

On Unity and Simple Substance in Leibniz

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Abstract

What is Leibniz's argument for simple substances? I propose that it is an extension of his prior argument for incorporeal forms as principles of unity for individual corporeal substances. The extension involves seeing the hylomorphic analysis of corporeal substances as implying a resolution of matter into forms, and this seems to demand that forms, which are themselves simple, be the only elements of things. The argument for simples thus presupposes the existence of corporeal substances as a key premise. Yet a theory of simple substances as the elements of things threatens to preclude the existence of corporeal substances for Leibniz, and the extension of the argument for forms into an argument for simples is not cogent. If nothing else rides on the simplicity of individual substances, then perhaps instead of being its most fundamental tenet, the doctrine of simples—the monadology—is something that over-extends and destabilizes Leibniz's metaphysics.

My topic is Leibniz's ontology of substance, in particular his doctrine of simple substances according to which reality consists in an infinity of incorporeal, indivisible, simple, active, mind-like beings whose only qualities are perception and appetite and from which all other things result. Leibniz calls these simple beings 'monads'—invoking the ancient name *monas* "signifying unity or what is one" (G VI,598) that the Greeks used for Plato's Forms—and, echoing the title given to Leibniz's famous 1714 essay, we might call this doctrine his 'monadology'.¹

Why does Leibniz advance a monadology? That is, what reasons does Leibniz offer in support of this doctrine? What are his arguments? Since the doctrine itself is complex, even as sketched here in its barest outlines, the question may be better posed in several parts. Why incorporeal? Why indivisible? Why simple? Why active? Why mind-like, etc.?

In the present essay I want to focus on the question of simplicity. It is clear what Leibniz means by saying that a monad is simple. In the first line of "Monadology," he writes:

The monad, which we shall discuss here, is nothing other than a simple substance that enters into composites; *simple*, that is to say, without parts. (G VI,607/AG 213)

Yet why does he hold that substances, *any* substances, are simple? In fact it is obscure just what his reasons are.² I believe there is a certain line of thought that leads Leibniz to a doctrine of simple substances, one that also tells us why and in what respect substances are incorporeal and indivisible, and even why there are infinitely many of them. (A distinct line of thought, which we shall briefly touch on also, tells us why substances are active, and it too supports the view that substances are incorporeal. The “idealistic” features of the monadology, the mind-likeness of the monads, will play a short role in our discussion as well. But it is no aim of the present study to pursue Leibniz’s idealism or dynamism.) My purpose is to articulate that line of thought in enough detail to make clear just what Leibniz’s principal argument is for the simplicity of his simple substances. That is the main point of the essay.

Alas, I must introduce a few caveats. In fact I think there are two lines of thought that might seriously be considered as Leibniz’s own reasons in favor of simple substances. The second of those—a certain way of developing his idea that aggregates borrow their reality from constituent unities—cannot be properly treated within the compass of the present work. We shall address the “borrowed reality” argument in a few places below and see how it might be supplemented, by a particular premise, to show that there are simple substances. But an analysis of it as a potential argument for simple substances independently of that added premise will have to wait for another occasion.³ What I consider here as Leibniz’s principal argument, then, is only one of at least two “major” possibilities. Still, I think it is a line of thought that drives Leibniz’s philosophy of substance and is the one that best explains his embrace of simples. Even with the focus limited to this particular way of approaching a doctrine of simple substances, I cannot claim to have resolved the obscurity as much as one might wish, and some uncertainty remains about precisely how Leibniz understands this argument for simples. What I say at some points will also no doubt be controversial. I hope the inquiry will offer some light nonetheless.

On some traditional interpretations of Leibniz’s “mature” ontology, there are nothing but simples in the category of substance: monads and nothing else. In particular, on this view, there are no corporeal beings in the category of substance—Leibniz’s references to such entities being either immature, disingenuous, exoteric, experimental or just references to simple substances under another name⁴—and so by allowing only the mind-like monads as substances Leibniz qualifies as a

ON UNITY AND SIMPLE SUBSTANCE IN LEIBNIZ

“substance idealist.”⁵ The textual and conceptual evidence for substance idealism in Leibniz’s later writings, in particular, is considerable.⁶

But I think readings of Leibniz’s metaphysics that exclude corporeal substance from his ontology cannot express the correct view of his position. This is not a new idea. Recent commentators have argued against the substance-idealist tradition, noting a wealth of evidence from the texts and the contexts of their composition for ascribing to Leibniz a “realistic” commitment to corporeal substances, especially animals and other organisms, in his “middle years” and even in his later writings.⁷ Thus the issue of corporeal substances and substance idealism in Leibniz is host to a number of scholarly disputes; it is even in question whether Leibniz has a position on those topics at all in many of the most important texts.⁸

My aim in this essay is not to adjudicate those disputes. But the argument for simple substances that I find in Leibniz will allow us to try a somewhat different angle on the question of corporeal substances. I think perhaps the most potent reasons for denying that Leibniz’s ontology is correctly understood as a form of substance idealism are located in the doctrine of simple substances itself. This might seem an unpromising route. One familiar line of argument in favor of the substance-idealist reading holds that the doctrine of simple substances directly implies that there are no corporeal substances, for everything that is not a simple substance must be a construction out of simples, and no construction out of simples could itself be a substance for Leibniz.⁹ This “Construction Problem,” which we shall examine in detail, poses a real difficulty for the idea of corporeal substance in a metaphysics of monads, and it may not be answerable.

Still, I shall argue that once the whole train of Leibniz’s argument for simple substances is in clear view, it will be seen that corporeal substances—composite beings that are true unities, one *per se*—are integral to his case for simple substances.¹⁰ Their existence is presupposed as a key premise in his argument. At least, insofar as Leibniz’s argument for simple substance is the one discussed in the pages below—and assuming it is not just a metaphysical dogma but a view given on the basis of arguments—his doctrine of simple substances requires the existence of corporeal substances. (There will be a “methodological” point in what follows as well, though I hope a relatively minor one: I shall suggest that Leibniz’s doctrine of simple substances is to be understood as essentially involving the argument that supports it.) Moreover, the line of thought that eventuates in the theory of simple substances appears, on analysis, not to be cogent at a few late stages—late enough,

in fact, for Leibniz's ideas to have flowered into his characteristic metaphysics of matter as infinitely divided and as containing souls and incorporeal forms in it everywhere, but prior to the inference to simple substances as such. To the degree to which the Construction Problem reveals a tension between the idea of simple substances and the idea of corporeal substances, it might be wondered whether the monadology itself, rather than being an inevitable and fundamental feature of Leibniz's metaphysical thought, is not finally a destabilizing extension of it.

1. Unities *per se* and the Construction Problem

Let us begin by laying out the problem about the construction of unities from simples and seeing clearly why, given key principles of Leibniz's thought, a world of monads would seem to rule out the existence of corporeal substances. Recall Leibniz's distinction between substances and aggregates, drawn in terms of unity.¹¹ Substances—the fundamental beings in the world's inventory—have a “unity” or “one-ness” that is intrinsic to them. They are beings of which it is unqualifiedly true to say: here is some *one* thing.¹² Leibniz describes beings that have this sort of unity as ‘true unities’ or ‘substantial unities’ or ‘one *per se*’.

By contrast, aggregates do not have this sort of unity. Aggregates may be aggregates *of* substances, but they are not themselves true unities, one *per se*. Rather, they are only multitudes, pluralities, heaps. Whatever unity an aggregate may enjoy is extrinsic to it, an aspect of the way its constituents are represented in thought to some mind. In truth, an aggregate (using the singular now merely as a courtesy or shorthand) is not one thing at all but only so many distinct beings: those beings that are aggregated together. Leibniz describes the unity of an aggregate as ‘accidental’ or ‘mental’ or a ‘fabrication of the mind’. He mentions as examples of aggregates: a flock of sheep, a circle of men holding hands, a bundle of sticks, a pile of stones, a block of marble, the Dutch East India Company and all its officers, a pair of diamonds bound together in a ring, a house, a ship, a chain, an army, and so on.¹³ We can even construct an aggregate from “all the Roman Emperors,” he says, despite the fact they never even exist together at a single time; it suffices that they be “considered together” in one thought (A VI,4,627).

It is a metaphysical distinction that Leibniz draws between mere aggregates and true unities, but it is not hard to grasp and his examples bring it out well. A man is truly one thing its own right; a circle of men holding hands is not truly one thing but only so many things, the many individual men. Further, Leibniz is severe in

ON UNITY AND SIMPLE SUBSTANCE IN LEIBNIZ

his views about what it would take for something to qualify as a true unity. Two triangles at a distance from one another do not form a true unity, and placing them together so as to touch would seem to make no metaphysical difference either (G II,71-2). In fact nothing merely corporeal in nature—no “mode of extension,” to use the Cartesian phrase—could truly unite *many* things into some *one* thing, he claims. Neither contact nor a common motion, nor regular or irregular arrangement, nor participation in a common plan, nor any other merely physical connection among many parts will suffice to form a true unity (cf. G II,101). With so many modes of connection failing to yield something that is truly one being, it becomes hard to see how any composite being could be a true unity, a substance.

Now consider the prospect of corporeal substances in a world of simples. To be substances they would have to be unities *per se*, yet as corporeal beings they would also have to be composites, on Leibniz’s view, for all corporeal beings have parts. And so not being simples themselves, corporeal substances would have to be constructions out of simple substances. The difficulty then arises that there seem to be no resources in Leibniz’s metaphysics for effecting the construction of a unity *per se* out of a plurality of simple substances. Accidental unity would appear to be their metaphysical limit.

Two further elements of Leibniz’s metaphysics compound the difficulty. First is his “idealism” about the qualities of simple substances. Simples, he says, contain only “perception and appetite” as intrinsic properties (G II,270), where these are understood as mental qualities, or what we can call ‘ideas’ for short. Second is Leibniz’s view that relations, like all “denominations,” must always be “founded” in the intrinsic qualities of the relata.¹⁴ Putting the two together, it follows that the only connections there can be between simple substances must somehow reduce to (or supervene upon) no more than a matter of coordination among their ideas. And even if we allow that a coordination of ideas might define a specific aggregate or multitude of things, distinguishing just those beings from the rest of the universe, it is hard to see how this could amount to a “real union” which constitutes something that is truly one being. Robert Adams puts a fine point on it:

There is no way for the unity of a corporeal substance to be anything over and above the system of relations among perceptions of simple substances. But aggregates, too, are united by relations among the perceptions of substances, according to Leibniz. [...] so on this line of thought it might seem that the unity of a corporeal substance is of the same kind as the merely accidental unity of an aggregate. (Adams 1994: 293)

This is a serious problem, and arguably fatal to any attempt to domesticate composite corporeal substances into the framework of the monadology. (Adams 1996: 119)

Since putative corporeal substances could have no greater unity than that of an aggregate, they can be no more than accidental unities and thus not unities *per se*. Therefore the corporeal substances Leibniz talks about could not be substances, strictly speaking, unless somehow they are just simple incorporeal substances under another name.

This Construction Problem strikes me as a difficult one, and I am not inclined to argue that Leibniz has an effective answer to it. I don't understand how a corporeal substance, one *per se*, could be constructed from an infinity of monads and their ideas. I confess that I picture the monads as a lot of marbles with little movies playing inside them. I don't see how any way of manipulating the marbles or their inner movies or the relations among their playlists could bring into existence some further being that is a true unity or one *per se*. Maybe my picture thinking is the obstacle holding up my understanding here. But as it stands, I do find the Construction Problem to be quite compelling.

Nonetheless, I do not think it offers a compelling reason for holding Leibniz to be a substance idealist, i.e. to admitting only monads in the category of substance, even in the period in which he clearly endorses the doctrine of simple substances. That is, even if we accept it as fatal to "the project of domesticating composite corporeal substances in the framework of the monadology," I do not think the Construction Problem should lead us to accept that Leibniz's doctrine of simple substances implies that there are no corporeal substances. This will need explaining, of course, and to provide it we must consider what Leibniz's argument is for simple substances.

