally taken it to appear. We began with the intuition that this distinction divides familiar concrete particulars and the attributes that we prephilosophically take those particulars to have or exhibit. The substratum theorist, however, takes bare substrata to be the literal possessors of attributes and thereby invokes the distinction at a lower level of analysis. Familiar objects of the everyday world do not figure in the distinction; only the more basic, more fine-grained entities that are their constituents do.

I have presented the substratum analysis as an anonymous theory; the fact is that eminent philosophers have defended it. Although scholars disagree

about whether Aristotle actually endorsed the idea of a bare substratum, the roots of the idea are surely implicit in his claim that the subject of an attribute is something such that its “to be is different from that of” the attribute.³ More explicit endorsement of the view is found in John Locke’s claim that while the qualities associated with an object require a subject, that subject is “something I know not what.”⁴ In our own century, Bertrand Russell, at one stage in his career, argued for an underlying substratum for properties;⁵ and more recently, Gustav Bergmann and his followers have joined the ranks of substratum theorists arguing that the literal exemplifiers of the properties associated with ordinary objects are bare particulars.⁶

But despite its distinguished history, the bare substratum theory has had its share of critics. Especially intense criticism has come from philosophers who have endorsed an empiricist program in ontology. On this view, the basic entities of a metaphysical theory must be limited to things that can be the objects of direct or immediate experience; and these philosophers have argued that bare substrata fail to pass this test. Direct experience, whether perceptual or introspective, consists in the apprehension of some attribute of a thing; and since bare substrata are supposed to be things whose being what they are involves no attributes, they would be entities beyond the reach of experience. Empiricists have sometimes gone further in their criticism of bare substrata. Insisting that the meaningfulness of an assertion presupposes that it has some ascertainable empirical content, they have argued that since bare substrata are completely beyond the reach of experience, the assertion that there are bare substrata is mere sound without sense.

But whether they construe the claims of the substratum theorist as nonsense or as simply false, empiricists have argued that we can provide a completely satisfactory account of the structure of familiar concrete objects if we limit ourselves to the empirically manifest attributes associated with them. On this view, then, familiar objects are complexes or wholes whose constituents are exhausted by those attributes that can be the objects of perceptual or introspective awareness. Denying the need for an underlying subject for attributes, these empiricists have frequently invoked metaphors to express their analysis of the structure of concrete particulars. A concrete particular, we are told, is nothing more than a “bundle,” a “cluster,” a “collection,” or a “congeries” of the empirically manifest attributes that common sense associates with it.

But what is the ontological “glue” that holds the different items in each of these bundles together? On the substratum theory, recall, it was the fact that there is a single underlying subject that exemplifies or has each of many attributes that serves to explain how a plurality of different items go together to constitute what common sense takes to be a single unified object. The bundle theorist (as we may call him or her), no less than the substratum theorist, owes us an account of the unity of familiar objects. The account bundle theorists provide invariably involves the appeal to a special relation tying all the attributes in a bundle together. They have given the relation a

variety of names. Some have called it “compresence”; others speak of “collocation”; still others use terms like “combination,” “consubstantiation,” and “coactuality.” But however it is labeled, the relation is treated in the same way. It is taken to be an unanalyzable or ontologically primitive relation, but it is explained informally as the relation of occurring together, of being present together, or being located together; and it is always construed as a relation that attributes enter into only contingently. Attributes that enter into this relation might have failed to do so.⁷ That it is a relation attributes enter into only contingently, bundle theorists tell us, explains the contingency of familiar concrete objects.

Like the substratum theory, the bundle theory enjoys a distinguished pedigree. It is, we have noted, a theory favored by empiricists. Thus, while he endorsed a substratum theory for the case of minds, Berkeley insisted that physical objects are mere collections of sensible qualities.⁸ Hume, in turn, urged that we endorse the bundle theory in both cases.⁹ Although Russell held to the substratum theory early in his career, he became increasingly suspicious of an empirically inaccessible subject of attributes and ultimately came to endorse the bundle theory;¹⁰ and A.J. Ayer joined Russell in rejecting bare substrata in favor of a bundle theoretic treatment of familiar objects.¹¹ Another twentieth-century philosopher in the empiricist tradition, D.C. Williams, coupled his trope theoretic interpretation of attributes with the bundle theory, claiming that ordinary concrete objects are bundles of collocated tropes.¹² More recently, Herbert Hochberg and Hector Castañeda have followed these empiricists in defending the view that ordinary objects are mere clusters of empirically manifest attributes.¹³

All these philosophers agree with substratum theorists in denying that the concrete objects of everyday experience are ontologically basic or fundamental. They all take the fact that familiar objects have a structure to entail that they are mere constructions out of more basic things. They disagree with substratum theorists in restricting the building blocks of the world to attributes, properties if they are metaphysical realists or tropes if they are nominalists about attributes. Accordingly, these bundle theorists all deny that the distinction between attributes and the particulars that have them is an ontologically fundamental distinction. At the ontologically most basic level, there are only attributes; if it makes any appearance at all, the concept of a thing that has or exemplifies an attribute appears as a derived or constructed notion. Thus, bundle theorists like Russell, Ayer, Hochberg, and Castañeda who are metaphysical realists about attributes will deny that the distinction between universals and particulars is an ultimate distinction. They will insist that at rock bottom there are only universals; and they will explain universality not by speaking of a property’s being exemplifiable by numerically different objects but in terms that make no reference to a subject for or exemplifier of a property. They will speak, for example, of multiply occurrent entities, repeatable entities, or multiply locatable entities; and they will say that particulars are constructions out of universals neutrally so described. It is worth noting

that the account provided by realistic defenders of the bundle theory is the polar opposite of that defended by the austere nominalist. The austere nominalist insists that at rock bottom there are only structureless concrete particulars and that talk apparently about properties and the like is simply disguised talk about the ontologically fundamentally concrete particulars. Both ontological frameworks represent one-category ontologies, the former recognizing only universals; the latter, only concrete particulars. Bundle theorists, like Hume and D.C. Williams, who hold to a trope-theoretic interpretation of attributes, likewise endorse a one-category ontology; but for them the ontologically basic entities are attributes construed as particulars or unrepeatables. What turns out to be derived or constructed, on their view, is not the concept of a particular. What is derived or constructed is, first, the concept of the complex concrete object of common sense and, second, the concept of a universal which, as we have seen in the last chapter, the trope theorist takes to be a set theoretical construction.¹⁴

An objection to the bundle theory – subject-predicate discourse

So we have two general patterns of analysis for the concept of a concrete particular – the substratum theory that takes a concrete particular to be a complex whose constituents are the various attributes associated with it and an underlying substratum that is the literal bearer or subject for those attributes and the bundle theory that construes familiar objects as clusters of attributes standing in the relation of compresence, collocation, or co-occurrence. An interesting feature of the debate between defenders of these two accounts is that they seem to take the two patterns of analysis to exhaust the field. They seem to think, that is, that the ontologist who so much as concedes that concrete particulars have a structure must endorse one or the other of these two accounts, that there is no option but to be a substratum theorist or a bundle theorist. Thus, when he objects to the idea of a Lockean substratum, Hume takes the inadequacy of this idea to entail that familiar objects are nothing more than collections of sensible qualities. Likewise, when he becomes disenchanted with the idea of a propertyless bearer of properties, Russell sees the only option to be some version of the bundle theory; and more recent defenders of either of the two views seem content to direct their arguments to proponents of the other view, the shared assumption apparently being that one must be either a substratum theorist or a bundle theorist, that these two views represent the only games in town.

Let us assume, for the moment, that they are right here, and let us ask ourselves what considerations might tell for or against each of the two accounts. Bundle theorists, we have seen, object to bare substrata on empiricist grounds. Substratum theorists, in turn, point to what they take to be serious problems in the bundle theory and argue that those problems can be resolved only by conceding that, in addition to the attributes constitutive of an ordinary object, there is a constituent that fits their characterization of bare

substratum. One objection is that the bundle theorist cannot accommodate our prephilosophical intuition that familiar objects remain identical through change. Change, the objection goes, always involves an alteration in the attributes associated with the thing that undergoes the change. But since bundle theorists hold that familiar objects are nothing more than bundles of attributes, they are committed to the view that the object that enters a change is numerically different from the object that emerges. Different attributes entail different bundles, so where we have change we have numerically different bundles and, hence, numerically different objects. This may be an important objection, but I shall not discuss it further here. I pass over the objection for two reasons. First, it is not clear that the difficulty posed by the objection arises only for the bundle theorist. Although the central premise of the argument (“Difference of attributes entails difference of bundles”) was formulated in bundle-theoretic terms, that premise is merely an instance of a more general principle governing the constituent–whole relation; for if it is true that difference in attributes entails difference in bundles, it is true only because it is true that difference of constituents entails difference in constituted wholes or complexes. But the substratum theorist no less than the bundle theorist construes the attributes associated with an ordinary object as its constituents. Accordingly, if the bundle theorist is committed to denying that the concrete object emerging from a change is ever numerically identical with that entering the change, so, it would seem, is the substratum theorist. Second, since the issue of persistence through change is itself both large and puzzling, we will devote a later chapter to it. In that context, we will be able to examine the resources different accounts of familiar objects have for accommodating our prephilosophical intuitions about the issue.

