

A Review of Leibniz's Metaphysics of Body in the *Discourse of Metaphysics* and letters to Arnauld

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1. Introduction

In this article, I will briefly review Leibniz's theory of body in the *Discourse of Metaphysics* (1686) and the letters to Arnauld, and explain its relationship with the theories in the early years. Here I introduce modest suggestions for interpreting Leibniz's metaphysics of the middle years (1686-1700)¹. I do not argue that Leibniz had a unified system of metaphysics in 1686. As suggested by notable commentators, it's not easy to find it, and it may be true that we can find a plurality of systems in the texts of 1686. Catherine Wilson introduced three metaphysics within the *Discourse of Metaphysics*: the metaphysics of individual substance, the metaphysics of spiritual substance, and the metaphysics of corporeal substance (Wilson 1989, pp. 88-109). The metaphysics of individual substance is founded on Leibniz's logic, according to which an individual substance can be a subject of a proposition, but it cannot be a predicate. The metaphysics of spiritual substance implies that only spiritual substances or minds are substances, and all the bodies are phenomena for perceiving minds. According to the metaphysics of corporeal substance, however, animals are substances, and even an inorganic body is a collection of substances, each of which has unconscious perceptions. Daniel Garber explicated the metaphysics of corporeal substance in detail, and argued that Leibniz did not introduce it merely for compromising with Arnauld, who strongly believed that bodies are substances (Garber 2009). Rather, according to Garber, Leibniz had his own concerns for the ontological status of bodies, inspired by his investigations of physics, and thus he was internally motivated to discuss the metaphysics of corporeal substance. But Garber notes that this metaphysics is not consistent with the view that only minds are substances. Considering the discussions of these commentators, it is not easy to unify all the suggested metaphysics into one consistent system. I do not defend a view that Leibniz had several distinct and mutually inconsistent systems, either, since it would require serious examination of other interpretations. For instance, Robert Adams interpreted the *Discourse of Metaphysics* and letters to Arnauld as presenting a unified system, according to which all the substances are immaterial (Adams 1994, pp. 262-307). Robert Sleigh also attempts to read discussions of corporeal substance as consistent with the metaphysics of monadology, the view that any organism is a collection of simple and immaterial substances (Sleigh 1990, p. 101). I will not critically examine their interpretations in this article.

1 It is not easy to limit the span of the "middle years," even for Daniel Garber who introduced this terminology. But in his book, Garber argues that Leibniz was at least committed to the existence of simple substances in a letter to Sophie of June 1700 (Garber 2009, p. 341; A.I.xiii.89-93). He seems to suppose that the middle years ended in this month.

I do not follow Leibniz's discussions in the order of their composition. In other words, I do not necessarily discuss letters to Arnauld right after the *Discourse of Metaphysics*, though these letters were written after the *Discourse*, but I pick up notable topics of 1686.

2. Substantial Form

(1) Leibniz held that substantial form was considered as the principle of duration and identity. The tenth section of the *Discourse* is entitled "That the belief in substantial forms has some basis, but that these forms do not change anything in the phenomena and must not be used to explain particular effects" (AG.42). "[A]ncients" and "many able men accustomed to deep meditation who have taught theology and philosophy some centuries ago" are "not distant from the truth" (ibid.). Also, though it is not obvious from the tenth and eleventh sections of the *Discourse*, Leibniz later suggested that substantial forms do exist, since Leibniz wrote that "we must necessarily recognize in body something related to souls, something we commonly call substantial form" (DM.12 = AG.44). This substantial form is considered as having perceptions, though it may lack consciousness and memory. It also provides some kind of unity and duration for a body.