2. Simples and Composites

By 1695, and perhaps as early as 1690, it is clear that Leibniz is adopting a commitment to the existence of simple substances.¹⁵ By 1698 the term 'monad' begins to appear in his writings,¹⁶ and within five or ten years the "framework of the monadology" has taken on its full, distinctive shape. It is hard to find any decisive statements of an argument for the existence of simple substances in the early development of the doctrine. The clearest and most unambiguous remarks on behalf of simples may be those occurring in "The Principles of Nature and Grace" (1714)

ON UNITY AND SIMPLE SUBSTANCE IN LEIBNIZ

and in the “Monadology” (1714) itself. In the latter, Leibniz follows his clarification of the term ‘monad’ with a compact argument for simple substances:

And there must be simple substances, since there are composites; for the composite is nothing other than a [collection or] mass or *aggregate* of simples. (Mon. 2, G VI,607/AG 213)

This repeats the argument of “Principles of Nature and Grace” (PNG), in which he writes:

Compounds, or bodies, are multitudes; and simple substances—lives, souls, spirits—are unities. And there must certainly be simple substances everywhere, for without them there would be no compounds. (PNG 1, G VI,598/AG 207)

If the statements are clear, the argument they contain is not. Composites or compounds require simples, Leibniz tells us, but *why*? Composites are nothing but aggregates of simples. But what is his reason for accepting that?

In the passage from PNG 1, Leibniz notes that simple substances are unities, perhaps even equating simples with unities. But there is an important distinction between simplicity and unity. Nothing about unity automatically requires the view that something is a unity only if it is simple or partless—not, that is, without further argument. What is missing here is precisely the principle that would establish such a link. If it is obvious that anything that is simple is a unity, and this seems obvious, it is not yet just evident that *only* simples can be unities; and Leibniz does not say why this should be so. Nor could he plausibly take it to be self-evident or somehow true by definition, since at other (earlier) points in his career he appears clearly to hold that some composites are unities—*true* unities, one *per se*—despite their division into parts, as in the letters to Antoine Arnauld.¹⁷

Leibniz’s compact argument in PNG and “Monadology” recalls a similar line of reasoning about aggregates that Leibniz puts forward in a number of texts, with particular clarity in letters to Burcher de Volder, for instance in this passage written in 1704:

I have undertaken to prove that there are these things [*unitates*] from this: because otherwise there would be nothing in bodies.

First, what can be divided into many consist of many or are aggregates. Second, whatever are aggregates of many things are one only on account of the mind, and they have no reality except what is borrowed [*mutuatam*], that is, <the reality> of the things from which they are aggregated. Therefore, third, what can be divided into parts have no reality unless there are in them these

things which cannot be divided into parts. Indeed, they have no other reality except that of the unities which are in [them]. (G II,261)¹⁸

The argument offers much to consider, and it sustains extended analysis.¹⁹ For the purposes of this essay, however, we shall note only a modest point: Leibniz does not conclude that there must be simples. The argument is for the existence of unities—*indivisible* unities, to be sure, but first of all only for unities and not immediately for simples.²⁰ (And as we have noted, even indivisible unity does not automatically entail simplicity for Leibniz. “Containing many” is one thing; “consisting of many” or being “divisible into many” in the relevant respect may be something else yet.) Although Leibniz undoubtedly accepts a doctrine of simple substances at this time and takes simples to be the unities that provide reality to aggregates, he does not represent the “borrowed reality” argument as implying this of its own accord. Some further reasoning—perhaps some additional premise—is needed.

An additional premise that will suffice to extend the “borrowed reality” argument is not hard to find, however. Suppose composites are nothing more than aggregates, so that the reality of anything that has parts is always only borrowed reality. If, as the argument contends, every aggregate requires for its very existence something with unborrowed reality, and anything with parts is only an aggregate, then there must be a class of beings with unborrowed reality that contains only simples. Thus adding the idea that composites are nothing but aggregates to the “borrowed reality” argument yields an argument for simple substances.

The premise that composites are nothing but aggregates does not appear in the letters to de Volder, but it does so expressly in “Principles of Nature and Grace” and “Monadology,” in the very passages observed earlier: “Compounds, or bodies, are multitudes” (PNG 1); “the composite is nothing other than a [collection or] mass or *aggregate* of simples” (Mon. 2). Thus perhaps what we find in those texts is exactly an argument for simple substances that is mounted by combining the “borrowed reality” argument with the “added premise” that composites are nothing but aggregates—the monadology of “Monadology” completes the reasoning advanced in the letters to de Volder.

Is this, then, Leibniz’s argument for the doctrine of simple substances? I think the answer is no. Or, at any rate, I think this is not the original and basic argument for simples, not the one that leads him to a doctrine of simple substances and explains why he accepts it, though it may be the argument that Leibniz intends, or abbreviates, in PNG 1 and Mon. 2. Leibniz’s move towards a theory of simple

ON UNITY AND SIMPLE SUBSTANCE IN LEIBNIZ

substances begins to show itself in the 1690s, perhaps as early as March of 1690. His argument for unities was well-entrenched for at least a decade prior to that point, from about 1679, and it is clear in the interim that Leibniz means to defend an ontology of corporeal substances—composite beings that are true unities and not mere aggregates.²¹ In fact, the argument for unities is presented during that period as an argument for *corporeal* unities, beings consisting of many parts. This is incompatible, of course, with taking composites to be nothing but aggregates, and so if the remarks in PNG 1 and Mon. 2 are intended to rule out the possibility of composite unities, then at the very least Leibniz must have a change of mind about composites by 1714. What is then left unclear is *why* Leibniz comes to think composites must be nothing but aggregates, why they cannot qualify as true unities. And, in the context of his philosophical development, the reasons for that change of mind will be crucial to understanding Leibniz's argument for simple substances.

This aspect of Leibniz's case for simple substances in PNG 1 and Mon. 2 seems obscure. There is no obvious signal of his reasons for abandoning the possibility of composite unities (if that is indeed what he does). Reading backwards from PNG and "Monadology" to the letters to de Volder would seem to help us identify Leibniz's argument for simples and the precise step in it whose origins and justification are the missing link in our effort to reconstruct the chain of reasoning.

What I would suggest here, however, is that this link simply is missing, that Leibniz has no independent grounds for denying that composites could be unities, no grounds that are prior to the claim that there are simple substances. Instead what I think he comes to find are grounds for holding that his own view of composite, corporeal substances implies that there must be simple, incorporeal substances and that in the end all beings "reduce" to those simple substances. That is, I think Leibniz comes to have reasons for accepting a metaphysics of simple substances that are separate from the direct argument for simples in PNG and "Monadology"—separate, at any rate, from the premise that composites are nothing but aggregates. So it is not that Leibniz discovers that composites cannot be unities and is then left with simples as the only open possibility; rather, he comes to see that even within a metaphysics of composite substances (*viz.*, his own theory of corporeal substances), there will have to be simple substances. And subsequently the ontology of composite unities is pushed out of the picture, being either dropped altogether or at least relegated to the margins, without any decisive independent reason having emerged to deny that composites could be unities.

Reading backwards from PNG and "Monadology" to the letters to de Volder

gives rise to a certain illusion about Leibniz's reasons for simple substances, the illusion that Leibniz strikes upon some idea about composites and the demands of unity that yields the last step needed to complete his proof of simple substances. Reading forward from his earlier works and following the order of discovery dispels that illusion and replaces it with a more complex view of his philosophy. Or so I will argue.

My discussion so far has insisted at several points that Leibniz allows for composite unities—corporeal substances, one *per se*—in his writings of 1679-1690. In fact I think the bulk of his argument for a metaphysics of incorporeal simples is developed in the course of making his case for corporeal substance in that period. It is time to provide the details.

3. Substances and Incorporeal Principles of Unity

In the winter of 1675-6, Leibniz makes a close study of Descartes's *Principles of Philosophy* (cf. A VI,3 N.15), evidently taking note of its striking demonstration in Book 2, sections 33-35, that matter is actually infinitely divided into parts. There Descartes observes that in order for motion to occur in a plenum it must always take place by means of circulation, so that some matter is always flowing back into the spaces from which other bodies move out, closing up the gaps before they can open, so to speak. This is how motion in a plenum is possible. The special case of motion through unequal spaces raises a difficulty: in order for the moving matter to conform to the varying spaces, it must break into parts that can be re-arranged to fit any space (matter is conceived as essentially inelastic). If the shape of the space varies continuously, and thus offers an infinite gradation of different subspaces, then any body of matter moving through that space must likewise be able to accommodate an infinite gradation of actual changes of its shape. This, Descartes says, means that the moving parcel of matter will have to be actually divided into smaller and smaller parts *ad infinitum* to ensure a constantly perfect fit with the spaces through which it travels. In a review of the *Principles* he will write years later, Leibniz praises Descartes for this demonstration, calling it “most beautiful and worthy of his genius” (G IV,370).

By the Spring of 1676, the actually infinite division of matter has become a fixed feature of Leibniz's thought. In fact he elaborates the Cartesian conclusion from the special case to the general one, holding that motion is ongoing constantly everywhere in the universe and so every part of matter is actually subdivided into

ON UNITY AND SIMPLE SUBSTANCE IN LEIBNIZ

further parts *ad infinitum*.²² The hypothesis of infinite division introduces difficulties of its own, including one in particular about the unity of bodies. In the tradition of Plato, Leibniz holds that unity and being are reciprocal: something is a unity if and only if it is a being (cf. G II,97, 304, 446).²³ The idea that a body is subdivided into parts raises at least a *prima facie* doubt about its unity: if it is to be truly one thing and not just so many distinct things, what makes that true? In virtue of what is a body truly one thing and not just a multitude? The reciprocity of unity and being makes this at once into a doubt about the being of a divided body: if it is not truly a unity, it is not truly a being—it does not truly exist. Given now that every body in the universe is further subdivided into parts, and those parts further subdivided and so on *ad infinitum*, unless there is something in virtue of which something with many parts can form a unity, there will be no bodies at all. If there are to be bodies at all, there must be some “principle of unity” for them, something in virtue of which individual bodies, despite their compositional complexity, can constitute something that is truly one being.

What Leibniz finds, however, is that no corporeal principle, no mode of extension, could ground the unity of a body, and so he is driven to “rehabilitate” the Aristotelian doctrine of substantial forms as *incorporeal* principles of unity for composite corporeal beings.²⁴ In a passage from the 1678-9 piece, *Conspectus for a little book on physics*, Leibniz writes:

Now there follows the subject of incorporeals. There are certain things in body which cannot be explained by the necessity of matter alone; such are the laws of motion; which depend on the metaphysical principle of the equality of cause and effect. Here therefore is to be treated the subject of the soul, and it must be shown that all things are ensouled [*animata*]. Unless there were a soul, or a kind of form, a body would not be a being, since no part of it could be assigned which would not again consist of further parts, and so nothing could be assigned in body which could be called *this something* or *some one thing*. (A VI,4,1988/Ar 233f.)

The problem about unity is evident here, as is the appeal to forms for its solution. Also in evidence is the kernel of Leibniz’s second principal reason for positing incorporeal forms: the laws of motion. Leibniz’s account of the corporeal world evolves alongside his critiques of the Cartesian view of body and motion. Descartes had claimed extension to be the whole essence of body and had articulated various laws of motion.²⁵ Leibniz would attack the Cartesian picture on almost every front,²⁶ but what matters at present is just to see that Leibniz’s assertion of forms

as incorporeals is drawn up against a (narrowly interpreted) Cartesian view of corporeity. On the side of the laws of motion, Leibniz argues that something besides extension must belong to bodies in order to account correctly for their dynamical properties: there must be forces in bodies that govern their movements and extension alone provides nothing in virtue of which bodies could possess such forces; thus beyond extension one must suppose inherent “principles of motion” or “principles of action” in bodies to serve as the basis for their dynamical properties. On the side of unity, Leibniz contends that there must be something besides extension in bodies in order to account for the existence of bodies as *beings*, something in virtue of which a body can be *some one thing* despite consisting of parts within parts *ad infinitum*—some “principle of unity” for bodies.

In both cases the posited “principles” will count as incorporeal by not falling under the attribute of extension. Also in both cases Leibniz associates these principles with the soul and calls them ‘forms’ (though he often refers to principles of motion as ‘entelechies’, and then sometimes goes on to identify them as forms (cf. G II, 119-21, G III, 227)). But we should take care not to assume that the two lines of argument are simply arguments for the same thing. In each case the posited incorporeal form is assigned a theoretical role defined by the particular argument behind it. In calling the one a principle of motion and the other a principle of unity, I hope to keep those two roles clearly distinguished (and even this division is a crude one: under the heading of motion one could certainly draw the lines more finely to sort out the various theoretical roles assigned to forms).