Another objection against the bundle theory is that its defenders are incapable of providing a satisfactory account of subject–predicate discourse. In making a subject–predicate claim we ascribe an attribute to an object; but, according to the substratum theorist, in denying that familiar objects include an underlying subject for attributes, the defender of the bundle theory deprives himself of the materials required for characterizing attribute ascriptions. It is important to understand the force of this objection. Our brief summary of the objection makes it look suspiciously like the bald assertion that every attribute requires a subject, that the idea of an unsupported attribute is incoherent. However, in the present context, that assertion would be question begging. The bundle theorist’s central claim is that in the strict and literal sense attributes are not possessed by anything – they simply occur. Talk about the occurrence of attributes, the bundle theorist is claiming, is like talk about the weather. We speak of it raining or snowing without thereby implying that there is anything that is doing the raining or doing the snowing. Likewise, an attribute like the color red occurs without there being anything such that it is red. The mere assertion that every occurrent attribute has a subject hardly counts as an argument against this claim; it is simply the unsupported denial of the claim.

94 Concrete particulars I

Although substratum theorists sometimes do come close to begging the question in their criticisms of the bundle theory, the objection we are considering need not be the question-begging claim that every occurrent attribute has something as its possessor. Recall our red ball from a few pages back. If we agree to call the ball 'Sam,' then we must concede that each of the following subject-predicate claims is true:

- (1) Sam is red
- (2) Sam is spherical
- (3) Sam is shiny
- (4) Sam is 2 inches in diameter
- (5) Sam weighs 3 ounces.

The objection we are considering can be understood as a challenge to the bundle theorist to provide an account of what is going on in each of these claims. Pretty clearly, in each of (1)–(5), an attribute is being picked out – the color red in the case of (1), the spherical shape in the case of (2), shininess in the case of (3), being 2 inches in diameter in the case of (4), and weighing 3 ounces in the case of (5). Furthermore, in each case, we are saying that some relationship obtains between the relevant attribute and some further thing. The substratum theorist's challenge to the bundle theorist can be understood as the demand for answers to two questions: what is the further thing to which, in each case, an attribute is being said to be related? What relationship is being said to obtain between the two?

The initially most promising answers to these questions might appear to be, first, that it is simply the bundle of attributes that is our ball, the thing we have dubbed 'Sam,' that, in each case, is the item to which the relevant attribute is said to be related and, second, that in making any one of these claims, we are saying that the attribute in question is a constituent in that bundle. The substratum theorist will, however, argue that these answers have an unsatisfactory consequence: each of (1)–(5) turns out to be tautologous. The bundle theorist is claiming that in the case of each of (1)–(5) we are taking a complete bundle of attributes and saying that a given attribute is a constituent of it; but the substratum theorist will argue that it is impossible to grasp a complete bundle of attributes without knowing precisely which attributes are its constituents. To grasp a bundle, after all, is simply to grasp the things that make it up; but, then, no sentence like (1)–(5) can be both true and informative. No one could know which bundle a sentence like one of these is about without knowing that the sentence is true. The substratum theorist will point out, however, that sentences like these are often both true and informative, and will conclude that the bundle theorist's initial answer to his two questions is unsatisfactory.

But, perhaps, the bundle theorists were being too hasty in answering those questions as they did. Perhaps, they should have said that it is not the complete bundle of attributes, but some less comprehensive entity that, in each

case, is being said to stand in a relationship to the relevant attribute. In the case of (1), for example, the bundle theorists should have said that the color red is being related, not to the complete bundle that is our ball, but a “smaller” bundle, one including all the attributes associated with the ball except the color red. If they were to do so, then the bundle theorists would have an account of (1) that shows it to be at once true and informative. They could say that in asserting (1), we are stating that the color red is compresent or concurrent with each of the attributes in this “smaller” or less comprehensive bundle. The claim is obviously true, and since one could grasp this “smaller” bundle without knowing that red is compresent with each of its constituent attributes, the claim can be informative.

The substratum theorist will concede that this new pair of answers enables the bundle theorist to give a *prima facie* plausible reading of (1); but will insist that the bundle theorist go on and provide parallel readings for each of (2)–(5). What the bundle theorist will claim, of course, is that, in asserting (2), we are saying that the spherical shape is compresent with each of the attributes in a bundle incorporating all the attributes we associate with the ball except the relevant spherical shape, that in asserting (3), we are saying that shininess is compresent with each of the attributes constitutive of a bundle incorporating all the attributes we associate with the ball except shininess, and so on. The substratum theorist will concede that each account has the result that the relevant statement can be both true and informative, but will insist that the price the bundle theorist must pay to get this result is too great; for to achieve this result, the bundle theorist must hold that no two of these statements are about the same thing. The obvious fact, however, is that whatever we are talking about in these cases, it is the same thing in all of them.

So the substratum theorist concludes that the bundle theorist cannot provide satisfactory answers to his two questions. If bundle theorists answer them in such a way that what we are talking about in asserting each of (1)–(5) is one and the same thing, they do so only by making the assertions tautologous if true; and if they answer them in a way that permits our assertions to be both true and informative, they do so only by making each of the assertions assertions about different things. At this point, of course, the substratum theorist will go on to argue that it is only by introducing bare substratum that we can provide a satisfactory account of statements like (1)–(5), claiming that what is really going on there is the ascription of attributes to a further constituent of the ball, an underlying subject whose identity involves none of the ascribed attributes.

What kind of response can the bundle theorist make to this objection? One obvious reply is to argue that if subject-predicate discourse presents problems for the bundle theorist, it presents analogous problems for the substratum theorist. The substratum theorist claims that substrata are the items to which we ultimately ascribe attributes; but, then, substrata had better be things we can pick out as identifiable objects of reference. The difficulty, of course, is that substrata are bare; they are things that in themselves have no attributes.

That entails that there is nothing in a bare substratum, taken by itself, that would enable us to pick it out as something distinct from other things. If a bare substratum is to be identified, it can only be by reference to the attributes with which it is compresent. Those attributes, however, are just the attributes that can be truly ascribed to it. But, then, the substratum theorist would seem to confront the same sorts of difficulties he poses for the bundle theorist.

A more satisfying line of response is to argue that the substratum theorists' objection goes wrong in ascribing to bundle theorists a theory of reference they need not accept. The objection succeeds only if the bundle theorist accepts the view that a speaker's ability to grasp the concrete object that is the referent of a name like 'Sam' presupposes the ability to specify every attribute associated with that concrete object. As an account of the use of proper names, the view is obviously unsatisfactory. It assumes a kind of omniscience in those who use proper names; but the fact is that we are able to use proper names correctly while being ignorant of many of the attributes associated with their bearers. Bundle theorists can deny, however, that their analysis of concrete particulars commits them to this view. To suppose it does, they can argue, involves a confusion of metaphysics and epistemology. Why suppose, they can ask, that our prephilosophical ability to think and talk about concrete particulars presupposes an apprehension of every feature of their underlying ontological structure? They can claim that bundle theorists have considerable latitude in their choice of a theory of proper names. Bundle theorists can hold, for example, that a speaker's ability to grasp the referent of a proper name presupposes an apprehension of only some of the attributes associated with it; but, then, they can claim that the ascription of other attributes to the bearer of that name can be both true and informative. Alternatively they can hold, as the later Russell apparently did, that we are able to apprehend a complex and apply a name to it without apprehending any of its constituents;¹⁵ and if they do, they can claim that no true ascriptions of attributes to concrete objects are tautologous.

As a reply to the substratum theorist's objection, this line of argument carries considerable force. It shows that a bundle theorist need not construe a speaker's ability to pick out a concrete object as presupposing all the knowledge that is expressed in the true subject-predicate statements we can make about it. It is important to note, however, that if bundle theorists succeed in meeting the substratum theorist's objection as we have formulated it, they may, nonetheless, be committed to a view that we might find problematic. According to the bundle theory, the identity or "being" of a concrete particular involves each and every attribute that enters into its constitution. Its being what it is is simply a matter of its having those attributes as its constituents. Now, the speakers of a language may be able to pick out the concrete object without apprehending each of these attributes. Accordingly, there may be true subject-predicate statements about the object that are genuinely informative. However, if the bundle theory is correct, then,

informative or not, every true subject-predicate claim about a concrete object ascribes an attribute that is *essential* or *necessary* to it in the following sense: if the attribute did not enter into the constitution of the object, that object would not exist. On the bundle theory, every true subject-predicate claim is a mere elaboration of the essence of a concrete object.¹⁶ And here we confront what is, perhaps, the central difference between the bundle theory and the substratum theory; for whereas the bundle theory must construe all true ascriptions of attributes as holding of necessity, the substratum theorist insists that none does. According to the substratum theorist, the literal possessors of attributes, the things to which attributes are properly ascribed, are one and all bare; they are all things whose identity involves no attributes at all. But, then, for the substratum theorist, every true subject-predicate claim involves the ascription of an attribute that is external to or lies outside the nature of that to which it is ascribed. No such claims hold of necessity; they are all mere matters of contingency.

Another objection to the bundle theory – the Identity of Indiscernibles

Another objection against the bundle theory has a more limited target than the objection we have been discussing. It seeks to show the inadequacy of only those versions of the bundle theory that endorse metaphysical realism and construe the attributes constitutive of concrete objects as properties or multiply exemplifiable entities. Despite its more limited target, this objection has occupied center stage in twentieth-century debates between substratum theorists and bundle theorists. The prominence of the objection is explained by the fact that in our century defenders of either of the two accounts of concrete particulars have typically rejected nominalistic treatments of attributes.¹⁷ Accordingly, a realist account of attributes has generally functioned as something like a constraint on the whole debate over the ontological structure of concrete particulars. The objection proceeds by arguing, first, that the bundle theorist is committed to the truth of a principle known as the *Identity of Indiscernibles (II)* and, second, that since this principle is false, the bundle theory is also false.