Leibniz's introduction of substantial form in a letter to Arnauld was a bit more modest, since he suggested the existence of substantial forms based upon some unproved assumptions. In his letter of 4/14 July 1686, Leibniz wrote that "[i]f the body is a substance and not a simple phenomenon like the rainbow, nor an entity united by accident or by aggregation like a heap of stones, it cannot consist of extension, and one must necessarily conceive of something there that one calls substantial form" (GP.II.58 = MA.66). Also, in his draft of a letter, Leibniz wrote that "the substance of a body, if bodies have one, must be indivisible; whether it is called soul or form does not concern me" (GP.II.72 = MA.88). In these two passages, Leibniz explicitly wrote assumptions to conclude that bodies have substantial forms, suggesting that the conclusion is established only based upon these assumptions or premises. Here Leibniz thought that if body endures and has some identity, the endurance and identity are based upon its substantial form. Along with this line of thought, Leibniz suggested that bodies move continuously. In *A Specimen of Discoveries of the Admirable Secrets of Nature in General* [*Specimen inventorum de admirandis naturae generalis arcanis*], presumably written in 1686, Leibniz argued that motions of bodies are continuous, and there is no leap:

There is no transition to rest by a leap, and nothing passes from motion to rest or to a contrary motion without passing through all the intermediate degrees of motion. And just as no motion from place to place occurs in an instant, so no change from degree to degree occurs in an instant. [A.VI.iv.1630 = RA.333]

I think Leibniz rejected his previous view in *Pacidius to Philalethes* (PP), where he claimed that bodies are recreated at every moment (A.VI.iii.567 = RA.213). Bodies do not move continuously in the framework of PP, but Leibniz suggested in the passage above that bodily movements are continuous since they must pass "through all the

intermediate degrees of motion.” In the framework of PP, Leibniz already rejected leaps, but he assumed that bodies instantaneously move to contiguous places from moment to moment. In this case, there is no intermediate state between the states of these two moments. But Leibniz changed his view in 1680s. He accepted the view that bodies can continuously produce changes by themselves, and any of two successive states of a body must have an intermediate state. In this view, the movement of a body has no leap, and not only that, it is completely continuous.

(2) Leibniz held the view that substantial forms make bodies actually divided. According to him, any portion of matter has a plurality of substantial forms, and owing to these forms, any part of the matter is substantially different from others. Any portion of matter is not homogeneous and continuous, but their parts are really distinct from others. Leibniz suggested the actual division of bodies owing to “different motions”:

No body is so very small that it is not in turn actually divided into parts excited by different motions; and therefore in every body there are actually infinitely many bodies. [A.VI.iv.1626 = RA.323]

The view suggested in the passage seems to be different from what Leibniz introduced in *De Summa Rerum* (DSR), where Leibniz seems to claim that there are indivisible bodies with indivisible mind (A.VI.iii.393 = DSR.47). Inorganic bodies in general are divisible and considered as aggregates. But some part of an inorganic body has only one mind, and it cannot be divided further. In DSR, it seems that an organic body has an intrinsic unity through the mind. But according to the passage above, every body, including an organic body, is actually divided.

3. Corporeal Substance

Leibniz argued that every body is actually divided. If so, an organism seems to have a complicated structure. According to this view, an organism is united by a substantial form, but without this substantial form, the organism is taken as a collection of parts, each of which further contains other substantial forms. Even an organic body is thus actually divided into smaller parts. In 1686, Leibniz tried to explain this complicated structure of organism by discussing corporeal substance.

(1) As well-known, the letters to Arnauld include detailed discussions of corporeal substance:

However, it seems to me certain that if there are bodily substances, they do not belong to man alone, and it appears probable that animals have souls although they lack consciousness. [GP.II.73 = MA.90 The draft of the letter of 28 November/8 December 1686]

Although Haydn T. Mason used the expression “bodily substances” in his translation, Leibniz was discussing corporeal substance here since the original term is “substance corporelle.” Leibniz’s claim is that if there are corporeal substances, animals are probably among them. One animal is united by its soul, and cannot be taken as an aggregate.

Leibniz also suggested that a human body united by a soul is a corporeal substance:

I reply that in my opinion our body in itself, leaving the soul aside, i.e. the corpse, cannot be correctly called a substance, like a machine or a heap of stones, which are only entities through aggregation; for regular or irregular arrangement has no effect on substantial unity. [GP.II.75 = MA.93]

To be sure, Leibniz here argued that organic body without a soul cannot be a substance, but an aggregate. But the discussion here suggests that an organism can be a substance if it is endowed with a soul.