Leibniz’s idea that a single entity will serve to fill both roles is an ambitious further claim and one that, I think, need not be taken for granted in understanding the arguments he puts forward for incorporeals; and in the present essay I mean to sidestep the topics of motion and dynamics in Leibniz’s philosophy. Still, it is useful to contrast them against the topic of unity in considering Leibniz’s monadology. Monads are supposed to be incorporeal, indivisible, simple, active beings. Leibniz’s critique of Descartes on motion and dynamics will lead him to posit beings whose natures consist in activity, and this activity requires something besides extension in bodies and so something incorporeal. His critique of Descartes on the unity of bodies leads him to posit indivisible beings, and this indivisibility will likewise require something other than extension in bodies and so something incorporeal. It is thus over-determined in Leibniz’s philosophy that fundamental reality will include incorporeal principles in things. It is worth noting, however, that the question of simplicity will belong to Leibniz’s analysis of unity rather than to his analysis of

ON UNITY AND SIMPLE SUBSTANCE IN LEIBNIZ

motion and dynamics. If we want to know why monads are simples, or why Leibniz accepts a doctrine of simple substances, we shall need still to focus our attention on the topic of unity.

As we saw in the passage from *Conspectus for a little book on physics*, by early 1679 Leibniz turns to the hypothesis of forms to account for the unity of a body, i.e., for its existence as a being or some one thing, in the face of its division into parts. The argument's unstated premise is that extension alone includes nothing that could serve as a principle of unity; hence one is forced to posit incorporeals: "Unless there were a soul or a kind of form, a body would not be a being." After this point the texts in which forms are touted as principles of unity begin to pile up and a number of restatements of the basic argument can be found over the subsequent fifteen years or more. An especially clear example comes in a document tentatively dated to the winter of 1682-3, and in it the premise that went unstated in the *Conspectus* is more openly in view:

(1) I suppose that what has no greater Unity than the logs in a bundle of firewood or woodpile, or bricks placed on top of one another, is not properly one Being, but rather Beings, although one name can be supposed for them all.

And this is true whether they are close together or far apart, and likewise whether those bricks or logs in the pile are arranged together in an orderly way or not, for this does not give them greater Unity; likewise the individual parts may have some motion in common, or anything else that can be predicated of them all.

(2) I also suppose that nothing can be understood in a body other than extension or what has parts beyond parts.

(3) Finally, I suppose that every body is actually divided into several parts, which are also bodies.

From this it follows:

First, that there is no such thing as one body.

Second, that there are no such things as bodies either, these being nothing but one body after another.

Hence it follows that either bodies are mere phenomena, and not in fact real Beings, or there is something other than extension in bodies.

(A VI,4,1464/Ar 257f.)

The editors of the Akademie Edition of Leibniz's manuscripts have given this piece the neutral title *An corpora sint mera phenomena* or "Whether bodies are only

phenomena,” presumably reflecting the fact that the argument ends in a dilemma: either bodies are not real beings or there is something other than extension in bodies.

Of course by this time there is no doubt for Leibniz that there is something other than extension in bodies, something he argues on dynamical and, here, more “purely” metaphysical grounds. The argument from unity offers a *reductio* of the Cartesian conception of body. If the Cartesians were right, there would be no such thing as one body and thus no such thing as bodies at all; bodies would not be real beings but only phenomena, which is absurd. So premise (2), the Cartesian principle about the nature of body, is to be rejected.

Just a year or so later, in *On the Existing World* (1684-6?) we find Leibniz carefully spelling out the distinction between an accidental unity and a unity *per se*, and presenting the doctrine of substantial forms to account for the unity *per se* of corporeal beings.

Every real being is either a unity *per se*, or an accidental being. A *being (unity) per se* is, for instance, a man; an *accidental being (unity)*—for instance, a woodpile, a machine—is what is a unity only by aggregation, and there is no real union in it other than a connection: perhaps a contact or even a running together into the same thing, or at least an agreement observed by a mind gathering it into a unity. But in a being *per se* some real union is required, consisting not in the situation and motion of parts, as in a chain, a house or a ship, but in some unique individual principle and subject of its attributes and operations, which in us is called a soul, and in every body a substantial form, provided it is a unity *per se*. (A VI,4,1506/Ar 283)

So it is clear that the doctrine of substantial forms is introduced by Leibniz in order to solve the problem of unity for corporeal beings—a solution that is supposed to guarantee the existence of corporeal beings, that is, corporeal things which *are* real beings, unities *per se*.

If those last three texts belong to documents that have not attracted a great deal of attention, the same argument for forms as principles of unity can also be found in some of Leibniz’s most celebrated works, perhaps most famously his letters to Arnauld. A quite sharp formulation occurs in a draft of a letter Leibniz composed in late 1686:

Once it is granted [that bodies are substances], I believe that one can infer that corporeal substance does not consist of extension or divisibility. For you will grant me that two bodies which are at a distance—for example, two

ON UNITY AND SIMPLE SUBSTANCE IN LEIBNIZ

triangles—are not really one substance. But now let us suppose that they come together to compose a square [*composer un quarré*]: can merely being in contact make them into one substance? I don't think so. But every extended mass can be considered as composed of two, or a thousand, others. Extension only comes from contact. Thus you will never be able to find a body of which we can say that it is truly one substance. (G II,71-2/M 88)

Again the argument is a *reductio*: the conclusion that no body is a substance contradicts the given premise that (at least some) bodies are substances, and thus the Cartesian thesis that corporeal substance consists only of extension—the premise assumed for *reductio*—is refuted.

As a last example, consider also a letter Leibniz writes to Antonio Alberti (Amable de Tourreil) in 1694; by now the argument will speak for itself:

All bodies are actually divided into an infinity of parts, so that if there were nothing but extension in bodies, there would not be corporeal substance, nothing of which one could say 'Here is truly one substance'. For all corporeal mass is an aggregate of other masses, and those of others, and so on *ad infinitum*. Thus bodies would be reduced to pure appearances if they had in themselves only extension or a multitude, and nothing in which there was a principle of true unity. (G VII,444)²⁷

4. From Forms to Simple Substances I: The Idea of a Resolution into Forms

The problem of the unity of bodies is a problem about bodily substances. Unless there are forms to be principles of unity, there will be no such thing as *one* body, no body that is a *being*—no body that is truly a substance or unity *per se*. Still, note what the argument from unity does not yet establish. It does not establish a case for simple substances. True unities, yes, and so too incorporeal principles of unity; but not simples. The argument also demands that substantial forms as principles of unity not be divisible, lest the same problem about unity and division into parts simply arise again for forms, as Arnauld pointed out (cf. G II,66).²⁸ But the theory of substantial unity framed by the argument does not automatically yield any thesis about simple substances, and Leibniz does not claim that it does. All he concludes is that there are substantial forms and unities everywhere in things; that for every corporeal being which is truly a substance or *some one thing*, there is a substantial form that makes it so.

During the period in which the argument about the unity of bodies is most clearly

advanced, roughly 1679-1694, Leibniz maintains a doctrine of souls as substantial forms of corporeal substances, and it is discussed in a wide variety of his texts. By contrast there is almost no mention of the idea of simple substances.²⁹ Leibniz has not yet become absorbed in a monadology, as he will just a few years later.

It might seem a small step from a theory of indivisible unities and incorporeal souls to a theory of simple, incorporeal substances. But there is a conceptual gap between the two and it is not obvious how Leibniz negotiates the passage from one to the other. Our earlier look at the compact argument for simples on display in PNG and “Monadology” suggested that it might be understood as an extension of the argument for unities that Leibniz proposed in his letters to de Volder, one that takes over the idea that aggregates borrow their reality from their constituents and adds to it the premise that composites can be nothing but aggregates, since conjointly the “borrowed reality” argument and the “added premise” establish a need for simple substances. In that case the project of understanding Leibniz’s argument for simples comes down to understanding why Leibniz holds that composites can be nothing but aggregates. Seen now against the backdrop of his case for substantial forms as incorporeal principles of unity that make truly one substance of infinitely divided composite bodies, the “added premise” would itself seem to represent a major shift in Leibniz’s thought even separately from its implications for his ontology.

One idea would then be to see his doctrine of simple substances emerging in his philosophy as a consequence of his coming to hold, along with his other prior commitments, that composites are nothing but aggregates. But the development of Leibniz’s views suggest otherwise, for the doctrine of simple substances appears in his writings well before any clear articulation of the view that composites can be only aggregates. By 1695, for instance, in the “New System of Nature,” Leibniz is already defending the existence of “atoms of substance” that he concisely describes as “real unities absolutely destitute of parts” (G VI,478); and within a few years the term ‘monad’ itself comes into play.³⁰ And there is evidence as well that the idea of simple substances is taking hold as early as 1690 in Leibniz’s notes on a conversation with Michelangelo Fardella, which we shall examine below. What can be found in those documents, however, is not a subscription to the claim that composites are only aggregates but a rather different sort of reason for seeing the world as resolving into simple beings, one not directly concerned with the question whether composites could be more than mere aggregates. Moreover, it is a reason that can be seen as a natural outgrowth of Leibniz’s analysis of the structure of a corporeal substance conceived as a form-matter compound, i.e. as a composite being

ON UNITY AND SIMPLE SUBSTANCE IN LEIBNIZ

with an incorporeal form as its principle of unity. The idea is not hard to grasp in the abstract, and once it is in place it is not hard to see in the texts either.

Consider the hyломorphic analysis of a corporeal substance on Leibniz’s account. It is a compound of an incorporeal form and the matter of its body. Using ‘CS’ for corporeal substance, ‘F’ for form and ‘M’ for matter, we might abbreviate this analysis as follows:

$$(*) \quad CS = F(M).$$

This “formula” is for heuristic value and needn’t be taken rigorously as a mathematical equation. It is only schematic. But it is illuminating, nonetheless, to see how it may be expanded. (Here I follow discussions of Richard Arthur.³¹) Leibniz is clear that the relevant matter of a corporeal substance that is combined with its form is “secondary matter,” itself an aggregate of a number of corporeal substances that are included in the body of the encompassing one (cf. G II, 119). Letting the sign ‘+’ indicate aggregation, the analysis of matter as secondary matter is then:

$$M = (CS + CS + CS + \dots).$$

With those in hand we can “recursively” substitute terms into the right-hand side of (*) to generate the outline of an analysis of a corporeal substance into an infinite descending hierarchy of its constituents, yielding the following series of expressions in the analysans:

1. F(CS + CS + CS + ...).
2. F(F(M) + F(M) + ...).
3. F(F(CS+CS+CS...)) + F(CS+CS+CS ...) + F(CS+CS+CS ...) + ...).
4. F(F(F(M)+F(M)+F(M)...)+F((F(M)+F(M)+F(M)...)+F((F(M)+F(M)+F(M)...)+...)).

And so on, *ad infinitum*.

The resulting picture is intriguing because of the way forms appear as fixed points in the analysis—i.e. each term for a form introduced at any stage thereafter recurs in all subsequent stages—whereas each of the terms introduced at any stage for matter disappears at some later stage (just two stages later in the way the analysis is developed here). Although terms for matter appear at every finite stage in the analysis, it is tempting to see the following as the *limit* of the analysis:

$$F(F(F(F...)+F(...)+ F(...)+ ...) + F(F(...)+F(...)+F(...)+ ...) + F(F(..)+F(...)+ F(...)+ ...) + ...).$$

And thus it appears, tantalizingly, that in the end corporeal substances are resolved into forms alone. Every corporeal being, and so in fact the entire corporeal world, is finally nothing but an infinity of incorporeal forms.³²

This picture now also suggests an argument for simple substances. If in the end, there are only forms, then forms are the only elements of things. And if they are the only elements of things, they must be real beings in their own right, otherwise the things of which they are the elements will not be real either. But if forms are real beings in their own right, then forms must also be unities, substances, one *per se*. Since forms themselves have no parts, however, if they are substances in their own right, they must be simple substances. On this resolution of things into forms, therefore, we find that forms are simple substances—simple, incorporeal substances and the elements of all things. Thus a monadology.

5. From Forms to Simple Substances II: Evidence in the Texts (1690, 1695, 1712)

I do not know that Leibniz ever explicitly argues in the way just described for his doctrine of simple substances. I know of no passages in which he asserts, for instance, that forms must themselves be simple substances. Of course it would be strange for Leibniz to assert without qualification that forms are simple substances, since the traditional understanding of forms takes them to be “incomplete beings” whereas substances are “complete.”³³ The more natural thought linking forms to simples perhaps would be to suppose that the beings which constitute or play the role of forms—souls, say—have turned out, on analysis, to be substances in their own right.