As I shall understand it, (II) is the claim that it is impossible for numerically different concrete objects to share all their attributes. More formally, the principle can be stated as follows:

- (II) Necessarily, for any concrete objects, a and b , if for any attribute, ϕ , ϕ is an attribute of a if and only if ϕ is an attribute of b , then a is numerically identical with b .

What the principle tells us is that complete qualitative indiscernibility (indiscernibility or complete similarity with respect to all attributes) entails numerical identity; hence, the name 'Identity of Indiscernibles.' If we are to

98 Concrete particulars I

understand the objection in which this principle plays the central role, then we must understand why it might be thought that the bundle theorist is committed to (II) and why it might be thought that (II) is false.

Beginning with the first point, bundle theorists tell us that familiar concrete objects are constituted completely and exclusively by their attributes. As they see things, concrete objects are nothing more than the compresent or concurrent attributes common sense associates with them. But the bundle theorists do not take this analysis of concrete objects to represent a merely contingent truth, a claim that while true, might have been false. They think that it is impossible for concrete objects to include bare substrata; there could be no such things as bare substrata, they will say. Accordingly, bundle theorists take their account of the structure of concrete particulars to be necessarily true. They endorse the following principle which I dub (BT) for 'bundle theory':

(BT) Necessarily, for any concrete entity, a , if for any entity, b , b is a constituent of a , then b is an attribute.

Furthermore, the bundle theorist is committed to a certain account of the relation between constituents and the wholes they compose. The central insight underlying the ontologist's use of the terms 'constituent' and 'whole' is that certain things are mere constructions out of other more basic things. The idea is that the constructed items are nothing more than the items that go together to constitute them, so that we can provide a complete "recipe" for complex things by identifying the items that count as their constituents. But, then, a requirement on the ontologist's use of these terms is that no numerically different complex objects have exactly the same constituents. Complete identity in constituents entails numerical identity. As I have suggested, this claim represents a kind of regulative principle, a principle governing the ontologist's use of the correlative notions of constituent and whole. We can call the claim the *Principle of Constituent Identity (PCI)* and can formulate it as follows:

(PCI) Necessarily, for any complex objects, a and b , if for any entity, c , c is a constituent of a if and only if c is a constituent of b , then a is numerically identical with b .

Now, it takes just a moment's reflection to see that (BT) and (PCI) together entail (II). If it is impossible for numerically different complex objects to have all and only the same constituents and if, as a matter of metaphysical necessity, concrete particulars are complex objects whose only constituents are attributes, then it is impossible for numerically different concrete particulars to have all and only the same attributes. The substratum theorist, however, claims that it is, in fact, possible for numerically different objects to be qualitatively indiscernible – to have the same color, same shape,

same weight, same size, and so on¹⁸ – and argues that since *(BT)* and *(PCI)* together entail *(II)*, the falsehood of *(II)* entails that at least one of *(BT)* and *(PCI)* is false. He goes on to point out that since *(PCI)* is a regulative principle that does nothing more than state a condition on the use of the terms ‘constituent’ and ‘whole,’ we have no option but to concede its truth. The falsehood of *(II)*, the substratum theorist concludes, shows that the central claim of the bundle theorist, *(BT)*, is false.

So the substratum theorist’s objection can be summarized as follows: *(BT)* and *(PCI)* together entail *(II)*. Since there can be numerically different, yet qualitatively indiscernible concrete objects, *(II)* is false. Therefore, either *(BT)* or *(PCI)* is false; but *(PCI)* is true; therefore, *(BT)* is false. There is, however, a hidden assumption at work in this objection. By bringing the assumption to light, we can see why the objection works only against the bundle theorist who is a metaphysical realist. Consider a bundle theorist who, like Hume or Williams, endorses a trope theoretic or nominalistic interpretation of attributes. Such bundle theorists can concede that *(BT)* and *(PCI)* are both true, that together these principles entail *(II)*, and that it is possible for there to be numerically different, yet qualitatively indiscernible objects; but they will deny that the possibility of qualitatively indiscernible, yet numerically distinct objects shows the falsehood of *(II)*. For *(II)* to come out false, they will argue, it must be possible for numerically different concrete objects to have what are literally the same attributes; but they will claim that where numerically different objects are qualitatively indiscernible, they do not even have one attribute in common. Attributes are tropes, they will remind us; and no trope can be the constituent of more than one thing. But if it is impossible for different concrete objects to share even one attribute, the truth of *(II)* follows directly, so that *(II)* turns out to be just a trivial consequence of trope theory. Now, although our trope theorists deny that different objects can have numerically one and the same attribute, they insist that it is possible for different things to have similar, even exactly similar attributes. Indeed they want to claim that similarity between concrete objects is simply similarity between their attributes; but, then, if we have a case of qualitative indiscernibility or complete similarity between two concrete objects, we merely have a pair of things such that every attribute of the one is exactly similar to an attribute of the other and vice versa; and understood in these terms, qualitative indiscernibility is compatible with the truth of *(II)*.

But if the bundle theorist of nominalist persuasion can avoid the force of the substratum theorist’s objection, it is less clear that the bundle theorist who espouses a realistic interpretation of attributes can. These theorists interpret attribute agreement as the joint exemplification of a single property, so they must hold that where concrete objects agree in attribute, they have at least one constituent in common – the attribute in question. But, then, since the bundle theorist subscribes, first, to *(BT)* and holds that the attributes of a concrete object exhaust its constituents and, second, to *(PCI)* and maintains that identity of constituents entails numerical identity, the bundle theorist

who is a realist must deny that it is possible for numerically different concrete objects to be qualitatively indiscernible. The substratum theorist, however, claims that the qualitative indiscernibility of numerically diverse objects is possible and infers from this the falsehood of the bundle theory.

But is it really possible for numerically different concrete objects to be qualitatively indiscernible? The substratum theorist's only evidence that it is consists in the claim that different concrete objects can have the same color, same shape, same size, same weight, and so on; but one might object that if there are such objects, they fail as counter-examples to (II). Suppose we have our red ball, Sam, and another ball, Peter. Both balls are the same shade of red; both are perfectly spherical; both have the same texture; both weigh exactly 3 ounces; both are exactly 2 inches in diameter. Sam and Peter are exactly similar in all their empirically accessible properties; they are so similar that no one can tell the difference between them. It might seem that Sam and Peter provide a counter-example to (II); nonetheless, it could be plausibly argued that they do not since each has a property the other does not. Sam has the property of being identical with Sam, and Peter lacks that property; whereas Peter has the property of being identical with Peter, and Sam lacks that property. So Sam and Peter are not qualitatively indiscernible after all; and reflection on their case suggests that there could be no counter-example to (II), that qualitative indiscernibility does, indeed, entail numerical identity. For take any pair of objects, x and y , that might be thought to provide a counter-example to (II). However similar x and y might be, they will differ in their properties. x will have the property of being identical with x and y will not; whereas, y will have the property of being identical with y and x will not. But, then, (II) would seem to turn out true after all, and the substratum theorist's objection to the bundle theory would seem to fail.

Now, some philosophers might object to the claim that there are properties like *being identical with Sam* and *being identical with Peter*; but substratum theorists need not. They can concede that there are such properties; they can even concede that because there are, (II) is true. They can make these concessions because they can argue that even if there are properties like these, they are properties bundle theorists cannot appeal to in their analysis of the notion of a concrete particular. Bundle theorists, recall, are claiming that the concept of a concrete particular is a derived concept. Concrete particulars, they insist, are mere constructions out of more basic entities. They are, we might say, reductionists about concrete particulars; but since they are, none of the entities they construe as constituents of concrete particulars can already presuppose the notion of a concrete particular. But pretty clearly, properties like *being identical with Sam* and *being identical with Peter* do already presuppose the notion of a concrete particular, so bundle theorists cannot appeal to them in giving us their recipe for the ontological structure of concrete particulars. If we call properties that do not, in this way, presuppose the concept of a concrete particular *pure properties* and those that do, *impure properties*,¹⁹ then we can make the point by saying that the bundle theorist is committed to the

idea that concrete particulars are wholes or complexes whose constituents are exclusively pure properties. So *(BT)* does not really express the view of bundle theorists. They are committed to a stronger claim. I will call it *(BT*)* and state it as follows:

(BT)* Necessarily, for any concrete entity, *a*, if for any entity, *b*, *b* is a constituent of *a*, then *b* is a pure property/attribute.

(BT)* and *(PCI)*, however, together entail not just *(II)*, but a much stronger principle that tells us that indiscernibility with respect to pure properties entails numerical identity. Put more formally, this stronger principle – I shall call it *(II*)* – can be stated as follows:

(II)* Necessarily, for any concrete objects, *a* and *b*, if for any pure property/attribute, ϕ , ϕ is an attribute of *a* if and only if ϕ is an attribute of *b*, then *a* is numerically identical with *b*.