Furthermore, Leibniz suggested that the soul of an animal is the form of its body:

The soul, however, is nevertheless the form of its body, because it is an expression of the phenomena of all other bodies in accordance with the relationship to its own. [GP.II.58 = MA.65-6]

But the relationship between the form and body is not as strong as that of the Aristotelean form and body. In the Aristotelean framework, soul and body cannot be separated, and they causally interact. On the other hand, the relationship between soul and body here seems to be fairly similar to their relationship in the framework of the preestablished harmony, according to which soul and body correspond to each other without any causal interaction. Robert Sleigh also takes the theory proposed in the letters to Arnauld as close to the preestablished harmony. He introduces the “modified corporeal substance theory,” according to which a soul is a substance, and also functions as the substantial form of its organic body:

We should also bear in mind a variant of this theory —what we will call the “modified corporeal substance theory.” [...] So, on St. Thomas’s theory, the human soul behaves in some ways like a substance in abstracto as a form of matter—and in some ways like a substance in concreto—as an immaterial form. [...] On the modified corporeal substance theory, all substantial forms—not just human spirits are viewed as occupying this dual position[...] [Sleigh 1990, p. 99]

According to the modified theory, the soul is a complete substance, and it can continue to exist even if it is separated from the body. In fact, I could not find a passage of the *Discourse of Metaphysics* or letters to Arnauld to show that the soul is not a complete substance. If there is no passage of that kind, Leibniz may have proposed the modified theory. This theory is quite similar to Leibniz’s metaphysics of monad or simple substance, according to which the human soul is a dominant monad, and it is a complete simple substance that can exist independently from other simple substances that constitute the organic body.

(2) Compared to his previous discussions, Leibniz became more careful in his discussion of physical actions of corporeal substances. In the letters to Arnauld, Leibniz did not argue that corporeal substances physically act

upon their parts. Rather, he seems to introduce non-physical actions of corporeal substances.

Leibniz thought that corporeal substance is spontaneous. It can produce actions and changes by itself. Though body seems to interact and be changed by others, corporeal substance is not acted upon and caused to change by other corporeal substances. In *A Specimen of Discoveries of the Admirable Secrets of Nature in General*, written around 1686, Leibniz claimed that “no impetus is transferred from one body to another”:

These things are true to the extent that in physics too, on careful investigation of the matter, it is evident that no impetus is transferred from one body to another, but each body moves by an innate force, which is determined only on the occasion of, i.e. with respect to, another. [A.VI.iv.1620 = RA.311]

One may have a difficulty in understanding how bodies spontaneously move, given that they seem to be moved by others. Bodies always appear to be contiguous to other bodies, and their movements seem to be caused by them. Leibniz introduced an example of elasticity to claim that corporeal substances are actually not moved by others.² Elastic bodies change their shapes by virtue of their internal force. For instance, when they shrink and become smaller, they tend to have a larger volume since their inner pressures will be larger. Likewise, any corporeal substance has some tendency to have a new state, and the new state will be brought about by the immanent force of the corporeal substance. By assuming this kind of immanent force, Leibniz suggested that bodies have some absolute (non-relative) properties that allow us to ascribe an action to some of them rather than others:

Just as when a body swims in water, there is an infinite number of movements by the parts of the water, as is necessary in order that the place which this body vacates be always filled by the shortest possible path. That is why we say that this body is the cause of it, because by means of it we can explain distinctly what happens; but if one examines what physical reality exists in motion, one can as well assume that this body is at rest, and that everything else is moving in conformity with this hypothesis, since the whole movement in itself is only relative, that is to say a change of location, which cannot be attributed to anything with mathematical precision; but one attributes it to a body by whose means everything is distinctly explained. [GP.II.69 = MA.84-5]

Leibniz here suggested that movements are relative, and moving bodies may seem to be at rest when they are seen from another point of view. But he still suggested that body has some absolute quality when it seems to be moving. That is to say, it can have some quality that explains the event of moving more distinctly than other bodies, and in this case it is considered as more active than the other bodies. And he suggested that one body involves something

² “The cause of the elasticity, however, is the internal motion of the parts of the elastic body; for although elasticity may be derived from a kind of general fluid, nevertheless the parts of the permeating fluid, as long as they are passing through the body, are contained in it.” [A.VI.iv.1620 = RA.311-3]

that explains a physical event more distinctly than another body. I think Leibniz's discussion concerning corporeal substance changed after he developed his view on individual substance, as we see in the next section.