In any case, I suspect this is the line of reasoning that leads him to adopt an ontology of simple substances. He does clearly observe how the analysis of corporeal beings seems in the end to resolve them into forms alone. And interestingly what may be the first occurrence of the term ‘simple substance’ in its characteristic use in his theory of matter appears in a 1690 document that includes a marginal note briefly pointing out the resolution of matter into forms. The document may record the two ideas—a doctrine of simple substances and the resolution into forms—taking shape in Leibniz’s thought together. But whether or not it chronicles the moment of origin for Leibniz’s monadology, the text is instructive, and it has attracted the attention of scholars.³⁴ It is the sheaf of Leibniz’s notes on his conversation with Fardella.

Fardella, apparently, had described Leibniz’s view as holding that bodies are composed of souls and that souls are substances, and had then objected on the grounds that souls would not be parts “intrinsically of the same sort” as a body

ON UNITY AND SIMPLE SUBSTANCE IN LEIBNIZ

but would be “essentially altogether different from it.” In reply, Leibniz clarifies his own position on a few points.

I do not say that the body is composed of souls, nor that body is constituted by an aggregate of souls, but that it is constituted by an aggregate of substances. Moreover, the soul, properly and accurately speaking, is not a substance, but a substantial form, or the primitive form existing in substances, the first act, the first active faculty. (A VI,4,1670/AG 105)

He goes on to say that while bodies are aggregates of substances, substances are not parts of bodies but *constituents* of them, what he elsewhere describes as an “essential internal requisite” (A VI,4,1669).³⁵ The organic bodies of individual substances (i.e. the masses of secondary matter that combine with their souls to make up unified substances), however, are of the same sort as the aggregates that contain them and are parts of those aggregates (cf. A VI,4,1670f.)

This leaves a question about how to understand the place of the incorporeal form or soul in the aggregate, and Leibniz perhaps struggles to a degree in answering it. The relation of a soul or form to a mass of matter, he says, is analogous to that of a point to a line. The point is a constituent of a line without being a part of it and is presupposed by the existence of the line, while a line segment in which there is such a point can be a part of the line. Likewise, a soul enters as a constituent into a mass of matter that contains the substance of which it is the soul, but the soul itself cannot be a “homogeneous part” of that mass. By contrast, the matter of the substance, for instance, the body of a man, may be a homogeneous part of such a mass of matter. Leibniz’s discussion thus seems to treat the relation of soul or form to matter in the same way that it treats the relation of substance to matter. The example of points in a line has been presented in essentially the same way twice already at this point in the Fardella memo, first as an analogy for substances (cf. A VI,4,1669) and second, in reply to the objection, as an analogy for souls (cf. A VI,4,1671). Leibniz eventually seems to indicate that the relation of a single substance, such as a man, to matter can be taken in either of two ways, depending upon how one is conceiving of the substance: as a “divisible and destructible body,” the man is a part of matter; as an indivisible, indestructible being, “what would be called ‘soul’ or ‘mind’ or ‘I’,” a man is not a part of matter” (*ibid.*).

Perhaps Leibniz’s view is that once the relations of body-to-aggregate and soul-to-aggregate have been clarified, there is nothing left over to understand about the relation of substance to aggregate. The substance, after all, just is the compound of soul and body. And it is clear that Leibniz identifies the substance with its soul much

more closely than with its body. (The soul is presumably a basic and inseparable ingredient of the substance, whereas the body contains sub-constituents that are themselves only *requisita pro tempore* (G II,120); the soul endures through change, whereas an aggregate body, apart from the soul, is not the same thing even for a moment.³⁶) In any case, it is clear that Leibniz's inclination here is to associate substance and soul or form closely enough to treat them as interchangeable in articulating what the relation is between a substance and a mass of matter containing it, despite his straightforward denial of the idea that the soul is itself a substance.

The analogy with points in a line is then advanced a third time in the Fardella memo, in a passage that refers explicitly to simple substances:

There are an infinity of simple substances or creatures in every particle of matter; and matter is composed from these, not as from parts, but as from constituent principles, or immediate requisites, just as points are essential ingredients of the continuum yet not parts. (A VI,4,1673)

In fact, the word 'simple' was added to the text by Leibniz,³⁷ correcting what had initially been the phrase 'there are an infinity of substances or creatures'. The uncorrected version would read as an unremarkable statement of his theory of corporeal substance. The corrected version, though, looks much like his later monadological view. An even more striking addition, one that again takes up the example of points in a line, comes in a marginal note whose date is uncertain but whose content is of the highest interest:

One must distinguish between the relation of lines to points and that of body to substance. Whereas in lines no determinate division is understood but indefinite possible divisions, in things the actual divisions are in fact made and a resolution of matter into forms is instituted. What points are in the imaginary resolution, souls are in the true one. (A VI,4,1670-1)

In discussing substance here, Leibniz wishes both to draw a contrast with points in a line and to indicate a further analogical connection. In lines it is not true that a determinate division into parts is fully effected, and it is not true that a line is resolved into points. Any actual division of a line into parts will determine endpoints of the intervals, but the idea of a "complete" resolution of the line that contains every possible division and resolves the line into a powder of points is only something imaginary. It is an imaginary limit of possible divisions, not itself an actual (or even possible) division of the line. By contrast, any body or mass of matter is actually divided into all of its parts and nothing is left indeterminate. The division of any such body of matter is complete, and there is a true resolution

ON UNITY AND SIMPLE SUBSTANCE IN LEIBNIZ

of matter into constituents. In this true resolution, the constituents of matter turn out to be forms or souls. “What points are in the imaginary resolution, souls are in the true one.”

The logic of the resolution is not spelled out in the marginal note, but it is clear enough from the descriptions in the text of the Fardella memo that Leibniz is seeing this as the limit of the analysis of matter as an aggregate of corporeal substances each of which is itself a mass of secondary matter combined with an incorporeal form. Leibniz appears to be coming to a new view of what the commitments of his theory of matter and substance might be. He is approaching the precipice of a theory of simple substances, and the Fardella memo, I think, provides a sort of snapshot of his philosophy at a moment of transition.

This idea of a resolution of matter into forms can be found again in later writings in which simple substances are unqualifiedly being proposed, and Leibniz appears to situate them exactly in the place of forms from the earlier work. Consider the 1695 “Note on Foucher’s Objection.” There Leibniz takes pains to distinguish the composition of “realities” such as matter from the composition of “ideals” like the geometrical line. He writes:

[I]t is the same for the line, in which the whole is prior to the part because the part is only possible and ideal. But in realities in which only divisions actually made enter into consideration, the whole is only a result or an assemblage, like a flock of sheep. It is true that the number of simple substances which enter into a mass, however small, is infinite, since besides the soul, which brings about the real unity of the animal, the body of the sheep (for example) is actually subdivided—that is, it is, again, an assemblage of invisible animals or plants which are in the same way composites, outside of that which also brings about their real unity. Although this goes on to infinity, it is manifest that, in the end, everything reduces to those unities, the rest or the results being nothing but well-founded phenomena. (G IV,492/AG 147)

The soul here is still not quite directly asserted to be a simple substance, and its role as a principle of unity remains on display. But the implication would seem to be that souls have been promoted to the status of substances in their own right; what else could those simple substances be? In any case, by 1712 little is left to implication when, in “Metaphysical Consequences of the Principles of Reason,” Leibniz presents the ideas in some detail:

A substance is either simple, such as a soul, which has no parts, or composite, such as an animal, which consists of a soul and an organic body. But an organic

body, like every other body, is merely an aggregate of animals or other things which are living and therefore organic, or finally of small objects or masses; but these also are finally resolved into living things, from which it is evident that all bodies are finally resolved into living things, and that what, in the analysis of substances, exists ultimately are simple substances—namely souls, or if you prefer a more general term, *monads*, which are without parts. For even though every simple substance has an organic body which corresponds to it—otherwise it would not have any kind of orderly relation to other things in the universe, nor would it act or be acted upon in an orderly way—yet by itself it is without parts. And because an organic body, or any other body whatsoever, can again be resolved into substances endowed with organic bodies, it is evident that in the end there are simple substances alone, and that in them are the sources of all things and of the modifications that come to things. (C 13-4/MP 174-5)

Souls are now simple substances on Leibniz's view, monads, although he continues to allow them also to play the role of forms, combining somehow with organic bodies to constitute composite substances. And this is all supposed to be managed within the framework of the monadology, for in the end of the analysis there are simple substances alone that are the sources of all things.

As before, I suspect this idea of a resolution of matter into forms is what leads Leibniz to a doctrine of simple substances. It strikes me also as a natural and even persuasive philosophical claim that if there is a resolution of matter into forms and forms are the first elements of all things, then forms must be real beings—unities, substances—in their own right.

The analysis according to which matter is resolved into forms and the idea that forms must be real beings, or substances, in their own right if they are the elements of all things together yield an argument for simple substances. Moreover, given the theoretical role in the analysis of matter that forms are introduced to play as indivisible, incorporeal principles of unity, the argument supports the conclusion that there are infinitely many incorporeal indivisible simple substances everywhere in matter. And this, I would propose, is Leibniz's argument for the doctrine of simple substances.

6. Principles of Unity and Principles of Reality

Still, it is with a degree of doubt that I make this proposal about what Leibniz's argument is for the doctrine of simple substances. It would be more convincing if Leibniz presented the total picture sketched above and the long train of reasoning behind it directly and unambiguously as an argument and not just a picture. He is willing, after all, to state his arguments with uncanny clarity in many contexts, and perhaps one would expect to find the same for something as central to his later metaphysics as the doctrine of simple substances. Also, the inference from the resolution of matter into forms to the claim that forms or souls must be substances in their own right if they are the only elements of things, even if natural and obvious, is being supplied as a premise explicitly in interpretation in a way that seems to exceed Leibniz's own statements (though the last passage quoted above comes close).

Yet if this account interprets Leibniz's expressions of his primary argument as enthymemes at most, and perhaps as "pictures" more than arguments, I think it also has a point in its favor for the way it parses the role of forms. To see this clearly, consider how forms are now playing two key roles in the analysis. They are introduced as principles of unity in virtue of which bodies might constitute substances despite being infinitely divided into subparts. When the analysis yields a resolution of all matter into forms, forms are pressed into a further theoretical role as the first elements of all things—forms must now be "principles of reality" in virtue of which corporeal beings can be real.

The distinction between principles of unity and principles of reality may be delicate, but it tracks a distinction in Leibniz's own arguments concerning substance.³⁸ We have already seen in the letters to Arnauld, for instance, the argument for forms as a principles of unity on the ground that without them there would be no body that is "truly one substance" (G II,72). In the lines that immediately follow Leibniz argues to Arnauld for an ontology of forms in bodies on the ground no body will be "a real being" if it is merely an aggregate of many things. The inference now concerns not unity but reality:

It [a body] will always be an aggregate of many. Or rather, it will never be a real being, since the parts that compose it are subject to the same difficulty, and so one never arrives at real being, because beings by aggregation can have only as much reality as there is in their ingredients. From this it follows that the substance of a body, if bodies have one, must be indivisible; whether it is

called a soul or form does not concern me. (G II,72/M 88)

This passage is notable as a precursor of the “borrowed reality” argument Leibniz will make to de Volder in later decades.³⁹ The reasoning in this early version, which we might call the “indivisible reality” argument, is much the same: if there are aggregates, there must be real beings as their ingredients, i.e. principles of reality for aggregates. Of course the point of the argument is that something besides aggregates must be admitted, something whose status as a real being is not subject to the same problem that aggregates face. There must then be beings whose reality is not exhaustively divisible in the way that the reality of an aggregate is divisible. For bodies, this indivisible reality—the “substance of a body”—may be called a soul or a form. Notice how the result in this case diverges slightly from the conclusion of the later versions of the “borrowed reality” argument. Here Leibniz is proposing souls or forms as the source of indivisible reality for bodies. It is an argument for forms as principles of reality. In the letters to de Volder, Leibniz will portray it as an argument for unities rather than for forms or souls.⁴⁰

As Leibniz represents it, this line of argument leads not just to principles of reality—that is, principles of unborrowed reality (to de Volder) or indivisible reality (to Arnauld)—but to unity, or rather “beings endowed with a true unity” (G II,96), which are presupposed by aggregates. Does the argument from aggregates to unities as principles of reality not then collapse into the same argument as the one for forms as principles of unity?