Since properties like *being identical with Sam* and *being identical with Peter* are all impure properties, the bundle theorist can no longer appeal to them in dealing with the substratum theorist's counter-examples. Sam and Peter may not represent counter-examples to *(II)* but they are counter-examples to *(II*)*; for they are numerically different concrete objects that, nonetheless, agree in all their pure properties. The substratum theorist claims that such pairs of objects are possible and that since they are, *(II*)* is false and so, accordingly, is *(BT*)*.

In this connection, the substratum theorists will point out that another sort of property that might also serve to handle counter-examples to the weaker *(II)* will be of no service to bundle theorists in their attempts to deal with counter-examples to the stronger *(II*)*. Since it seems plausible to think that it is impossible for two different concrete objects to occupy precisely the same region of space at a given time, it is reasonable to think that no two concrete objects will agree with respect to those properties that specify their spatiotemporal location. While conceding this, the substratum theorist will argue that these properties are one and all impure. They will argue that since space and time represent relational structures, the properties that specify the spatiotemporal position of concrete objects are always properties like *being 2 miles north of the Eiffel Tower* and *being 80 feet east of the west entrance to Old Trafford* – properties that already presuppose or involve concrete particulars and so cannot number among the items the bundle theorist construes as constituents of concrete objects.²⁰

An argument for the substratum theory

So the reformulated version of the substratum theorists' objection goes as follows: since they endorse both *(BT*)* and *(PCI)*, bundle theorists are

committed to the truth of (II^*) . If they are realists about attribute agreement, bundle theorists must concede that qualitatively indiscernible concrete objects would be objects having literally the same constituents. Accordingly, such bundle theorists must concede that if it is possible for numerically different concrete objects to be qualitatively indiscernible, (II^*) is false. But it is possible, so (II^*) is false. Therefore, either (BT^*) or (PCI) is false; but (PCI) is true, so (BT^*) , at least when coupled with a realistic understanding of attributes as multiply exemplifiable entities, is false. This is an impressive line of argument, and the fact is that nowadays most metaphysicians take it to represent a decisive refutation of the bundle theory in its realist versions.²¹ Substratum theorists, however, take it to be something more; for as they see it, the objection can easily be converted into an argument for the existence of bare substrata.

The substratum theorist, no less than the bundle theorist, takes concrete particulars to be complexes that have ontologically more basic entities as their constituents; and, like the bundle theorist, the substratum theorist takes the pure properties associated with a concrete particular to be constituents of that concrete particular. Finally, most recent substratum theorists have been realists about attribute agreement and have held that agreement in attribute is a matter of shared constituents. But, then, substratum theorists need an account of the phenomenon they take to show the falsehood of a bundle theoretic analysis of concrete particulars; they need an account of the possibility of numerically different, yet qualitatively indiscernible concrete objects. Consider once again our two red balls, Sam and Peter. Although they are numerically different, Sam and Peter agree in all their pure properties. But, then, what is it about Sam and Peter that makes them different? The Principle of Constituent Identity of (PCI) tells us that identity of constituents entails numerical identity; but then, where we have numerical diversity, we must have diversity of constituents. So Sam and Peter do not have precisely the same constituents; but their pure properties count as constituents, and these are the same in the two cases. Accordingly, Sam and Peter each have at least one constituent over and above their pure properties, and these additional constituents are different in the two cases.

But what are these additional constituents? They are not pure properties; but neither can any impure properties explain the numerical diversity of Sam and Peter. Sam and Peter doubtless do differ in their impure properties; but since our aim is to identify the constituents out of which concrete particulars are composed, the items we appeal to in characterizing their ontological structure cannot already presuppose the complex entities that are concrete particulars, and impure properties all do. So no properties, whether pure or impure, serve to explain the numerical diversity of Sam and Peter. Nonetheless, each incorporates a constituent the other does not, and those constituents ground the numerical diversity of our two balls. Since no properties, no repeatable entities, are relevant to the explanation of the numerical

differences between Sam and Peter, the constituents that do explain their diversity must be items that in themselves involve no properties; they must be items whose identity is independent of any properties. But this is just a characterization of what we have been calling bare substrata. So what explains the numerical difference between qualitatively indiscernible things is that each incorporates a constituent unique to it, a bare substratum. So Sam and Peter are complexes whose constituents include, first, the various pure properties associated with them and, second, an entity unique to each – a bare substratum.²²

We have, then, an argument to show that Sam and Peter each incorporate a constituent over and above their shared properties, a constituent unique to each. But does the argument generalize beyond the case of Sam and Peter? It might seem that it does not. It might seem, that is, that it is only where we actually have numerically different, yet qualitatively indiscernible concrete objects, that the argument applies. It might be thought that where we have a concrete object whose pure properties are different from those of any other concrete object, there is no need to postulate any additional constituents. But a moment's reflection suggests that this cannot be right; for were we to posit bare substrata only where we have qualitatively indiscernible objects, we would be attributing different categorial structures to things – concrete objects – that are manifestly of the same categorial type. Furthermore, we would be making the ontological structure of a thing depend upon matters of mere contingency. The fact is that, for any concrete object, the possibility of its having a qualitatively indiscernible counterpart always exists; and that possibility has to be written into the object in advance; it has to be secured by the underlying ontological structure of the thing. So the argument for bare substrata does, in fact, generalize beyond the case of Sam and Peter: every concrete object is a complex incorporating constituents it can share with other concrete objects – pure properties and a constituent unique to it – a bare substratum.

We have, then, a new argument for the view that concrete particulars incorporate bare substrata among their constituents. Whereas the earlier argument introduced bare substrata as the underlying subjects of attributes, as the literal bearers or possessors of the attributes associated with concrete particulars, this second argument introduces bare substrata as the constituents of objects that explain their numerical diversity, their being numerically different from other things. The two arguments are different. Although the first argument is available to substratum theorists of either a nominalist or realist persuasion, the second argument can be invoked only by the substratum theorist who is a metaphysical realist about attributes. Trope theorists who endorse an ontology of bare substrata cannot argue for that ontology by reflecting on the case of numerically diverse, yet qualitatively indiscernible concrete objects; for since, on their view, none of the constituents of exactly similar or qualitatively indiscernible objects are shared, the possibility of numerically different, yet qualitatively indiscernible concrete objects gives no

reason for supposing that those objects incorporate any constituent over and above their constituent tropes.

Furthermore, the two arguments assign different roles to bare substrata. The first makes bare substrata the underlying subjects of attributes, the items to which, ultimately, all the attributes associated with a concrete object are ascribed. The second makes bare substrata the principles of the numerical diversity of concrete objects; and it is at least theoretically possible that there are different constituents in concrete objects that play the two roles. But while different, the two roles are complementary; and the suggestion that the thing that functions as the literal bearer of the attributes associated with a concrete particular be the constituent in it that is responsible for its numerical diversity from all other concrete particulars seems eminently plausible. We think, do we not, that whatever it is that literally possesses the attributes associated with one concrete particular is something numerically different from whatever it is that literally possesses the attributes associated with another? Given that intuition, it would be surprising were the constituents of a concrete particular that play the two roles to turn out to be different things. It is understandable, then, that recent substratum theorists, almost all of whom have been metaphysical realists, tend to assimilate the two roles and to assume, without argument, that one entity plays both.

Problems for the substratum theory

In the past few sections, the substratum theory has been presented as a response to problems that arise for the bundle theory, problems about attribute ascriptions and problems about numerical diversity; but the substratum theory is not without its own problems. It is time we put the substratum theory on the defensive and considered those problems. In the opening section of this chapter, we found the bundle theory to have its roots in empiricist concerns about the notion of bare substratum. The concerns had their roots in the methodological principle that the ontologist should postulate no entities that cannot be the objects of direct or immediate experience; and the claim was that since experience is always an awareness of a thing as characterized in some way and since bare substrata are things that in themselves have no characteristics, their introduction violates the empiricist's methodological principle.

Now, one might have expected substratum theorists to challenge the empiricist's methodological principle. The fact, however, is that most substratum theorists (including Locke, the early Russell, and, more recently, Gustav Bergmann) have endorsed some version of the empiricist program. Accordingly, they have responded to the objection by arguing that bare substrata can be perfectly respectable components in an austere empiricist metaphysics. The claim has been that bundle theorists are just wrong to suppose that bare substrata cannot be the objects of empirical awareness. Thus, we find substratum theorists arguing that to be acquainted with

numerically diverse, yet qualitatively indiscernible objects is *eo ipso* to be acquainted with bare substrata. Bare substrata, we are told, just are those constituents of concrete objects that render them numerically different from each other, so that in being confronted with a pair of objects related as our two balls, Sam and Peter, are, we are in a perceptual context where the principles of numerical diversity in them make themselves apparent to us.²³ Likewise, we find substratum theorists arguing that in being empirically presented with any attribute associated with a concrete particular we are thereby presented with the thing that literally bears that attribute. Here, the claim is that since the notions of attribute and subject are correlative concepts, it is impossible to be acquainted with an attribute without also being acquainted with its subject. Accordingly, if attributes can be the objects of empirical awareness, so can the substrata that literally possess them.²⁴

The bundle theorist is not likely to be impressed with these attempts at showing the empirical legitimacy of the concept of bare substratum. He will doubtless find them question begging. They assume, he will complain, precisely what needs to be proved; and, here, I think, it is difficult not to be sympathetic with his complaint. The more promising strategy for the substratum theory, I think, is the one mentioned earlier – to concede that the introduction of bare substrata is incompatible with a rigorous empiricism, but to object that since we need bare substrata to provide an adequate analysis of attribute ascriptions and to account for the possibility of numerically diverse, yet qualitatively indiscernible objects, the constraints the empiricist imposes on the metaphysical enterprise are unreasonably stringent.