4. Individual Substance

Although Leibniz's discussion of individual substance may not primarily belong to his metaphysics of body, it is a major topic of his metaphysics in general. Furthermore, he was wondering if one animal with an organic body is an individual substance. If so, in the framework of pan-organism, an inorganic body is a collection of many tiny organisms, and therefore it is considered as a collection of individual substances. Thus Leibniz's discussion of this topic is related to how to understand inorganic body, and body in general. I start from the doctrine of individual substance since it determines the character of substance, and eventually the ontological status of body in 1686.

(1) In 1686, Leibniz emphasized his doctrine of individual substance and complete individual concepts. He put special emphasis on the view that individual substances are spontaneous, which seemingly led him to assume that corporeal substances are also spontaneous. We find a detailed explanation of examples of individual substance in the *Discourse*. In section 8, Leibniz wrote:

Since this is so, we can say that the nature of an individual substance or of a complete being is to have a notion so complete that it is sufficient to contain and to allow us to deduce from it all the predicates of the subject to which this notion is attributed. An accident, on the other hand, is a being whose notion does not include everything that can be attributed to the subject to which the notion is attributed. [AG.41]

Here Leibniz introduced the doctrine of complete individual concepts. Every individual substance has a concept that involves complete information about any event that happens to it. Still, this discussion is not so new for us, since we have seen the doctrine introduced in another text in the previous chapter. Leibniz thought that individual has its unique essence, and it has a substantial form that can produce future states. The unique essence of an individual involves everything that will happen to the individual, and the individual has a power to produce events that corresponds its essence. Leibniz uses the expression “the essence or individual notion” in the *Discourse of Metaphysics* (DM.16). Also, in a letter to Hessen-Rheinhels of 1686, Leibniz stated that since soul is an individual substance, its notion, idea, essence or nature needs to contain whatever will happen to it (GP.II.69). It seems that individual notion is the essence of the individual. Also, the individual notion is unique, and no two individuals share the same individual notion. On the other hand, in the period of DSR, Leibniz did not use the term “individual notion” as G.H.R Parkinson notices (Parkinson 1992, pp. li-lij cf. Wilson 1989, p. 78).

In the *Discourse*, Leibniz claimed that an individual substance can be a subject, but it cannot be a predicate. Everything that happens to an individual are contained in its individual notion (DM.8). The individual notion offers complete information about the individual, and no other information is needed. The individual is dependent upon

God as a creature, and it owes its existence to God. But an individual is also a complete being in the sense that its notion is sufficient for understanding it.

Moreover, Leibniz refers to an opinion that the nature or form of Alexander the Great corresponds to his individual notion. Leibniz then claims that even if this is true, still all the events that happen to Alexander are contingent. But Leibniz accepts that Alexander has a form that corresponds to his individual notion (DM.13). Since God provided such a form, all the contingent events in the future need to correspond to the form. Leibniz here suggests that a form is the principle of the production of events.

In light of the foregoing discussion, we understand that Leibniz assumed that forms are principles of successive actions in the period of the *Discourse of Metaphysics*. Furthermore, the mutual independence of individual substances is shown by the fact that an individual substance has a form that corresponds to the individual notion, and the individual changes itself by continuing to act. In the *Discourse of Metaphysics*, Leibniz stated that strictly speaking “one particular substance never acts upon another particular substance nor is acted upon by it” (DM.14). This view continued into Leibniz's late philosophy, and in the *Monadology*, for instance, Leibniz stated that “[t]he monads have no windows through which something can enter or leave.” (M.7). How is this causal independence of individual substances related to the previous discussion? If an individual can produce all the events spontaneously, it does not need to be changed by being affected by other individuals. Thus not only human thoughts, but their sensations, arise independently of the actions of other individuals. Indeed, Leibniz explicitly stated that “[f]rom the notion of individual substance it also follows in metaphysical rigor that all the operations of substances, both actions and passions, are spontaneous” (A.VI.iv.1620 = RA.311).