I think the answer is no, and it is important to see clearly how principles of reality and principles of unity play distinct conceptual roles in Leibniz’s reasoning. Principles of unity will account for how composites can also be unities in their own right. Principles of reality, on the other hand, will account for how aggregates can be real and not merely phenomena or illusions. Evidently the ideas are interlinked: if bodies are real, they must either be substances in their own right or else aggregates, and in either case there will have to be unities, for without unities nothing can be a substance and nothing can have indivisible or unborrowed reality.

Nonetheless the arguments differ, and they differ right in their initial premises. The argument for principles of unity begins from the assumption that some bodies are substances, and its driving theoretical concern is how bodies can be substances or true unities despite being divided into parts. By contrast, the argument for principles of reality assumes that there are aggregates, and the question is how there can be aggregates at all. Both lines of argument are targeting the Cartesian picture of bodies as consisting of extension alone, an idea that Leibniz interprets as

ON UNITY AND SIMPLE SUBSTANCE IN LEIBNIZ

denying that there could be any true unities in the material world. But they target that picture in different ways, exposing different conceptual vulnerabilities in it.

Leibniz's own picture of bodies is crafted to answer the difficulties he has located in the Cartesian account, and it does so by positing incorporeal elements, forms or souls at first, and then eventually simple substances, to play the roles of principles of unity and principles of reality. Leibniz's doctrine of simple substances itself emerges, I suggest, out of the analysis of forms in their role as principles of unity. That analysis begins with the assumption that some bodies are substances, and it posits forms in order to account for the unity of those. What the analysis then further shows, or seems to show, however, is that in the end forms will be the only elements of things. And this result secondarily brings the role of forms as principles of reality into a quite a new light, for the first time revealing forms not merely as principles of reality for aggregates but as things that can be substances in their own right.

This is a subtle difference in the way in which forms have to serve in their role as principles of reality. In the argument for principles of reality as we see it in the letters to Arnauld, all that is required of forms is that they make it the case that there are some beings with indivisible reality, beings whose reality will not be subject to the same problem of division that faces the reality of aggregates. Forms could satisfy this demand by making indivisible realities (i.e. unities) of certain bodies even if forms are not substances in themselves. But once matter is seen to be resolved into forms, as in the analysis described in the Fardella memo and other documents, it appears that forms must play a more demanding role as principles of reality: they must be the first elements out of which everything else is constructed, and this requires them to be substances in their own right. Since forms themselves are incorporeal and without parts, the result is a doctrine of simple substances.

7. And That *Other* Argument for Simple Substances— in PNG and “Monadology”?

Our discussion of Leibniz's case for simple substances leaves us, so far, with the following view of the arc of his thought from 1679 to 1690-95 or so. Motion in a plenum requires the actually infinite division of bodies. This infinite division poses a threat to the idea that bodies could be substances, a threat which is then answered by introducing incorporeal forms as principles of unity for corporeal substances. Infinite division also poses a problem for the idea of the reality of aggregates, and

forms are likewise introduced as the principles that provide indivisible reality to the constituents of aggregates. The analysis of the structure of corporeal substances as form-matter compounds (with forms in their role as principles of unity) further reveals that in the end there is a resolution of matter into forms. And this presses forms into a new, deeper role as principles of reality that are the first elements of all other things and thus as substances in their own right—simple substances.

This, I believe, is Leibniz's argument for the doctrine of simple substances, much abbreviated. I have been presenting it in its order of discovery and not exactly as a series of precise inferences—though it would not be too hard to do so—in part because I think the order of discovery illuminates the philosophy itself and in part to highlight the fact that Leibniz appears nowhere to state the whole line of reasoning as a single connected series of inferences. As I see it, the doctrine of simple substances arises out of a cumulative series of reflections rather than as the output of a function from prior premises. By the time Leibniz sees his way clear to the end conclusion that there are simple substances, various lemmas upon which he relies are already entrenched features of his thought, and he might no longer be in the position to see just which claims were the originating premises.

When Leibniz proposes his “borrowed reality” argument to de Volder in 1704, the idea that the world ultimately consists in simple substances has been active in his thought for perhaps as long as fourteen years and has been settled doctrine, it seems, since 1695; and so too has his idealism about the simples. By June of 1704, when Leibniz makes his “borrowed reality” argument to de Volder for the second time, he is also prepared to announce: “There is nothing in things except simple substances, and in them perception and appetite” (G II,270).⁴¹ In that context, the conclusion that there are indivisible unities is readily interpreted as implying that there are simple substances, even if the “borrowed reality” argument itself, as stated by Leibniz in numbered premises, falls short of carrying that implication.

As we noted, in making his argument to de Volder, Leibniz does not claim anything more to follow directly from the consideration of the reality of aggregates than the existence of unities. Moreover, in observing the precursor version of that argument in Leibniz's letters to Arnauld, we can see that Leibniz embraced the same reasoning even when he clearly did not regard it as implying that there are simple substances. The additional step from unities to simple substances, I have suggested, comes from an alternative line of thought, one that involves the idea that there must in the end be incorporeal principles of reality in things, but one

ON UNITY AND SIMPLE SUBSTANCE IN LEIBNIZ

that is not just a natural extension of the “borrowed reality” argument. It comes instead from a consideration about the analysis of matter into forms, an analysis that initially represents forms in their role as principles of unity but eventually issues in a verdict that the very forms which are principles of unity must take on a basic role as principles of reality as well.

One might worry that my account appears to favor a long and involved path of reflection that is less directly stated in the texts as the “real” argument for simple substances in Leibniz’s philosophy, while discounting the compact argument that appears straightforwardly stated as an argument for simples in the PNG and “Monadology.” If in the letters to de Volder, the “borrowed reality” argument does not reach the conclusion that there are simple substances, by the PNG and “Monadology” the inference to simple substances is explicit, as is the premise that would need to be added to the “borrowed reality” argument in order to underwrite that inference, namely, the premise that composites are nothing but aggregates. Why read Leibniz’s “real” argument as taking the long path to simples? Why not rather interpret his doctrine of simples as just being the result of his coming to hold the “borrowed reality” argument together with the “added premise” that composites are nothing but aggregates? And in that case, all that would seem to be missing are the grounds for adopting the “added premise.”

This counter-suggestion that the doctrine of simples arises from the “borrowed reality” argument is tempting. It perhaps becomes even more so when it is seen that grounds for the “added premise” are already recognized in the scholarship. The Construction Problem described by Robert Adams might seem to offer a powerful reason for accepting the premise that composites are nothing but aggregates. Composites cannot be unities in Leibniz’s philosophy because there is no way for the unity of a composite to be “anything over and above the system of relations among perceptions of simple substances,” a type of unity characteristic of the merely “accidental unity” of aggregates (cf. Adams 1994: 293).

Put in those terms, however, it is not hard to see that the Construction Problem cannot be taken, in the context of Leibniz’s argument for simple substances, as the missing grounds for the premise that composites are nothing but aggregates. For if it were, then the grounds for the “added premise” would presuppose the conclusion at issue, namely that there are simple substances. If it is first assumed there are simple substances which are the elements of all other things, the Construction Problem will support the idea that composites are nothing but aggregates. Whether the Construction Problem can support that idea independently of the assumption

of simple substances as the elements of all things is far less clear, however. The Construction Problem would need to be modified, in any case, to set aside reference to simple substances and to be recast in terms that challenge the idea of composite beings as unities no matter what the constituents of the composites are taken to be.

To that end, one thought might be to ask whether *any* composite could be a true unity just in virtue of the system of relations among the perceptions of its constituents. Adjusting the inner movies or playlists in a multitude of monads would not seem to offer any true unity to an aggregate of those monads. Why think that it would help if the multitude were instead a multitude of composite beings rather than simples? How could a mere system of relations among perceptions of things yield a true unity from a multitude, *any* multitude? It is tempting to think there is no good answer to be had here, and to concede that with only “idealistic” resources—only properties of thought and relations among thinkers—to make one out of many, there can be no composites with a unity greater in kind than that of an aggregate.

Yet that suggestion also appears to reverse the order of ideas in Leibniz’s metaphysics. The idea that perception and appetite are the only real properties of things might be almost a slogan for the theory of monads, but it would not seem to be true of bodily substances. Idealism about substances in Leibniz’s philosophy might be quite compelling if substances are taken to be simple and incorporeal. But it is not clear that idealism makes such a powerful claim independently of a doctrine of simple substances. To advert to Leibniz’s idealism in order to explain why he holds composites to be nothing more than aggregates puts the support for that proposition on the wrong side of the case for simple substances, making it a plausible consequence of his view that simple substances are the first elements of all things rather than a premise that leads him to it.

Even leaving aside the conceptual issues about the order of ideas, there is a difficulty with the counter-suggestion that the doctrine of simples arises as an extension of the “borrowed reality” argument. If Leibniz’s case for simple substances is to be understood in that way, the missing grounds for the “added premise” that completes the argument for simples would have to arise by 1695 or so, the point at which his commitment to an ontology of simple substances is fairly definitely taking hold—or, say, not later than April of 1702 when Leibniz writes to de Volder: “When I say that every substance is simple, I understand by this that it lacks parts” (G II,239). But it is not clear that Leibniz means to defend, or even

ON UNITY AND SIMPLE SUBSTANCE IN LEIBNIZ

to propose, the claim that composites can be nothing but aggregates by either of those dates. There appear to be no obvious texts in which he advances such a view, though of course I cannot claim to have exhausted all the documents. In any case, what one would hope or expect to find is some evidence of the “added premise” or the grounds for it early enough to explain Leibniz’s coming to adopt an ontology of simple substances around the time when he actually does, but so far the texts do not seem to provide it.

My somewhat reluctant conclusion is that the direct argument for simples as it appears in PNG and “Monadology” does not represent the line of thought that is the actual basis for Leibniz’s doctrine of simple substances. Rather, the actual basis is the longer series of reflections concerning the analysis of matter into forms. Still, the fact that Leibniz offers the direct argument for simples is not to be disputed, and any full account will need to explain why Leibniz comes to hold that composites are nothing but aggregates, whether that premise belongs to the original case for simples or is only a later development. One question is *when* Leibniz comes to hold the “added premise.” Another question is *why*. To the first, I can offer no firm answer. I am not aware of any statement of that premise prior to PNG 1 (1714), though it would seem surprising if its first occurrence were not earlier. To the question of why Leibniz comes to hold that composites are only aggregates, it may be possible to speculate without too much embarrassment.

If, as I suspect, the “added premise” is a quite late addition to Leibniz’s metaphysics, coming after the existence of simple substances is already fixed in his thought, then perhaps something like the Construction Problem and its attendant idealism is behind Leibniz’s change of mind about the unity of composites. Call the thesis that the first elements of things are simple substances whose only properties are perception and appetite ‘simple-substance idealism’. It is a natural and compelling idea within the context of a simple-substance idealism that there could not be any composite unities. If it is the case that Leibniz is led by his idealism to hold that composites can only be aggregates, there is then a further guess to be made about the answer to the question when he comes to accept that premise. For Leibniz puts the idea of the unity of a composite under scrutiny during the late period of his writings, when his simple-substance idealism is fully intact, in his correspondence with Bartholomew Des Bosses, most notably in the letters from 1712-16.

The question Leibniz faces is precisely how anything could be both a unity and constituted of many monads, or what could be the “relation through which one new

substance arises from many substances” (G II,438). In the letters to Des Bosses, he explores the idea of a *vinculum substantiale* or “substantial bond” as an additional element that might fashion a single composite substance from many monads. Scholars have disputed how to interpret Leibniz’s discussion here—just what the idea of the *vinculum substantiale* comes to, whether Leibniz’s commitments are genuinely in play, to what degree the discussion is heteronymous and a concession to Des Bosses’s interests, etc.⁴²—but what matters for us is only to note how Leibniz frames the basic challenge for composite unities. Writing in a letter of 26 May 1712, he defends the *vinculum substantiale* on the grounds that without it there could be no composite constituted of monads that is truly a unity, something one *per se*:

The Peripatetics certainly recognize something substantial besides monads, otherwise, according to them, there would be no substances beside monads. And monads do not constitute a complete composite substance, since they make up, not something one *per se*, but only a mere aggregate, unless some substantial bond [*substantiale vinculum*] is added. (G II, 444/LR 243)

The resources of a simple-substance idealism are, it appears, insufficient to support an ontology of composite substances, and so something else needs to be posited if there are to be composites that are truly one *per se*. Within the framework of a “pure” monadology, there are only mental properties and ideal relations of “subordination” among simple substances with which to make one substance out of many. Yet this seems not to be enough. In a subsequent letter from May 1716, Leibniz writes to Des Bosses, “Composite substance does not formally consist in monads and their subordination, for then it would be a mere aggregate or a being *per accidens*” (G II, 517-8/LR 371). It is plausible to suppose the problem about composite unity that Leibniz is seeing here is very much what we have called the Construction Problem. Accidental unity appears to be the metaphysical limit for composites, if there are only monads and relations among their perceptions from which to construct them. Still, the idea of a composite unity as something distinct from an aggregate remains up for consideration, and in the same letter Leibniz clarifies that distinction by saying:

An aggregate is resolved into parts, but a composite substance is not. The latter only requires component parts, but it is not essentially constituted of them; otherwise it would be an aggregate. (G II,517/LR 369)

This seems to continue his earlier view that whatever can be divided into many things is only an aggregate and with the understanding that composite unities, like all substances, would have to be indivisible: though a composite substance may

ON UNITY AND SIMPLE SUBSTANCE IN LEIBNIZ

contain parts, it is not essentially constituted of those parts, for the *being* of the composite substance cannot be divided into many. In the correspondence with Des Bosses, an answer to the problem of the unity of composites is imagined in terms of a *vinculum substantiale*.