Another objection against the substratum theory makes the stronger claim that the theory is contradictory.²⁵ What the substratum theorist is telling us is that the things that possess attributes are bare; but to be bare is to possess no attribute, so that the central claim of the substratum theory turns out to be the contradictory claim that the things that possess attributes possess no attributes. The substratum theorist will likely respond that this objection is based on a misunderstanding of what he means by 'bare.' Substrata are not bare in the sense of having no attributes; they are bare in the sense that *in themselves* they have no attributes; and what this means, he will claim, is that none of the attributes that a substratum has figures in its identity; it has a "being" independent of all of them. As we put it earlier, none of the attributes of a substratum belongs to its essence; none is essential or necessary to the substratum. So substratum theorists will deny being committed to the contradictory claim that the things that possess attributes do not possess attributes. What they are claiming, they will say, is that none of the attributes possessed by a substratum is essential to it.

Now, this may constitute a satisfactory response to the objection as it was originally formulated; but central to the response is the idea that there are things that have no essential attributes. That idea is a familiar one in the works of substratum theorists. Gustav Bergmann, for example, repeatedly tells us that his bare particulars are things that have no natures or essences.²⁶

One might wonder, however, whether the idea of a thing that has no attributes essentially is coherent. We are told, for example, that bare substrata have no attributes essentially; but what of this feature of bare substrata? Is it one that is merely contingently true of bare substrata? Likewise, bare substrata are said to be the literal bearers of attributes. Is this a merely contingent feature of bare substrata? Is it possible that things could be otherwise, so that not they, but some other entities played this role? Again, bare substrata are said to be the principles of numerical diversity. Might they have failed to diversify objects? Could it have turned out that bare substrata are repeatable entities, things that each enter into the constitution of several different concrete objects?

All these questions, it would seem, must be answered negatively; for the features of substrata just mentioned represent categorial features of substrata, and it seems incredible to claim that a thing could fail to exhibit those features that give it its categorial form. The categorial features of a thing, we want to claim, are essential to it. But the categorial features of substrata would not seem to be unique in being essential or necessary to them. There are attributes like that of being self-identical, of being red or not red, and of being colored if green. Such attributes, it would seem, are essential to every object; hence, to substrata as well. And there are attributes that while not essential to everything are essential to each thing that has them, attributes like *being numerically different from the number seven* and *being a substratum or a human being*. Every substratum possesses many such attributes and, so it would seem, possesses them essentially. So it begins to look as though the idea of a completely bare entity, an entity with no essential attributes, is deeply flawed. Everything, it seems, has attributes that are essential or necessary to it. Accordingly, if concrete objects do, in fact, incorporate special constituents that function as subjects for attributes and principles of numerical diversity, those constituents are not bare. Like everything else, they have some, perhaps many, essential attributes.

The substratum theorist will surely object to all of this, denying that there are any attributes of the sort mentioned in the last couple of paragraphs. The difficulty is that the substratum theorist needs to come up with nonquestion-begging reasons for issuing this denial, and it is just not clear what they might be. One might think, however, that no denial is called for here. One might suppose that substratum theorists could simply embrace the insight that substrata have various attributes essentially, incorporate that insight into their description of substrata, and go on from there. Unfortunately, things are not so easy; for it can be argued that if substrata are not bare, they cannot play the roles the substratum theorist attributes to them. Substrata are supposed to be the ultimate subjects for attributes. What led us to the idea of an underlying subject for attributes was the view that the literal possessor of an attribute must have an identity or essence that is independent of that attribute. This view, however, forces us to conclude that a substratum cannot be the literal possessor of any attribute essential to it. But, then, just as we were

forced to postulate substrata to be the literal possessors of the attributes associated with concrete objects, so, it would seem, we are forced to postulate new entities, constituents in substrata themselves, to serve as the literal possessors of the attributes essential to our original substrata. Unfortunately, things will not stop here; for our new, lower-level substrata will themselves have many attributes essentially, so we will need new, still lower-level substrata to be the subjects for those attributes; and so on *ad infinitum*. Once we admit that nothing is bare, we find that the project of identifying what the substratum theorist takes to be the ultimate bearers of attributes can never be carried out.

In the same way, if substrata are essentially characterized, it is no longer clear that they provide a final answer to questions about numerical diversity. Substrata are supposed to be the entities that explain the possibility of numerically different, yet qualitatively indiscernible concrete objects; they are the constituents of such objects that make them numerically different from each other. But, now, we see that substrata are essentially characterized. The difficulty is that once we concede this fact, we find that the very problem substrata were introduced to resolve arises in their case. Substrata turn out to be complexes or wholes themselves, complexes or wholes constituted by the attributes essential to them. Unfortunately, the attributes essential to any one substratum seem to be precisely those essential to any other. They are all essentially subjects for attributes, all essentially diversifiers, all essentially different from the number seven, all essentially colored if green, all essentially red or not red. But, then, while being numerically different from each other, they begin to look like qualitatively indiscernible entities. And so we need an account of their numerical diversity; and the only account that will do is one that posits a lower-level substratum in each of our original substrata, a lower-level substratum that makes each of our original substrata different from each other. But since nothing can be bare, the same problem arises for these new, lower-level substrata; and we seem once again to be off on an infinite regress. It is no accident, then, that substratum theorists have insisted that substrata be bare. If the idea of a bare entity, an entity with no essential attributes, is incoherent, the substratum theory is in deep trouble.

Aristotelian substances

If we follow bundle theorists and substratum theorists in holding that any metaphysician who concedes that concrete objects have some sort of ontological structure must endorse one of the two theories we have so far discussed, we are likely to conclude that few options are genuinely viable. If the idea of an entity completely lacking in essential attributes is, as it seems to be, problematic, then the substratum theory is not an attractive option. And if it is, as it seems to be, possible for numerically different concrete objects to be qualitatively indiscernible, then any version of the bundle theory that endorses a realist interpretation of attributes would appear to be

unacceptable. It looks as though we have only two options: to join forces with bundle theorists like Hume and Williams who embrace a trope-theoretic interpretation of attributes²⁷ or to follow the austere nominalist and deny that concrete particulars have any ontological structure for the metaphysician to characterize. By any standards, the list of available options is depressingly short; its brevity is especially depressing for the philosopher who has sympathies with metaphysical realism.

But not all metaphysicians agree that the substratum theory and the bundle theory are the only accounts of concrete particulars available to the philosopher who attributes an ontological structure to familiar objects. According to a very old tradition, ontologists have another option: they can take concrete particulars themselves, or at least some among them, to be basic or irreducibly fundamental entities. On this view, having complexity of structure is compatible with being a basic or underived entity. The tradition is one that can be traced back to Aristotle; for while it may be that Aristotle occasionally flirts with the idea of bare substratum, there is another, more prominent, strand in his work that construes at least some concrete particulars, living beings – plants, animals, and persons – as fundamental entities, entities that cannot be reduced to more basic entities.²⁸ Philosophers in this Aristotelian tradition reject the constructivist approach to concrete particulars that underlies both the substratum and bundle theories. As they see things, the ontologist is not to construct the concept of a concrete particular from antecedently given materials; that concept is given the ontologist at the beginning of the ontological enterprise; and the task of the ontologist is merely to elaborate the concept in its own terms. On this view, the ontologist cannot get below the concept of a concrete particular, and both the substratum theorist and bundle theorist are mistaken in thinking that they succeed in doing so. They tell us that concrete particulars can be “built out” of colors, shapes, weights, sizes, and the like. According to Aristotelians, however, no such list is rich enough to give us our concept of a concrete particular; but, further, none of the items on such a list represents an entity that is intelligible independently of the framework of material particulars it is supposed to generate. Our concept of a color is, in the first instance, the concept of a visible feature of the surface of a material object; our notion of a shape is the notion of an attribute concrete particulars exhibit in virtue of the relations that obtain among their physical parts; and the concepts of a weight or a size are ideas that can be understood only by reference to complex systems of measurement that already presuppose an antecedently given framework of concrete particulars.²⁹ So even if it were possible, as it is not, to generate our concept of a concrete particular out of concepts like these, that fact would be of no consolation to the ontologist who endorses a reductionist approach to concrete particulars.

According to philosophers in the Aristotelian tradition, the root difficulty in the substratum and bundle theorists’ accounts is their appropriation of the framework of constituents and wholes. Aristotelians find this framework logically grotesque. They deny that we can understand the constituent–whole

relation except as a version of the part–whole relation, and they find the idea that the attributes of a thing count as its parts a category mistake. As they see it, ontologists who endorse talk of constituents and wholes are engaging in a bizarre mimicry of physical scientists: just as the latter speak of atoms making up molecules, so the former speak of attributes (or: attributes plus a substratum) making up concrete particulars. Aristotelians see this as hopeless confusion and insist that metaphysicians who take concrete particulars to have a structure need not endorse this conception of the ontological characterization of that structure.