(2) Leibniz argued that every individual substance is qualitatively different from the others, and he suggested that every individual substance has a unique degree of perfection that is not shared by any other substance. Concerning the uniqueness of individual substance, Leibniz contrasted the concept of a sphere with that of the sphere “that Archimedes had placed on his tomb” in *Remarks upon M. Arnauld's letter* of 1686:

[...] [T]he concept of the sphere that Archimedes had placed on his tomb is complete and must contain all that pertains to the subject of that form. That is why in individual or practical considerations, which are related to individuals, in addition to the form of the sphere one is concerned with the substance of which it is made, the place, the time and the other circumstances which by a continual sequence would finally embrace the whole succession of the universe, if one could pursue everything contained in these concepts. [GP.II.39 = MA.41-42]

The concept of a sphere cannot be complete since it does not differentiate one particular sphere from another. It just expresses an abstract entity that may have another such entity that is indistinguishable from it:

But on the contrary two ellipses, which differ, not in the ratio of their axes, and thus by no distinction

explicable in itself, but only by their size, i.e. relatively to one another, possess no specific difference. One must know however that complete entities cannot differ in size alone. [GP.II.132 = MA.74]

In a sense, two similar ellipses that are different in their size alone are “different.” But Leibniz did not recognize their qualitative difference here. He assumed that merely quantitative difference of two things is not sufficient to identify one individual substance.

However, although Leibniz did not think individual substances are merely different in their size, he seems to assume that substances can be differentiated by their degrees of perfection. In relation to this point, Leibniz suggested that there are many degrees of souls, and some exist with unconscious perceptions. It is relevant to the view that even inorganic bodies contain soul-like substances with unconscious perceptions. In *There Can Be Infinite Degrees of Souls* [*Infiniti possunt gradus esse inter animas*], perhaps written in 1686, Leibniz suggested that there are many kinds of souls in addition to human minds.

A body corresponds to the situation of a point or present state; but souls correspond to the degree of change in the motion of the point. And the soul of lowest degree corresponds to tendency in a given direction, a soul of second degree to the first osculation, a soul of the third degree to the second osculation; and so on. But mind corresponds to an osculation of infinitieth degree[...] [A.VI.iv.1525 = RA.299]

Leibniz suggested some kind of continuity between “the soul of lowest degree” and mind. And any kind of soul is supposed to have osculation. It seems that soul has more distinct perceptions if its osculation is larger. Also, there can be infinitely many kinds of souls. Leibniz suggested that starting from the first degree of osculation, soul can have infinitely many and distinct degrees of osculation.

One difficulty remains. It is not easy to conceive of an osculation of infinitieth degree. If a function $y = x^2$ is differentiated three times, it will be zero. Then no further differentiation is possible. A sine curve can be differentiated an infinite number of times. But I don't think it is meaningful to do so. One possible reading is that the n-th osculation is analogy of an expression of the perception tied with the (n-1)th osculation. Still, the ontological status of a soul is not clear. It can be a complete substance. It can be a component of a complete substance. Also, Leibniz did not explicitly state that there are many kinds of souls. He may have suggested that they are possible.

As for whether soul is a substance, Leibniz suggested that the soul of Alexander the Great is an individual substance. In the same section, Leibniz wrote:

Thus when we consider carefully the connection of things, we can say that from all time in Alexander's soul there were vestiges of everything that has happened to him and marks of everything that will happen to him and even traces of everything that happens in the universe, even though God alone could recognize them all.

[AG.41]

Also, Leibniz stated that soul is an individual substance in the draft of a letter to Arnauld of 1686:

Now, since the soul is an individual substance, its concept, notion, essence or nature must include/everything that is to happen to it; and God, who sees it perfectly, sees what actions it will perform or undergo for evermore, and all the thought it will have. [GP.II.68-9 = MA.84]

Now if the soul of Alexander is a complete substance, it can exist as a substance even without its body. And Alexander does not have to exist as a corporeal substance, and the existence of a corporeal substance is not required here. Moreover, Leibniz here does not suggest that body is a substance, or at least a collection of substances.