Whatever its merits, that solution is absent from the PNG and “Monadology,” documents written in the very same period as the last letters to Des Bosses. It is hard to know with certainty whether Leibniz has abandoned composite unities in PNG and “Monadology” or just allowed them to persist, if rather on the margins, as unsolved problems. It is difficult to see how Leibniz could at the same time both defend composite unities to Des Bosses and assert in the PNG and “Monadology” that composites are nothing but aggregates. At most one of those two could represent a “considered” position. Perhaps neither does, and Leibniz never arrives at a position that is definitely meant to be the last word; or perhaps some kind of “theory pluralism” is in order.⁴³

It would seem to be of the first importance to resolve this question if Leibniz’s commitment to a doctrine of simple substances were riding on the premise that composites are nothing but aggregates, i.e. if the direct argument for simples in PNG and “Monadology” were the basis for that doctrine. But at this point it should be fairly clear that the doctrine of simple substances is not riding on that premise. Rather, the reverse is true: that premise is being considered in the light of simple-substance idealism. The commitment to simple-substance idealism puts enormous pressure on the idea of composite unities, potentially suggesting that there is no such category of beings—that composites could never be more than aggregates. One possible response to the pressure would be to modify the idealism by admitting elements that are not just more simple substances, e.g. a *vinculum substantiale*, to account for the unity of composites. Another response would be to abandon composite unities, or perhaps to stop trying to account for them. In either case, though, the idea of simple substances is taking priority; its position in Leibniz’s metaphysics is not seen as standing or possibly falling with the premise that composites can only be aggregates. Leibniz’s compact argument from that premise at the openings of PNG and “Monadology” serves as an entry to his theme, but his case for simple substances does not seem to be “essentially constituted” by it. By the time Leibniz clearly asserts that composites are nothing but aggregates, the doctrine of simple substances is already long-established on other grounds.

8. Simples, Composites and Leibniz's Metaphysics Reconsidered

To return to a topic raised at the outset of this essay, let us consider what our inquiry into Leibniz's doctrine of simple substances means for the question of whether his later metaphysics excludes composite corporeal beings from the category of substance.

I have argued that the basis for the doctrine of simple substances is a series of reflections concerning motion in a plenum, the infinite division of matter, principles of unity, and an analysis of form-matter compounds that suggests a resolution of matter into forms, which in turn extends to the idea that forms as the first elements of things must be simple substances in their own right. As I see it, the existence of corporeal substances as true unities, one *per se*, is essential to the doctrine that results from that series of reflections. Without the premise that some bodies are substances, Leibniz would have no grounds for positing forms as principles of unity. They are principles of unity for composite corporeal beings; that is the point of the hypothesis of forms in that context. The hierarchical analysis of corporeal beings into form-matter compounds that descends infinitely and suggests a resolution of matter into forms relies directly on the forms in their role as principles of unity for composites. That role defines their positions in the analysis. When the analysis approaches a limit in which it seems that in the end there are nothing but forms, we come to see those forms as also having to play a fundamental role as principles of reality for all other things, i.e. as substances. But if they were not first admitted as principles of unity for composites, there would be no reason for accepting the analysis itself, and so no basis for accepting any further consequences drawn from it.

Since, as I see it, the existence of simple substances is accepted as a consequence of his analysis of corporeal substances into form-matter compounds, the doctrine of simple substances would be lost if the role of forms as principles of unity were jettisoned. Further, that role itself is justified by the argument that there must be such principles of unity in order for infinitely divided bodies to be substances. Without the premise that some bodies are substances, the whole train of argument for simple substances just collapses. The doctrine of simple substances, then, cannot coherently be understood to exclude composite corporeal beings from the category of substance. To do so would be to undercut the actual rational basis for the doctrine itself and the point of the hypothesis of forms that led to the doctrine.

ON UNITY AND SIMPLE SUBSTANCE IN LEIBNIZ

In one respect, then, I think the traditional reading of Leibniz as a substance idealist makes a significant mistake by putting what is proposed as his fundamental ontological view at odds with his own argument for simple substances. Yet in another respect, the traditional reading seems right. Once simple substances are admitted as the elements of all other things, it is difficult to see how there could be composite unities at all. Leibniz's monadology poses a grave threat to the idea of corporeal substance, as is highlighted by the Construction Problem. It is, moreover, a problem that Leibniz apparently sees in the same way even as he considers a radical solution to it in the correspondence with Des Bosses: it is not at all clear how his ontology of monads can accommodate composite unities.

Leibniz's philosophy seems to pose a dilemma to his interpreters. It may be that his most celebrated metaphysical thesis cannot be reconciled with the ideas from which it was derived, and not for reasons invisible to Leibniz.⁴⁴ Perhaps no coherent picture can be formed of the philosophy as a whole and it will have to be considered in fragments in order to be fully taken in without representing it as incoherent in its intentions, as one might try to tease out the intended truths of a carefully crafted but inconsistent story.⁴⁵

One remedy I would be reluctant to administer, however, is that of downgrading Leibniz's commitment to corporeal substances in response to the Construction Problem. In the tradition of interpreting Leibniz as a substance idealist, variants of a downgrading solution have often been proposed, efforts at explaining away corporeal substances while also preserving the integrity of the monadology. Yet if the suggestions of this essay about the basis for Leibniz's monadology are correct, that sort of response is misguided. Even the very orientation of thinking about the Construction Problem as a problem for composite corporeal substances seems to have the philosophy running backwards, by imagining the "framework of the monadology" to be given in advance of the question of the existence of corporeal substances. If there is an irremediable problem about how monads could result in a corporeal substance that is one *per se*, then there was exactly that problem facing the argument for simple substances in the first place. The difficulty is not generated by the attempt to domesticate corporeal substances into a pre-existing framework of monads. It arises, rather, with the original idea that corporeal substances could be resolved into simple substances.

Leibniz's doctrine of simple substances is a whole piece of philosophy, including the arguments he offers, and properly to understand it as such, one should consider the reasons, and not just the conclusions, to be essential elements of the philosophical

doctrine. (This is the minor “methodological” point forecast at the top of the essay.) If the present essay is correct about Leibniz’s argument for simples, then to see the Construction Problem primarily as a threat to composite unities—rather than, say, as a threat to the monadology itself or to the cogency of Leibniz’s arguments for simple substances—is to see the monadology as conceptually isolated from its own rational basis. And that, I think, would be to distort our understanding of the philosophy.

If a corporeal substance cannot result from the simple substances, then we should first of all conclude that Leibniz’s argument for simple substances fails due to internal incoherence, and then perhaps try to diagnose the problem and identify why and at what point the line of thought goes astray. This may involve seeing the philosophy as deeply problematic, but it does so by privileging the philosophical reasoning within the philosophy. By contrast, to credit his metaphysics with an ontology of simple substances while discounting the premises of the argument he offers for it—indeed to interpret him as rejecting those premises himself—will tend to reduce his philosophy to dogmatism on this point, to see the philosophy as resting on its conclusions rather than on its arguments and as floating free of rational supports in his thought.

This is why I think the Construction Problem will not provide powerful grounds for the substance-idealist interpretation of Leibniz’s philosophy despite providing powerful reasons for holding that no composite unities could be constructed out of monads. To eliminate the composite unities would be to vacate the philosophy of one of its central arguments, and that seems to be too much to sacrifice in trying to understand Leibniz.

Of course it is not enough either just to ascribe to Leibniz, even in his later writings, a commitment to composite corporeal substances. If the Construction Problem is unsolved, and if it is regarded by Leibniz to be a problem, it needs to be determined how deep a problem it is and how resilient Leibniz’s philosophy is in the face of it. And we should want to know Leibniz’s attitude toward the metaphysics he has assembled—whether he himself sees corporeal substances as having disappeared from the world of his thought. We should also ask, I think, what the idea of simplicity adds to the theory of substance: why should it matter that monads be simples and not merely indivisible unities? Suppose it were decided that the argument for simple substances were flawed at some late stage and did not actually imply its conclusion (and shortly below I will propose just such a criticism of the argument). What rests on the idea of simplicity as opposed to unity,

ON UNITY AND SIMPLE SUBSTANCE IN LEIBNIZ

indivisibility, activity, etc., of substance? I cannot undertake all those labors at present, and I do not mean to deny that there are many other important interpretive questions to be answered in connection with these issues. But there are a few final ideas I would like to suggest before closing this inquiry.

The Construction Problem puts pressure on the idea of composite unities in a world of monads, but it has not exactly been shown to refute that idea. It may yet find a solution, even one given already within Leibniz's metaphysics. The account of monadic domination he outlines in later writings seems to be part of an effort to answer the problem,⁴⁶ even if one he regards in the correspondence with Des Bosses as insufficient to confer true unity on composites. The theory of the *vinculum substantiale* is another, more vivid effort in the same direction. Neither seems to have captured Leibniz's convictions as an answer to the problem, but this does not mean there cannot be any successful account of the unity of composites of monads. Also, it at least remains open to Leibniz to hold that the construction of composite unities involves some ontologically primitive relation—say, that composite unities just “supervene” on the appropriate monadic foundations. He might also proceed by leaving it a mystery how the corporeal results from the incorporeal.⁴⁷ (Perhaps the supervenience answer would also be a mystery answer.) If nothing else, either of those options allows him to embrace his central arguments in favor of simple substances.

A further idea to consider is diagnostic in spirit and concerns potential weak points in Leibniz's case for simple substances; yet it might also suggest a more radical view of his metaphysics. As I see it, the central line of argument from motion in the plenum to infinitely divided bodies to incorporeal principles of unity is essential to Leibniz's philosophy. It encapsulates his break from the Cartesian tradition and still achieves the picture of the infinite descending hierarchy of substances and an infinity of souls existing everywhere in the corporeal world. This is the distinctive profile of Leibniz's metaphysics. Two steps in the series of reflections that yield the doctrine of simple substances strike me as the most perplexing, and the least well-articulated in Leibniz's writings. The first is the step from (1) the infinitary analysis of corporeal substance into a descending hierarchy of forms and aggregates of substances to (2) the idea of a resolution of matter into forms. The second is the step that takes us from (2) the resolution of matter into forms to (3) the identification of forms as simple substances. I think perhaps either of those steps might be tested, and even resisted by Leibniz consistently with his core philosophical principles. We shall take them in reverse order.

Consider the step from (2) a resolution of matter into forms to (3) the claim that forms are simple substances. Suppose that the Construction Problem is somehow less severe in the case of substantial forms than it was in the case of simple substances. Perhaps we can think of substantial forms as intrinsically “unsaturated” or in need of “completion” so that they naturally combine with a plurality of things to form a unity.⁴⁸ In that case it is not necessarily true that if forms are the only elements of things, they must be substances in their own right. Forms could then play the role of principles of reality as it occurs in the “indivisible reality” argument in the correspondence with Arnauld (and even in the later “borrowed reality” version made to de Volder), a role that requires the existence of substances but does not yet require the principles of reality to be substances rather than just substantial forms. Although I do not myself find this a compelling idea, and cannot say with any confidence that it is a more natural extension of Leibniz’s analysis of matter into forms than the idea that forms must be substances in themselves if they are the only elements of things, there is at any rate a space here for the metaphysical imagination. Also, the proposal is a “theoretically conservative” one in that it adds less to the interpretation of the analysis of matter into forms than does an ontology of simple substances; and perhaps this already commends further inquiry.