But while they reject the conception of the metaphysical enterprise at work in the bundle theory and the substratum theory, Aristotelians agree with the bundle theorist that the “being” of a concrete particular, its being what it is, is grounded in the attributes associated with it. Aristotelians are, of course, realists about attributes, so they see the “being” of a concrete particular as grounded or rooted in the universals it exemplifies. But they insist that the bundle theorist goes wrong in two ways: first, in holding that all the attributes associated with a concrete particular figure equally in its being what it is and, second, in restricting the attributes relevant to the characterization of a concrete particular to those the realist calls properties. Beginning with the second point, Aristotelians will deny that properties exhaust the ontologically interesting monadic universals associated with concrete particulars. There are also the kinds to which concrete particulars belong, universals like *human being*, *dog*, *geranium*, and *oak tree*. Those kinds, Aristotelians will insist, cannot be reduced to or analyzed in terms of the properties concrete particulars possess. They represent an irreducibly distinct sort of universal; and they are the universals most centrally involved in the “being” of concrete particulars.

Although we have mentioned kinds in our discussion of universals, we have said little about them. They are, we have said, universals which objects exemplify by belonging to them. They are easily confused with the sets of the mathematician. We use similar language in speaking of both: just as we say that sets have members, so we speak of the members of a kind; and just as we say that each of its members is included in or belongs to a set, so we say that the members of a kind all belong to it. But while the language may be similar, there are significant differences between the two things. The identity of a set is determined by its members. Indeed, a set is just a construction out of its members. Kinds, by contrast, are prior to their members; they determine, so to speak, the identity of their members. As Aristotelians have characterized them, kinds mark out their members as *what* they are.³⁰ Thus, Aristotle tells us that where a universal is a kind to which an object belongs, that universal enables us to answer the “What is it?” question posed about that object. Thus, we can identify what a given person is by saying that it is a human being, what a given animal is by saying that it is a dog, and what a given plant is by saying that it is a geranium or, perhaps, an oak tree. Now, the insight underlying the Aristotelian conception of a kind is that to identify

what a concrete particular is is to identify its core “being” or essence. So the kinds to which concrete particulars belong mark them out as things having the essences they do; hence, those kinds are essential or necessary to the concrete particulars that are their members. A concrete particular is such that were it not to exemplify its proper kind, it would not exist. The kind to which a concrete particular belongs, then, provides us with existence conditions for that particular.

Kinds, we have said, cannot be reduced to properties. It is, of course, true that in virtue of belonging to a kind, a concrete particular will possess many properties. Thus, the things that belong to the kind *geranium* will have a characteristic shape; their height and weight will each fall within a certain range; their leaves will be of a certain shade of green; their flowers will have a certain configuration. Aristotelians will concede all these facts; what they will deny is that a plant’s belonging to the kind *geranium* can be reduced to or analyzed in terms of its possessing these properties. As they see things, it is because it belongs to the kind that it possesses these properties and not vice versa. The kinds to which concrete particulars belong represent unified ways of being that cannot be reduced to anything more basic.

But while Aristotelians take the kinds to which concrete particulars belong to mark them out as what they are, and, thereby, to determine their essences, they deny that every universal associated with a concrete particular expresses its essence. They insist that many of the properties associated with a concrete object represent features that are extrinsic to or lie beyond the essence of that concrete particular. They do not mark it out as what it is, but merely modify or characterize a concrete particular that has been antecedently so marked out by its kind. Thus, a certain complexion may characterize a human being, but it does not determine his or her core being. The human being could exist without exhibiting that complexion, so while it does exhibit that complexion, it does so nonessentially or merely contingently. As Aristotelians often put it, the complexion is accidental, not essential to the person in question.

So while Aristotelians agree with bundle theorists in thinking that we must look to the universals associated with a concrete object in giving an account of its being, they distinguish between the core being or essence determined by the kind that marks out the particular as *what* it is and the universals that lie outside that core being. But Aristotelians also find an important insight in the substratum theory. They agree that the attributes associated with a concrete particular require a subject, but they take the substratum theorist to be wrong, first, in construing that subject as a constituent of the concrete particular and, second, in characterizing it as bare. Aristotelians insist that it is the concrete particular itself that is the subject of all of the universals associated with it; it is what literally exemplifies those universals. But, as we have seen, Aristotelians contend that the concrete particular is, in virtue of belonging to its kind, a thing with an essence, so they reject the central assumption of the substratum theorists’ account of

subjects, that, for any attribute, the thing that exemplifies or exhibits it is something with an identity independent of that attribute. They insist that where a universal is merely accidental to a concrete object, the assumption holds. Suppose, for example, that Socrates is courageous. Courage, we may assume, is merely accidental to Socrates. After all, Socrates could exist without being courageous. In this case, then, the substratum theorists' assumption holds. We have a subject whose essence or core being does not include the attribute for which it is the subject. However, Socrates is also the subject for the kind *human being*. Socrates and not some constituent in him is the thing that is human; but the kind *human being* is what marks out Socrates as *what* he is, so in this case our subject is not something with an identity independent of the universal for which it is subject. Take the *man* away from Socrates and there is nothing left that could be a subject for anything.

The upshot is that the Aristotelians' account of the relation between a thing and its attributes represents a kind of middle ground between the accounts provided by the bundle theorist and the substratum theorist. As we have seen, bundle theorists construe all the attributes associated with a thing as essential or necessary to it. On their view, a concrete object is nothing more than its attributes, and all the attributes figure equally in the object's being as it is. Bundle theorists are, we might say, *ultraessentialists*: every attribute associated with a concrete object is essential to it. Substratum theorists, on the other hand, take the literal bearer or subject of attributes to be something that is bare or lacking in any essence. Accordingly, they hold that every attribute that can be truly ascribed to a subject is something that is extrinsic to the core being of that subject; it is always accidental to its bearer. Since they deny that any attributes are essential to what function as their literal subjects, we can call bare substratum theorists *antiessentialists*: nothing is essential to the literal bearers of attributes. Aristotelians hold the middle ground between the ultraessentialists and the antiessentialists. They insist that concrete particulars themselves are the subjects for all the attributes associated with them; and they hold that while some of these attributes are essential to their bearers, others are merely accidental to them. Concrete particulars belong to their kinds essentially; but they exhibit many attributes that are extrinsic to their core being; they exhibit all such attributes accidentally or contingently.

We have said that the kinds to which concrete particulars belong represent irreducibly unified ways of being. The Aristotelian wants to claim that because they do, the particulars that belong to them can be construed as basic entities. What a concrete particular is, on this view, is simply an instance of its proper kind; and Aristotelians argue that to be an instance of a kind is simply to exhibit the form of being that is the kind. Since that form of being is irreducibly unified, the things that exhibit it are themselves irreducibly unified entities, things that cannot be construed as constructions out of more basic entities. A concrete particular's being what it is does, of course, derive from its instantiating its kind; but Aristotelians will deny that the kind is a

part or a constituent of an object, something that enters into the composition of that object. It is, they will claim, *what* that object is.

So in virtue of instantiating or belonging to its proper kind, a concrete object exhibits an irreducibly unified form of being; and that form of being, Aristotelians insist, is a particular or individual form of being. For a universal like *human being* or *dog* to be instantiated just is for an individual or a particular to exist. If the kind *human being* is instantiated, we have a particular human being; and if the kind *dog* is instantiated, we have a particular dog. Aristotelians, then, deny that there is a special problem of explaining the particularity of concrete objects. Just in virtue of instantiating its proper kind, they claim, a concrete object is marked out as a particular. Furthermore, Aristotelians deny that there is a special problem of explaining how concrete particulars can be numerically different from each other. They insist that the multiple instantiation of a kind is, by itself, sufficient to secure the existence of numerically different particulars. Each of its instantiations is a particular that is numerically different from each of the others.

On this score, the kinds of Aristotelians differ from the properties of bundle theorists and substratum theorists. If they are metaphysical realists, bundle theorists and substratum theorists will agree that the multiple instantiation of a single property results in numerically one entity's functioning as a constituent of numerically different concrete objects; but since they hold that properties are the only universals that enter into the constitution of concrete objects, they face a special problem of explaining how it is possible for numerically different objects to be qualitatively indiscernible. Such objects would seem to have precisely the same constituents and so, given the Principle of Constituent Identity, our (*PCI*), they ought to be numerically identical. As we have seen, bundle theorists have no option but to deny that it is possible for numerically diverse objects to be qualitatively indiscernible; but that response, we have seen, flies in the face of our intuitions. Substratum theorists see the implausibility of the bundle theorists' response and claim that qualitatively indiscernible objects incorporate constituents over and above their properties; but if these additional constituents are to insure the numerical diversity of the concrete objects into which they enter, they must be bare or lacking in all essential properties; and the idea of a thing that is bare in this sense, we have seen, verges on the incoherent.

So we seem to face a kind of dilemma: either we deny the obvious and hold that there can be no qualitatively indiscernible, yet numerically different concrete objects, or we concede that there can be and endorse the incoherent notion of an essentially uncharacterized diversifier. Aristotelians claim to provide us with a way out of this dilemma; for they insist that once we recognize that the attributes of concrete objects include not merely their properties, but also the kinds to which they belong, the possibility of numerically different, yet qualitatively indiscernible objects ceases to be a problem for us. Kinds, unlike properties, are such that their multiple instantiation results in numerically different particulars. For the kind *human being* to be

instantiated twice is for two human beings to exist; and for the kind *oak tree* to be instantiated four times is for there to be four oak trees. A property, by contrast, is numerically identical in its different instantiations. If two objects exemplify the property of redness, there is something, redness, that is literally the same in the two objects; and if two objects are triangular, the triangularity of the one is numerically identical with the triangularity of the other. So, if we are metaphysical realists about attributes and hold that all the attributes relevant to our characterization of concrete particulars are properties, the numerical diversity of qualitatively indiscernible objects seems to emerge as a serious problem. Aristotelians, however, claim that if we take the core being of concrete objects to rest on their instantiation of their proper kinds, we find that the numerical diversity of qualitatively indiscernible objects has a ready explanation. They insist that in virtue of instantiating the proper kind to which both belong, each of the qualitatively indiscernible objects is marked out as a particular numerically different from the other. Their shared kind, then, diversifies the two objects, so even though they share all their additional attributes, all their properties, they remain numerically distinct. Their numerical diversity is given us in the ontologically fundamental fact about them, that they instantiate their proper kind.³¹

So the proper kind to which a concrete particular belongs marks it out as a particular numerically different from other particulars, both those that belong to the kind and those that do not. Aristotelians frequently express this fact about the kinds to which concrete objects belong by saying that universals like *human being*, *dog*, and *oak tree* are *individuating universals*. A metaphor helps explain the idea at work here. The kinds under which concrete objects fall are ontological “cookie cutters.” They go around the universe, so to speak, partitioning it into the discrete particulars that are their instances. They cut the world up into individual human beings, individual dogs, individual oak trees, and the like. As a result, they provide us with principles for identifying, distinguishing, and counting objects. Thus, we invoke the kind *dog* to identify a particular dog, to distinguish different dogs, and to count dogs, saying “one dog, two dogs, . . .”; and when we do these things we are merely recounting the way the kind has partitioned off the world into its instantiations.

The general contours of the Aristotelian approach to concrete objects are now becoming clear. The kind to which a concrete particular belongs marks it out as what it is, a particular of a certain sort, countably distinct from other members of that kind and from members of other kinds. That kind constitutes the essence or core being of each of its members; but in virtue of being an instance of its proper kind, a concrete particular can be the subject for attributes – properties – that are external to its core being. So concrete particulars do have a structure that the ontologist can characterize: there is a core being or essence furnished by a kind and a host of properties that lie at the periphery of that core and, hence, are accidental to concrete particulars. But while they have a structure, concrete particulars are not constructions out

of more basic things. Since the kind that furnishes their essence is an irreducibly unified form of being, concrete particulars are themselves irreducibly unified entities. Their being what they are – individual human beings, individual dogs, individual oak trees – is not to be analyzed in terms of lower-level constituents; they are basic entities.

To bring out this feature of concrete particulars, Aristotle and those following him have called concrete particulars *substances*. The English word ‘substance’ is etymologically close to the word ‘substratum,’ and that fact can lead to confusion. The Greek word for which ‘substance’ is our English translation is ‘*ousia*,’ and it does a better job of expressing the force of calling something a substance. ‘*Ousia*’ is a noun derived from the Greek verb for ‘to be.’ The force, then, of calling concrete particulars substances is to identify them as genuine beings, or full-fledged realities rather than mere constructions out of lower-level things.

Concrete particulars, then, are substances; *or at least some are*. When I introduced the Aristotelian account at the beginning of this section, I added the qualification; but, then, to facilitate matters, I ignored it. The qualification is, however, important; for Aristotelians have seldom held that all the things we have been calling concrete particulars are basic entities or substances. Aristotle himself was particularly stingy in his allocation of the term; he restricted the set of substances to individual living beings – plants, animals, and persons – and, perhaps, to the elementary items physics tells us enter into the composition of everything that is material. For Aristotle, the latter include the four elements, fire, earth, air, and water; for a contemporary Aristotelian, they would include the basic entities posited by contemporary physical theory. As Aristotle saw things, the only universals that furnish us with genuinely unified forms of being are the biological kinds under which living beings fall and the kinds posited by our best theory of the material constitution of the universe. He believed that the universals under which artifacts fall (universals like *automobile*, *clock*, and *computer*), the universals that express the roles things can play or the stages they go through (universals like *carpenter*, *president*, *larva*, and *seedling*), and the universals that express mere aggregations of physical objects (universals like *mountain*, *lake*, and *bouquet*) can all be analyzed in terms of the underlying biological/physical kinds and the accidental properties their members exhibit, so they are not to count as basic universals and the things that instantiate them are not to count as substances. Aristotle wanted to deny, however, that the universals under which living beings fall can be further analyzed; each biological kind involves a unique, unanalyzable, and irreducibly unified way of being, a form of life. These universals count as *basic natural kinds*, and the plants, animals, and persons that fall under them all count as substances.

Some concrete particulars, then, count as basic or underived entities. Those that do exhibit the irreducibly unified form of being furnished by a basic natural kind and, hence, are themselves unanalyzable unities. To bring out this central insight in the Aristotelian view, we could call it a *substance theory*

of concrete particulars. Now, I have done no more than provide a rough sketch of the substance theorist's approach. To be anything like a complete ontological theory, the sketch I have provided would need elaboration in a variety of different directions. To conclude the discussion, I will mention a few of the areas where the account needs filling in. First, I have oversimplified the Aristotelian account by speaking of the proper kind under which a particular falls. The fact is that every living being falls under many different kinds. Biologists tell us that besides being human, every human being is a primate, a mammal, a vertebrate, and an animal, and Aristotelians who embrace this biological taxonomy will presumably hold that our belonging to each of the relevant kinds is essential to us. They will deny, however, that this means that we have several different essences; for they will claim that the kinds to which a thing belongs form a nested hierarchy and that the more general kinds are included in or implied by the less general kinds in the hierarchy. It is the lowest-level kind, the *infima species*, to which a substance belongs that gives us its complete essence.

Second, this claim implies that the essences of concrete objects are inherently general, that essences are things shared by all the members of a kind. It is important to note that not all defenders of essences agree with Aristotelians on this point. Leibniz and others have insisted that each particular has its own *individual essence*, and they have pointed to the identity properties mentioned earlier in this chapter, properties like *being identical with Sam* and *being identical with Peter*, in support of their view.³² Every particular substance has a property of this sort, they have claimed; the identity property associated with a particular is necessarily unique to it; and it is essential to its bearer. Defenders of what we might call *Leibnizian* as opposed to *Aristotelian essentialism* go on to argue that the individual essences they champion are required for the solution of a whole host of philosophical problems. Aristotelians need to reply to these claims. They need, on the one hand, an account of the identity properties Leibnizians take to be individual essences. Here, they might try to find compelling reasons for denying that there are any properties of the sort Leibnizians posit; alternatively, they might argue that such properties are mere constructions out of the attributes, both essential and accidental, that are associated with a particular substance. They must, on the other hand, show that armed merely with their general essences, they can resolve the philosophical problems that Leibnizians claim force us to appeal to individual essences.

Third, Aristotelians deny that every item we are prepared to call a concrete particular counts as a substance; but, then, they owe us an account of "things" like mountains, automobiles, and carpenters. If they are not full-fledged realities, then what are they? One line of reply (defended recently by Peter van Inwagen) is simply to deny that there are such things as mountains and automobiles.³³ According to this austere version of the Aristotelian approach, the only material entities that exist are living beings and physical simples. Proponents of this view need not deny that nonphilosophers often speak truly

when they use words like 'mountain' and 'automobile'; but if they do not, they will insist, as van Inwagen does, that what nonphilosophers say when using words like these can be paraphrased in a way that makes it clear that their claims do not imply the existence of anything beyond living beings and physical simples. Aristotle's own way of tackling this set of issues is quite different. He takes the claim that there are no such things as mountains, clocks, and carpenters to fly in the face of deep prephilosophical intuitions. To accommodate those intuitions, he introduces the view that the verb 'exist' has a variety of senses or meanings.³⁴ It has a primary or core sense and a variety of secondary or derivative meanings. In the primary or core sense, the term applies exclusively to the things Aristotle calls substances; but Aristotle insists that this restrictive use of the term is fully compatible with the use of the term in one of its secondary senses to characterize the ontological status of lower-grade particulars. Things like mountains, clocks, and carpenters exist all right, but they do so only in a secondary sense of the term 'exist.'

Finally, apart from any physical simples they may recognize, the things Aristotelians call substances are entities with complex physical structures. Every living being is a thing with a variety of physical parts. This fact raises questions about Aristotelians' claim that substances are irreducible unities. Although one might concede that the Aristotelians' substances cannot be construed as constructions out of their properties, one might wonder, first, whether the physical complexity of living beings entails that they are mere collections of their physical parts and, second, whether the form of existence or way of life associated with any kind of substances can be explained by reference to the behavior and characteristics of their physical parts.

These questions raise the issue of reductionism; and that issue is both important and large. If the threat of reductionism is genuine, the Aristotelian account is in deep trouble; and from the time of Aristotle onwards, defenders of a substance theory have been anxious to dispel the threat. Aristotle's own response to the reductionist is as interesting and sophisticated as any. The response is two sided. When we speak of the parts out of which a living being is composed, Aristotle claims, we can be talking of the sorts of things the layman takes to be its parts – things like arms, legs, eyes, kidneys, heart, and stomach – or we can be talking about the sorts of elementary entities physicists invoke in their attempt to characterize the ultimate structure of all material objects. What counts as elementary in this second sense will, of course, vary from one physical theory to another. Democritus spoke of atoms; Empedocles spoke of the four elements; and Aristotle followed him in this. In our own day, it is basic particles, things like quarks, muons, and gluons, that are taken to underlie the material structure of the world.