More intriguing, however, is a reconsideration of the step from (1) the infinite analysis of corporeal substances into a descending hierarchy of forms and aggregates of substances to (2) a resolution of matter into forms. This step relies on the idea that the analysis has a limit. Moreover, it presupposes that this limit is to be understood as distinct from the infinitely many levels of the analysis, lying outside of them all, and that it represents an actual state of things, the “total” state of the corporeal substance being analyzed.

But that way of interpreting the analysis and its limit is not mandated by the analysis itself. One *might* hold the limit to lie outside all the levels of the hierarchy and to institute a resolution of matter into forms. Call this the *external* understanding of the limit. But it is an open possibility also to take an *internal* understanding of the limit that identifies it with the complete sequence of levels in the analysis itself. On this view, there is no further limit state of the world outside of all the levels in the hierarchy. What those levels successively converge upon is simply the complete articulation of all the levels in the sequence. On this view of the limit of the analysis as internal to the hierarchy, there will be no inference to a resolution of matter into forms, for the resolution itself consists only of all the levels in the hierarchy, and each and every level always contains corporeal substances. At no level are there

ON UNITY AND SIMPLE SUBSTANCE IN LEIBNIZ

“only forms.” To take the step from the descending hierarchy to an external limit state of only forms is, on this view, a cognitive error: a leap to an illusory limit.⁴⁹ Rather, we should understand the complete state of nature—or here the complete analysis of a single corporeal substance—as exhaustively described by all the levels of the analysis. Thus on this internal view, there are indeed infinitely many incorporeal elements everywhere in matter, but they all remain forever embedded within a corporeal world and never vanish into a world of forms alone. Once it is seen that there is no exhaustive resolution of matter into forms, the impetus to regard forms as the only elements of things is removed and with it the temptation to suppose that the world must in the end consist in beings that are incorporeal, indivisible principles of reality. The analysis no longer seems to imply a world of simple substances.⁵⁰

In light of both of those two avenues of resistance against the case Leibniz develops for simple substances, we could see Leibniz as over-extending when he passes from the theory of forms to the doctrine of simple substances. Simple substances are more than his metaphysical analyses require, and insofar as the introduction of a monadology poses a threat to the idea of corporeal substances, it seems to be a move toward instability. One attitude toward all this would be to see Leibniz finally as escaping into a monadology and then kicking away the ladder. As a view of the actual course of his thought, that may well be right. Yet a more critical attitude toward Leibniz’s philosophy might also come to mind: perhaps the facet of his metaphysics that needs to be abandoned in order to bring the whole account into steadier balance is not the existence of corporeal substances but rather the monadology itself.⁵¹

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Bibliography

- Adams, Robert. 1994. *Leibniz: Determinist, Theist, Idealist*. Oxford: Oxford University Press.
- —. 1996. “Response to Carriero, Mugnai and Garber.” *Leibniz Society Review* 6: 107-25.
- Arthur, Richard. 1989. “Russell’s Conundrum: On the Relation of Leibniz’s Monads to the Continuum.” In Brown and Mittelstrass, eds., *An Intimate Relation*, 171-201. Dordrecht: Kluwer Academic Publishers.
- —. 1998. “Infinite Aggregates and Phenomenal Wholes.” *Leibniz Society Review* [later: *The Leibniz Review*] 9: 36-7.
- —. Forthcoming. “Leibniz’s Inversion of Zeno: Continuity of Motion, Substantial Action and Plurality.” In Mugnai and Pasini, eds., *Corporeal Substance and the Labyrinth of the Continuum* (Studia Leibnitiana, Suppl.). Stuttgart: Steiner-Verlag.
- Baxter, Donald. 1995. “Corporeal Substances and True Unities.” *Studia Leibnitiana* 27/2: 157-84.
- Bolton, Martha. “Leibniz to Arnauld: Platonic and Aristotelian Themes on Matter and Corporeal Substance.” In Lodge, ed., *Leibniz and His Correspondents*, 97-122. Cambridge: Cambridge University Press.
- Broad, C.D. 1975. *Leibniz: An Introduction*. Cambridge: Cambridge University Press.
- Cover, J.A. 1989. “Relations and Reduction in Leibniz.” *Pacific Philosophical Quarterly* 70:185-211.
- Cover, J.A. and John O’Leary-Hawthorne. 1999. *Substance and Individuation in Leibniz*. Cambridge: Cambridge University Press.
- Dummett, Michael. 1994. “What is Mathematics About?” In Alexander George, ed., *Mathematics and Mind*, 11-26. Oxford: Oxford University Press.
- Garber, Daniel. 1985. “Leibniz and the Foundations of Physics: The Middle Years.” In Okruhlik and Brown, eds., *The Natural Philosophy of Leibniz*, 27-130. Dordrecht: D. Reidel.
- —. 1992. *Descartes’ Metaphysical Physics*. Chicago: University of Chicago Press.
- —. 1995. “Leibniz: Physics and Philosophy.” In Jolley, ed., *The Cambridge Companion to Leibniz*, 270-352. Cambridge: Cambridge University Press.

ON UNITY AND SIMPLE SUBSTANCE IN LEIBNIZ

- — . 2004. “Leibniz and Fardella: Body, Substance and Idealism.” In Lodge, ed., *Leibniz and His Correspondents*, 123-140. Cambridge: Cambridge University Press.
- — . 2005. “Leibniz and Idealism,” in *Leibniz: Nature and Freedom*, ed. Rutherford and Cover, 95-107. New York: Oxford University Press.
- George, Alexander and Daniel Velleman. 2002. *Philosophies of Mathematics*. Oxford: Blackwell Publishers.
- Hartz, Glenn. 1992. “Leibniz’s Phenomenalisms.” *The Philosophical Review* 101: 511-49.
- — . 1998. “Why Corporeal Substances Keep Popping Up in Leibniz’s Later Philosophy.” *British Journal for the History of Philosophy* 6/2: 193-208. (2005) 1-19.
- — . 2007. *Leibniz’s Final System*. London and New York: Routledge .
- Hartz, Glenn and Catherine Wilson. 2005. “Ideas and Animals: The Hard Problem of Leibnizian Metaphysics.” *Studia Leibnitiana*, 37 (1) : 1-19.
- Jolley, Nicholas. 1986. “Leibniz and Phenomenalism.” *Studia Leibnitiana* 18/1:39-51.
- Leibniz, G. W. 1923-80. *Samtliche Schriften un Briefe. Philosophische Schriften*. Series VI. Vols. 1-4. Berlin: Akademie-Verlag. **(A)**
- — . 1952. *Lettres de Leibniz à Arnauld d’après un manuscrit inédit*. Paris: Presses Universitaires. Reprint, New York and London: Garland Publishing, 1985 (Lewis).
- — . 1967. *The Leibniz–Arnauld Correspondence*, ed. and trans. H.T. Mason. London: Manchester University Press. **(M)**
- — . 1973. *Philosophical Writings*, ed. G.H.R. Parkinson and trans. M. Morris and G.H.R. Parkinson. London: Dent. **(MP)**
- — . 1993. *De quadratura arithmetica circuli ellipseos et hyperbolae cujus corollarium est trigonometria sine tabulis*, ed., with commentary, Eberhard Knobloch. Göttingen: Vandenhoeck & Ruprecht. **(DQA)**
- — . 2001. *The Labyrinth of the Continuum: Writings on the continuum problem, 1672-1686*, ed. and trans, R.T.W. Arthur. New Haven: Yale University Press. **(Ar)**
- — . 2007. *The Leibniz–Des Bosses Correspondence*, ed. and trans. Brandon Look and Donald Rutherford. New Haven: Yale University Press. **(LR)**
- Levey, Samuel. 1998. “Leibniz on Mathematics and the Actually Infinite Division of Matter.” *The Philosophical Review* 103: 49-96.

- —. 2003. “On Unity: Leibniz–Arnauld Revisited. *Philosophical Topics* 31: 245-75.
- —. 2005. “Leibniz on Precise Shapes and the Corporeal World.” In Rutherford and Cover, eds., *Leibniz: Nature and Freedom*, 69-94. New York: Oxford University Press.
- —. (ms.) “Borrowed Reality: Two Interpretations of an Argument for Unities in Leibniz.”
- Lewis, David. 1983. “Truth in Fiction.” Reprinted with postscripts in David Lewis, *Philosophical Papers, Volume I*, 261-280. Oxford: Oxford University Press. Originally published in *American Philosophical Quarterly* 15 (1978): 37-46. References are to the reprint.
- Lodge, Paul. 2005. “Garber’s Interpretations of Leibniz on Corporeal Substance in the ‘Middle Years’.” *The Leibniz Review* 15: 1-26.
- Loptson, Peter, and R.T.W. Arthur. 2006. “Leibniz’s Body Realism.” *The Leibniz Review* 16: 1-42.
- Mason, H.T. trans. and ed. 1967. *The Leibniz-Arnauld Correspondence*. Manchester: Manchester University Press.
- Mates, Benson. 1986. *The Philosophy of Leibniz: Metaphysics & Language*. New York: Oxford University Press.
- Mercer, Christia. 2001. *Leibniz’s Metaphysics: Its Origins and Development*. Cambridge: Cambridge University Press.
- Mugnai, Massimo. 1992. *Leibniz’s Theory of Relations*. Stuttgart: Franz Steiner Verlag.
- Phemister, Pauline. 1999. “Leibniz and the Elements of Compound Bodies.” *British Journal for the History of Philosophy* 7/1: 57-78.
- —. 2005. *Leibniz and the Natural World*. Dordrecht: Springer.
- Russell, Bertrand. 1937. *The Philosophy of Leibniz*, 2nd Ed. London: Routledge.
- Rutherford, Donald. 1990. “Leibniz’s Analysis of the Multitude and Phenomena into Unities and Reality.” *Journal of the History of Philosophy* 28: 525-52.
- —. 1995. *Leibniz and the Rational Order of Nature*. Cambridge: Cambridge University Press.
- —. “Leibniz as Idealist.” Forthcoming in *Oxford Studies in Early Modern Philosophy*.
- Sleigh, Robert C., Jr. 1990. *Leibniz and Arnauld: A Commentary on Their Correspondence*. New Haven: Yale University Press.
- Thomas, Christine J. “Speaking of Something: Plato’s Sophist and Plato’s Beard.”

ON UNITY AND SIMPLE SUBSTANCE IN LEIBNIZ

Forthcoming in *Canadian Journal of Philosophy*.

Wilson, Catherine. 1989. *Leibniz's Metaphysics: A Historical and Comparative Study*. Princeton: Princeton University Press.

Notes

¹ Abbreviations for primary texts are listed in the Bibliography. References to C, DQA, Gr and Lewis are to page numbers; G, GM to volume and page numbers; A to series, volume and page. With a few exceptions, English translations of Leibniz's writings in this essay follow those of Ariew and Garber (AG), Arthur (Ar), Look and Rutherford (LR), Mason (M), and Morris and Parkinson (MP), as noted in the texts; I have sometimes modified translations without comment.

² I think also meaning to stress the simplicity of substance, Mates observes, "At any rate it is clear enough that for Leibniz the only substances are the monads, even though it is quite unclear how he reached this conclusion" (1986: 195).

³ I discuss this in "Borrowed Reality: Two Interpretations of an Argument for Unities in Leibniz," in preparation.

⁴ This is a complex issue, but for some important recent commentaries that present Leibniz's discussion of corporeal substances as not reflecting a considered commitment, see: Sleight (1990: 108, 115), Adams (1994: 306-7), Rutherford (1995: 156-9, 265-82), Baxter (1995), and Cover and Hawthorne (1999: 50-5, 224-5).

⁵ Following Rutherford's phrase; see Rutherford (forthcoming).

⁶ For a recent, detailed discussion of idealism in the later writings, see the Introduction in LR (esp. xlix-lxxix).

⁷ See, for instance: Broad (1975), Garber (1985), Jolley (1986), Arthur (1998), Hartz (1998 and 2007), Bolton (2004), Phemister (2005), Hartz and Wilson (2005), Loftson and Arthur (2006).

⁸ See Garber (2004 and 2005), and see Lodge (2005) for extended discussion.

⁹ See especially Adams (1994: 293) and (1996), discussed in the next section.

¹⁰ Rutherford (forthcoming) proposes that, even when advancing a substance idealism in his later writings, Leibniz holds to the reality of matter, but not to that of individual bodies and so not to corporeal substances.