Now, Aristotle argues that if we are speaking of parts in the layman's sense, the fact that living beings are composed of parts does nothing to call into question the irreducible unity he ascribes to them.³⁵ As he sees it, the essence of any organic part of a living being can be identified only by reference to the whole living being whose part it is. The human kidney, for example, is an

organ that plays a certain kind of role in the total functional economy of a human life; and Aristotle takes this fact to be constitutive of the essence of a human kidney. Its being a kidney just is its being a thing that plays the relevant role in a human life. Similar claims, Aristotle thinks, hold true for all the organic parts of living beings; and what that shows, he claims, is that so far from being reducible to their organic parts, living beings are prior to those parts.

But Aristotle realizes that this strategy for dealing with reductionism will not work for the items the physicist takes to underlie the material structure of living beings. Such items obviously have an essence or identity independent of the wholes into which they enter, so the claim that living beings are nothing more than mere collections of such items and the claim that the form of life associated with any substance kind can be reduced to the characteristics of and relations between such items needs to be dealt with in other terms. Aristotle's discussions of these claims are both difficult and long. For our purposes, two points he makes in the course of these discussions are worth highlighting. First, Aristotle argues that while the relevant physical simples may be genuine substances when they exist independently of their incorporation in an organic system, that fact is compatible with their having a lower-grade ontological status when they are present in a living being. Toward developing this suggestion, Aristotle tells us that when they are found in a living being, physical simples are only *virtual* or *potential substances*.³⁶ They are not, in that context, actual substances, so their presence in the living being does not compromise its integrity or unity. They have, however, the potentiality to exist outside the organic context; and when and if they do, they exist as actual substances or full-fledged beings in their own right. Second, Aristotle argues that the functional economy of a living being is essentially or necessarily *teleological* in the sense that it involves one thing's being for or acting for the sake of another.³⁷ Aristotle points out that physical simples do not exhibit the teleology of organic systems, and he challenges the reductionist to show how the essential teleology of living beings can be derived from systems of objects none of which are teleological. Aristotle was confident that none of the reductionists of his day, philosophers like Democritus and Empedocles, could meet this challenge. If their claims about the unity and irreducibility of substances are to be viable, Aristotelians of our own day must be prepared to issue the same sort of challenge and to respond to the reductionists' attempts to show it can be met.

Notes

- 1 Armstrong (1989a: 38).
- 2 Some might prefer to use the label 'substratum theory' more broadly to refer to any view that both recognizes the existence of attributes and rejects the account discussed over the course of the next few pages and dubbed 'the bundle theory.' I am using the label more narrowly to pick out only those anti-bundle theory

accounts of concrete particulars that construe the literal possessors of the attributes associated with a familiar object as things that are, in themselves, bare of all attributes.

- 3 *Metaphysics* Z.3 (1029^a22) in McKeon (1941).
- 4 This is only an approximate quote from Locke. For the actual passage in question, see Locke (1690: II.xxiii.6; see also II.xxiii.2).
- 5 Russell, "On the relations of universals and particulars," in Russell (1956).
- 6 See Bergmann (1967: 24) and Allaire (1963).
- 7 This is not to say that for any pair of attributes that enter into the constitution of a familiar particular, it is a contingent fact that they are "found together." Some of the attributes constitutive of an object may be correlated necessarily. Thus, it is a necessary truth that any trilateral object is triangular. The point is rather that for any concrete particular the fact that *all* of its attributes are "found together" will be contingent.
- 8 Berkeley (1710: paragraph 1).
- 9 Hume (1739: Book I, Part I, Section vi).
- 10 Russell (1940: 93).
- 11 Ayer (1954).
- 12 Williams (1953: 4–8).
- 13 See Hochberg (1964) and Castañeda (1974).
- 14 Hume does not show any inclination to endorse a set theoretical account. See his views about abstract ideas in Hume (1739: Book I, Part I, Section vii).
- 15 See Russell (1940: 315–21). Russell's view receives support from the "new theory of reference" as found, for example, in Kripke (1972).
- 16 For attempts to formulate a version of the bundle theory that does not have this consequence, see Gasking (1960) and Simons (1994).
- 17 Exceptions include, besides D.C. Williams, Keith Campbell and C.B. Martin. See Martin (1980) and Campbell (1990).
- 18 See Bergmann (1967: 22–4); Allaire (1963: 281–3). For a more detailed discussion of the Identity of Indiscernibles, see Black (1952). A.J. Ayer responds in Ayer (1954).
- 19 A more precise characterization of the distinction between pure and impure properties can be given by saying that a property, *P*, is impure just in case there is some relation, *R*, and some contingent concrete particular, *s*, such that necessarily, for any object, *x*, *x* has *P* if and only if *x* enters into *R* with *s* and that a property, *P*, is pure just in case it is not impure.
- 20 One response here is simply to deny that space and time are "impure structures," structures involving impure properties. The defender of an absolute, as opposed to a relational theory of space and time would deny this; but I am inclined to think that few philosophers who find the notion of bare substratum problematic would be inclined to endorse the idea of an absolute space and an absolute time. To endorse absolute space and absolute time is to suppose that there are spatial points that differ from each other numerically, but not intrinsically, and that there are temporal moments that differ from each other numerically, but not intrinsically; furthermore, it is to suppose that these spatial points and temporal moments are such that necessarily, no more than one material thing can be at a given point at a given moment. In the next section, we will see that these features – differing numerically, but not intrinsically and being limited to just one object – are those that distinguish bare substrata. The philosopher who endorses the

- idea of absolute space and time, then, is committed to the existence of entities with all the features bundle theorists find problematic in bare substrata.
- 21 But there are exceptions. See, for example, Casullo (1984) and O’Leary-Hawthorne (1995).
 - 22 Speaking of two discs that are the same in all their nonrelational features, Allaire tells us that on the substratum theory, “The difference of the discs is accounted for by each containing a different individual; the sameness by each containing literally the same characters,” Allaire (1963: 283).
 - 23 See Allaire (1963: 288).
 - 24 C.B. Martin, a trope-theoretic substratum theorist, makes this claim in Martin (1980).
 - 25 Sellars poses this objection in “Particulars,” included in Sellars (1963a: 282–3).
 - 26 See, for example, Bergmann (1967: 26).
 - 27 Perhaps the problems I have isolated in realistic versions of the bundle theory and in the substratum theory explain the comeback that trope-theoretic versions of the bundle theory have made in recent years. See, besides Campbell (1990), Simons (1994) and Bacon (1995).
 - 28 This strand of Aristotle’s thinking is prominent in *Categories* 5. Although his subsequent analysis of concrete particulars as matter-form complexes complicates things, he remains anxious to hold onto the idea that one cannot reduce the notion of a particular falling under a natural kind to materials that do not involve that kind. See *Physics* II.1 and 8 as well as *Metaphysics Z* and *Θ*, all included in McKeon (1941). Contemporary defenders of different versions of the Aristotelian approach include G.E.M. Anscombe (Anscombe [1964]), P.F. Strawson (Strawson [1959], Part I), David Wiggins (Wiggins [1980]), Michael Loux (Loux [1978a: chap. IX]), Peter Van Inwagen (Van Inwagen [1990]), and Joshua Hoffman and Gary Rosenkrantz (Hoffman and Rosenkrantz [1994]). These authors differ from one another in important ways. No one of them would endorse all the claims I associate with what I call “the Aristotelian view.” What I call “the Aristotelian view” is simply the view one finds in Aristotle himself, although my statement of it has a modern ring. The view I outline represents an historically important alternative to both the bundle theory and the bare substratum theory. It is not, however, the only alternative; one could join Aristotle in being, say, an essentialist without endorsing his doctrine of natural kinds or his views about the role that kinds play in the individuation of their members.
 - 29 For a recent statement of these themes, see Chisholm (1976: 37–52).
 - 30 See Aristotle, *Categories* 5; Wiggins (1980: chap. 1); and Loux (1976b).
 - 31 See Loux (1978a: 158–66) for further discussion of this point.
 - 32 For further discussion of the core insights of Leibnizian essentialism, see Chapter Five.
 - 33 See Van Inwagen (1990: 98–114).
 - 34 See, for example, *Metaphysics Γ.2* and *Z.1*.
 - 35 See, for example, *De Anima* II.1 (412^b10–24) in McKeon (1941).
 - 36 See, for example, *Metaphysics Z.16* and *H.5–6*.
 - 37 See *Physics* II.1 and 8 for Aristotle’s defense of the teleology inherent in living beings.

Further reading

Classical empiricist thinking on the nature of ordinary objects is found in the discussion of substances in Locke (1690), the opening paragraphs of Berkeley (1710), and the section on substance in Hume (1739). For an introduction to twentieth-century versions of the bundle theory, the student is directed to Williams (1953) and Ayer (1954). In the latter, we have a response to the influential criticisms of the Identity of Indiscernibles found in Black (1952). More recent discussions of the bundle theory are found in chapter VII of Loux (1978a) and in Van Cleve (1985) and Casullo (1984). The clearest statement of the bare particular view is found in Allaire (1963). For Aristotelian approaches, see chapter I of Strawson (1959), chapter IX of Loux (1978a), and Van Inwagen (1990). The pieces by Black, Allaire, Van Cleve, Williams and Casullo are all included in *Metaphysics: Contemporary Readings*.