¹¹ There is a wealth of scholarship on this topic; my remarks in these paragraphs are meant to be summary and uncontroversial. For a sample of the recent secondary literature, see: Garber (1985), Rutherford (1990) and (1995: 154-159, 221ff.), Sleight (1990: 95-126), Hartz (1992), Adams (1994: 241-61), Baxter (1995), Levey (2003), Bolton (2004), Phemister (2005: 81-103). Leibniz's discussion of the distinction

between substances and aggregates is perhaps most thorough in his correspondences with Arnauld, de Volder and Des Bosses, though of course there is a profusion of sources to consider; for a small sample of other texts, cf. A VI,4,627,1506, 1622.

¹² Cf. G II,71-2; G VII, 444.

¹³ A VI,4,555-6,1464; G II, 58,73,76,88,96-7,100-1; G IV,492; LH IV,iii,5e, Bl.23r.

¹⁴ Cf. C 9; A VI,4,996, 1645. For discussion of Leibniz on relations, see Mates (1986: 209-226), Cover (1989), Mugnai (1992) and Cover and Hawthorne (1999: 57-86). A third element adding to the problem is Leibniz's later view that relations themselves are "ideal" or *entia rationis* (cf. Gr 266; A VI,6,145, 227, 265; G II,438, 486, 517; G V 132, 210, 246; G VII,401), and exist only within the mind of the subject that apprehends in one thought their foundations in the relata. The ideality of relations also suggests a very short argument for the thesis that substances must be simples: the only possible unity for a composite would have to be relational and so merely mental, whereas the unity of a substance must be real. Whatever the merits of this argument (I don't mean to suggest that it is unassailable), I have found no evidence that Leibniz contemplates it as an argument for simple substances. The tension between Leibniz's claims that relations are ideal and some of his other metaphysical commitments is noted by Cover and O'Leary-Hawthorne (1999: 73-77, esp. n28) and Hartz and Wilson (2005, esp. 18n60)). For discussion of the idea of aggregates as semi-mental beings whose reality consists in the reality of their constituents but whose unity belongs only to the mind apprehending them together, see Hartz (1992) and (2007: Chs. 6 and 7), Adams (1994: 241-255), and Rutherford (1995: 221ff).

¹⁵ 1695: cf. G IV 482-3, 491-2; 1690: cf. A VI,4,1670-1n., and 1673.

¹⁶ Cf. G IV,512.

¹⁷ For instance, in his letter of 9 October 1687, Leibniz says "It is true that the whole which has a true unity can remain strictly the same individual although it gains and loses parts." He also goes on to say that, if animals have souls (a view he favors), they will then be like "a man who is an entity endowed with a true unity conferred upon him by his soul, notwithstanding the fact that the mass of his body is divided into organs, vessels, humors, spirits, and that the parts are undoubtedly full of other corporeal substances endowed with their own substantial forms"(G II,120/M 153f.; in Leibniz's copy this passage ends with the term 'entelechies'; the copy received by Arnauld ends with 'forms', as here; see Lewis 87)). Cf. G II,97, 118, 126, and A VI,4,1583f. Still, it is disputed whether Leibniz upholds corporeal

ON UNITY AND SIMPLE SUBSTANCE IN LEIBNIZ

substances as composite unities even in the correspondence with Arnauld. For defense of my own view, see Levey (2003); see also Bolton (2004). For opposing views, see Sleight (1990: 98f. 110-115 and 119) and Baxter (1995).

¹⁸ Cf. also G II,267. Both texts are quoted in Rutherford (1990).

¹⁹ For discussions of this argument, see Rutherford (1990) and Adams (1994: 33-338). See also Levey, “Borrowed Reality” (ms).

²⁰ Likewise, Leibniz sometimes offers an argument “by cases” from the existence of aggregates which supports the conclusion that there must be substances that are true unities, even indivisible unities, but falls short of establishing the simplicity of substance; here to Arnauld: “If there are aggregates of substances, there must also be true substances from which all the aggregates result. One must therefore necessarily arrive either at mathematical points from which certain authors make up extension, or at Epicurus’ and M. Cordemoy’s atoms (which you, like me, dismiss), or else one must acknowledge that no reality can be found in bodies, or finally one must recognize certain substances in them that possess a true unity” (G II,96/M 120-1). Cf. G IV,478 and 478n.

²¹ See Garber (1985) and Levey (2003).

²² For discussion, see Arthur (1989, 1998, and Introduction in Ar) and Levey (1998).

²³ For Plato on unity and being, see *Sophist* 237c-e, 238-9; *Parmenides* 144c-e, 164a7-b4. See also *Republic* 478b-c and *Theaetetus* 188e-189a. For discussion, see Thomas (forthcoming).

²⁴ Leibniz’s affinity for a hylomorphic theory of individual substances is evident in various writings prior to the heavy emphasis he puts on this argument from unity for forms from 1678/9 onwards. Some strong precursors appear in 1676. For discussion, see Mercer (2001: Ch. 10, esp. 409-413)

²⁵ For instance, in the *Principles of Philosophy*, I,53 and 63 (AT VIII,25, 30-1) and II, 37ff. (AT VIII,62ff.). For discussion, see Garber (1992), Chapters 7 and 8.

²⁶ For discussion, see Garber (1995) and Levey (2005).

²⁷ Quoted in Hartz (2007:166).

²⁸ See also Garber (1985: 59).

²⁹ Volume 4 of the Akademie Edition, for instance, which includes Leibniz’s major philosophical writings, outside of his correspondences, from 1677 to 1690, appears to contain only three mentions of simple substance prior to the Fardella memo, all in 1685: A VI,4,635 and 1673.

³⁰ In fact in the same year, 1695, Leibniz writes to l’Hospital about substance:

“The key to my doctrine on this subject consists in this consideration of what is properly a real unity, Monas” (GM II,294-5; quoted in Sleigh (1990: 131); see also Wilson (1989: 180f.)). The name by itself is not conclusive evidence of a doctrine of simple substances, of course; in a 1698 letter to Bernoulli, Leibniz is willing to say that animals—complete with their organic bodies—are “Monads,” and it is not unnatural to take that at face value as meaning a composite being that is a “Unity” rather than, somehow, a partless entity.

³¹ See Arthur (1998 and forthcoming).

³² For related discussion, see Adams (1994: 324), Rutherford (1995: 156ff.), Garber (1995) and Arthur (1998).

³³ Though as Sleigh (1990: 106ff.) points out, already in the correspondence with Arnauld, Leibniz can be found describing forms as complete beings (cf. G II,76).

³⁴ See Garber (1985, 2004), Rutherford (1990 and forthcoming) and Adams (1994: 274-77).

³⁵ For a detailed discussion of Leibniz’s account of *requisita* and related concepts, see Rutherford (1995: Ch. 5).

³⁶ Cf. A VI,4,555f. and 627. In the former passage Leibniz discusses an army as an aggregate, contrasting it with a man. The army’s nature, he says, “consists in number, figure, appearance and similar things, and when these change it is not the same thing.” Although a man too has parts, “those parts make a unity”; and “the human soul has its own reality that it cannot lose no matter how much the parts of the body change.” For discussion, see Sleigh (1990: 123f.) and Bolton (2004).

³⁷ A VI,4,1673n.

³⁸ The distinction is also evident in Leibniz’s discussions of aggregates when he says that aggregates owe their reality to their constituents but owe their unity to the mind that apprehends them (cf. G II 96f., 101, 119, 263, 304, 306). For discussion, see Hartz (1992), Rutherford (1995: 221ff.) In the present study, however, I mean to focus on the ideas that lead to that conception, on the arguments for it rather than on its consequences.

³⁹ A more complete precursor occurs in Leibniz’s letter of 30 June 1687 (G II,96).

⁴⁰ It is worth observing also that in the letters to Arnauld Leibniz does offer an argument for the claim that aggregates presuppose unities which bypasses the question of forms or the existence of incorporeal elements in bodies. Against a proposal by Arnauld that in matter there might be nothing but aggregates without

ON UNITY AND SIMPLE SUBSTANCE IN LEIBNIZ

unities, Leibniz contends that aggregates require unities because (1) aggregates are just multitudes of beings, (2) the plural ‘beings’ presupposes the singular ‘being’, and (3) something is a being if and only if it is a unity, for ‘being’ and ‘unity’ are reciprocal terms. So if there aggregates, there cannot only be aggregates; there must also be unities. (G II,97) For analysis and discussion, see Levey (2003).

⁴¹ Wilson (1989: 194) suggests that Leibniz “had stopped actively trying to reconcile monads and corporeal substance” by around 1703.

⁴² For a good discussion of the issues, see the introduction in LR.

⁴³ For development of a theory-pluralist approach, see Hartz (2007: 14-27).

⁴⁴ Hartz (2007: 49-54) also stresses the idea that Leibniz’s commitment to monads seems to undo the “realistic” view of the extended world that serves as a premise in his arguments for substances: “They begin with Realism and end with Idealism” (*ibid.*, 52).

⁴⁵ See Lewis (1983: 277) on the “method of unions.”

⁴⁶ Cf. G II,451; G IV,564.

⁴⁷ As noted by Hartz and Wilson (2005), in the “Preliminary Dissertation” of the *Theodicy*, sections 55f., Leibniz indicates that the union of soul and body, like the Incarnation, is among the “Mysteries.”

⁴⁸ In one respect this would be to continue a Scholastic tradition of holding souls to be “incomplete substances” that need to be complemented by further ingredients in order to constitute a “complete” substance. Suárez, for instance, writes, of the soul, “It is not a part [of a complete substance] in the sense of something whole in itself; rather it is essentially a part, and has an incomplete essence, which by its own nature is ordained to make another essence complete; hence it is always an incomplete substance” (*Disputationes metaphysicae* XXXIII,1,11; cf. IV,3,8 and XV,5,1-2 and 9,1-2). Descartes gave verbal support to the idea (AT III,459f. and VII,222), which Leibniz noted favorably (A VI,6,317f.). Also, the traditional ideas about form and matter may reduce the severity of the Construction Problem by relieving the pressure to suppose that the unity of the composite must consist in, or result from, some relation among its parts. Hylomorphic accounts need not consider form and matter as if they were pre-existent beings in their own right that require some extra link to join them together: the unity of the individual of which they are aspects is prior to, or at least not posterior to, the distinction within it between its form and its organic body. In contrast, viewing the form, for instance the soul, as a simple complete being in its own right, as Descartes does, would seem to force the soul-body union to be understood as some sort of relation that is ontologically

secondary to the terms. Still, the present proposal would also break from the familiar tradition of hylomorphism by imagining that a plurality of other souls could play the role of the body and be what completes the whole substance.

⁴⁹ Leibniz's own analysis of the infinite division of matter in suggests just this view of limits (cf. A VI,3,555, 565f.), as does his treatment of the idea of an infinitely small quantity in the calculus not as a fixed sub-finite value but as a variable quantity that, for any finite value ϵ , can be taken smaller than ϵ (cf. A VI,3,503; DQA 32,39; GM IV,271).

⁵⁰ Rutherford (1995: 157) notes another variant of the worry that there are nothing but forms in Leibniz's analysis: "What is significant about this regress is that we never reach a more basic material principle complementary to substantial form. Instead Leibniz seems committed to explaining the reality of corporeal substance in terms of substantial forms alone." The present reply in terms of an "internal" reading of the limit may suggest an answer to this variant as well, while also conceding part of Rutherford's point. Since there is no step in the analysis at which there are only substantial forms, there will be no given corporeal substance x of which it is true to say that its reality is explained in terms of substantial forms alone; for x 's reality will be explained in terms of x 's form together with its secondary matter, a mass of other corporeal substances. Still, for the question about the idea of the reality of corporeal substance in general, there can be no reductive explanation in terms of a material principle, for the only principle of materiality for corporeal substances will be secondary matter, which itself is explained in terms of the idea of plurality together with the idea of corporeal substance. (Leibniz may mean to identify plurality as the principle of materiality for substances: cf. A VI,4,1399.)

⁵¹ Ancestors of this essay were presented to audiences at Dartmouth College, University of Massachusetts at Amherst, Harvard University and a symposium of the American Philosophical Association in Chicago, IL; my thanks to all for their feedback. Special thanks to Ric Arthur, Tyler Doggett, Dan Garber, Jeff McDonough, Dave Robb, Don Rutherford, Alison Simmons, Bob Sleigh and Christie Thomas for comments and discussion. Finally, thanks also to an anonymous referee for this journal and to the Editor, Glenn Hartz, for their generous help in improving the essay.