To sum up, Leibniz seems to have a hard time to decide whether there are soul-like substances that only have lower level perceptions, and whether bodies contain such substances. Obviously, we perceive physical phenomena, but they do not establish the existence of substances in bodies.

5. Skeptical Worry

Given that Leibniz argued that a body has a substantial form in 1678-9(A.VI.iv.1988 = RA.233), one may be tempted to conclude that Leibniz strongly believed that body is a substance in 1686. But in fact, Leibniz was still oscillating between two views. According to the first view, body is a substance, or at least a collection of substances. It contains substantial form as the principle of action, as he argued in 1678-9. According to the second view, however, human minds or souls do exist, but body only exists within a perceiving mind, as a phenomenon or appearance that is internal for the mind.³ Robert Sleight has suggested that Leibniz's phenomenalism in the *Discourse of Metaphysics* made him suppose that any substance must be a mind (Sleight 1990, p. 98).

Also, when Leibniz suggested that bodies may be substances, his view may be different from the later theory.

3 Later, Leibniz used the term "internal phenomenon" to specify what he was discussing in a draft of the *New System*, written in 1694:

The soul was created from the beginning in such a way that everything that the body can offer, and is presented in it by virtue of the representative nature which was given to it with its being, for being produced at a designated point. After that by a series of thoughts and, so to speak, like by dreams (or rather internal phenomena) which are regulated and so veritable that they are foreseen with success[...] (GP.IV.477)

Leibniz argued that soul has a capacity to produce a series of successive experiences by itself. Since they exist within the soul, it is called "internal phenomena." Leibniz used the same expression in the *Conversation of Philalète and Ariste* of 1711 as well:

But even granting that everything takes place in us ordinarily just as it would in the case of bodily annihilation, that is, admitting that we ourselves always produce within us (as I in fact believe) or that God produces in us (as Theodore believes) internal phenomena without the body having any influence over us, must this necessarily involve external ideas? Is it not sufficient to hold that phenomena are simple new transitory modifications of our souls? (GP.VI.591 = L.626)

Leibniz's conception of corporeal substance in the letters to Arnauld may be different from his conception of corporeal substance after 1700. He may have been thinking about an Aristotelian corporeal substance, which has a substantial form and an extended body at the same time. On the other hand, when Leibniz talked about corporeal substance in a letter to De Volder of 1703, he was thinking about a collection of simple substances, among which we can find one and only one dominant monad (GP.II.252).⁴

In brief, Leibniz was still thinking about two possibilities at least, and the theories he proposed seem to be different from the late theory. First, for Leibniz, it may be that bodies have subsisting beings in them given the conservation of kinetic energy or *vis viva*. Second, Leibniz still supposed that this conservation does not necessarily establish that body, or at least organism, is a substance. We might have perceptions as if there were external and real bodies, and as if forces in them were conserved and constant. I will introduce Leibniz's skeptical worries in detail.

(1) At some time during 1686, Leibniz was not sure whether there is a body that is an individual substance. In the margin of a draft of the section 8 of the *Discourse*, after writing that “[a]n accident, on the other hand, is a being whose notion does not include everything that can be attributed to the subject to which the notion is attributed,” Leibniz added:

“Thus the circular shape of the ring of [Gyges] [Polycrates] does not contain everything that the notion of this particular ring contains, unlike God [knowing] seeing the individual notion of this ring [seeing, for example, that it will be swallowed by a fish and yet returned to its owner].” (Words in brackets were deleted by Leibniz) [AG.41]

Thus Leibniz suggested that the ring of Gyges is an individual, and it has its complete notion. Obviously, however, it is not an individual substance since the ring is not an organic body that is united by one substantial form. Maybe that is the reason why Leibniz didn't leave it in the final version of the *Discourse*. Another issue is whether a part of the ring, at least, is an individual substance. If every inorganic body is an aggregate of organisms, and an organism is a corporeal substance, a part of the ring can be a substance. Perhaps Leibniz was not sure that it is, since as other drafts of the *Discourse of Metaphysics* show, he was not sure if body can be a substance. Leibniz added:

4 In a famous passage of the letter to De Volder 20 June 1703, Leibniz distinguished five ontological categories:

I therefore distinguish: (1) the primitive entelechy or soul; (2) primary matter or primitive passive power; (3) the complete monad formed by these two; (4) mass or secondary matter, or the organic machine in which innumerable subordinate monads concur; and (5) the animal or corporeal substance which the dominating monad makes into one machine. (GP.II.252 = L.530-1)

The fifth entity, corporeal substance is a composite of one dominant monad and many subordinate monads. The whole group is called a “machine.” But it is not a composite of substantial form and its extended body, since the body of the dominant monad is nothing but a collection of many monads, each of which is simple and immaterial.

“I speak here as if it were assumed that this ring [has consciousness] [is a substance].” [AG.41]

Leibniz seems to imply that the ring is actually not an individual substance. The reason can be understood from the discussions in the letters to Arnauld. Leibniz ascribed a substantial form that unites the whole body only to an organism, not to an inorganic body like the ring.

(2) Leibniz assumed that bodies might be phenomena for perceiving minds. Passages in the draft of the *Discourse of Metaphysics* show that Leibniz was not completely sure that there are corporeal substances. At the beginning of section 9 of *Discourse of Metaphysics*, Leibniz wrote:

Several notable paradoxes follow from this; among others, it follows that it is not true that two substances can resemble each other completely and differ only in number [solo numero], and that what Saint Thomas asserts on this point about angels or intelligences (that here every individual is a lowest species) is true of all substances, provided that one takes the specific difference as the geometers do with respect to their figures. [AG.42-3]

This passage is introduced after the introduction of the doctrine of individual substance and complete individual concepts in section 8. And Leibniz asserts that according to this doctrine, any two substances are not completely similar to each other, since the complete notion of one of them contains some predicate that differentiates it from the other. After writing “solo numero,” Leibniz added the following in the draft:

[...] [A]lso, that if bodies are substances, it is not possible that their nature consists only in size, shape, and motion, but that something else is needed. [AG.42]

This is a hypothetical statement, and Leibniz was not committed to the view that bodies are substances here. Similar discussions based upon hypotheses are found in other sections as well. At the beginning of the section 11, Leibniz wrote:

I know that I am advancing a great paradox by attempting to rehabilitate the old philosophy in some fashion and to restore the almost banished substantial forms to their former place. [AG.43]

But at the last part of the sentence, Leibniz added:

I do this, however, only under a hypothesis, insofar as one can say that bodies are substances. [AG.43]

Leibniz used the term ‘hypothesis,’ and he is more explicit about his position here. Namely, he did not hold the view

that bodies are substances. Also, the beginning of section 12 is the following:

But, to resume the thread of our discussion, I believe that anyone who will meditate about the nature of substance, as I have explained it above, will find that the nature of body does not consist merely in extension, that is, in size, shape, and motion, but that we must necessarily recognize in body something related to souls, something we commonly call substantial form, even though it makes no change in the phenomena, any more than do the souls of animals, if they have any. [AG.44]

And after writing “will find,” Leibniz added in the draft:

[...] [E]ither that bodies are not substances in metaphysical rigor (which was, in fact, the view of the Platonists)[...] [AG.44]

Leibniz did not write the last part of the sentence. However, he was obviously about to write that “bodies are phenomena for our minds” or something. He just did not have enough time to finish the sentence. Furthermore, the beginning of section 34 is the following:

Assuming that the bodies that make up an unum per se, as does man, are substances, that they have substantial forms, and that animals have souls, we must admit that these souls and these substantial forms cannot entirely perish, no more than atoms or the ultimate parts of matter can, on the view of other philosophers. [AG.65]

Commenting on this first sentence of section 34, Leibniz wrote:

I do not attempt to determine if bodies are substances in metaphysical rigor or if they are only true phenomena like the rainbow and, consequently, if there are true substances, souls, or substantial forms which are not intelligent. [AG.65]

Leibniz is more explicit about his agnostic view in this comment than he is in section 12. He mentioned two different and possible views, and confessed that he does not have sufficient evidence to show that one of them is true. Lastly, Leibniz wrote the following in section 35:

But so that we may judge by natural reasons that God will always preserve not only our substance, but also our person, that is, the memory and knowledge of what we are (though distinct knowledge is sometimes suspended during sleep and fainting spells), we must join morals to metaphysics, that is, we must not only

consider God as the principle and cause of all substances and all beings, but also as the leader of all persons or intelligent substances and as the absolute monarch of the most perfect city or republic, which is what the universe composed of all minds together is, God himself being the most perfect of all minds and the greatest of all beings. For certainly minds are the most perfect beings and best express divinity. [AG.66]

After writing “the most perfect beings,” Leibniz added in the draft:

[...] [M]inds are either the only substances one finds in the world, in the case in which bodies are only true phenomena, or else they are at least the most perfect[...] [AG.66]

Here Leibniz did not explicitly and thoroughly explain two different views. He just introduced one possible case in which only minds are substances and bodies are phenomena for perceiving minds. But at least what he added seems to match the view that bodies are not substances in metaphysical rigor.

Leibniz also suggested that the human mind can perceive phenomena without any help from other substances since the mind can spontaneously produce all its perceptions:

From the notion of individual substance[...] It also follows either that there are no corporeal substances and bodies are only true or mutually consistent phenomena, such as a rainbow or a perfectly coherent dream; or that in all corporeal substances there is something analogous to the soul, which the ancients called form or species. [A.VI.iv.1621-2 = RA.315]

Why does one of these two cases follow from “the notion of individual substance”? From this doctrine, it follows that the human mind has all its perceptions from the inside, and it is not influenced by other substances. So it might be true that we just produce bodily phenomena by ourselves, but no corporeal substance exists. But if there is a substance outside of perceiving minds, then it must have a spontaneous nature, which makes it “analogous to the soul.” Thus, though it is possible that body contains a substance, it may not be the case.

As Robert Sleigh noted, this type of skeptical worry does not show up in letters to Arnauld. Probably the reason is that Arnauld would strongly oppose the skeptical view, and Leibniz did not want to trigger needless controversies. But a passage in the letter to Arnauld of July 1686 suggests that Leibniz was not completely sure that body is a substance, since he argued that “if the body is a substance,” then “it cannot consist of extension”:

If the body is a substance and not a simple phenomenon like the rainbow, nor an entity united by accident or by aggregation like a heap of stones, it cannot consist of extension, and one must necessarily conceive there something that one calls substantial form, and that corresponds in some way to the soul. [GP.II.58 = MA.66; Sleigh 1990, p. 103]

Obviously, Leibniz was not committed to the truth of the antecedent of this hypothetical statement. We also find another passage from the same letter in which Leibniz introduced a similar hypothetical statement:

One will perhaps be more surprised to find that I deny the action of one bodily substance upon the other, though this appears to be so evident. But apart from the fact that others have already done so, one must consider that it is a play of the imagination rather than a distinct idea. If the body is a substance and not a simple phenomenon like the rainbow, nor an entity united by accident or by aggregation like a heap of stones, it cannot consist of extension, and one must necessarily conceive of something there that one calls substantial form, and which corresponds in a way to the soul. I have been convinced of it finally, as though against my will, after having rather far removed from it in the past. Nevertheless, however much I agree with the Scholastics in this general and, so to speak, metaphysical explanation of the principles of bodies, I am as corpuscular as one can be in the explanation of particular phenomena, and it is saying nothing to allege that they have forms or qualities. One must always explain nature along mathematical and mechanical lines, provided one knows that the very principles or laws of mechanics or of force do not depend upon mathematical extension alone but upon certain metaphysical reasons. [GP.II.58 = MA.66]

Leibniz's discussion is fairly similar to what he wrote in the draft of the *Discourse*. Leibniz argued that corporeal substance may exist, and if so, it must have a substantial form. But he did not declare that it actually exists. Leibniz also suggested that he was not sure if bodies are substances in another passage from the draft of a letter to Arnauld:

The other difficulty is incomparably greater, concerning substantial forms and the souls of bodies; and I confess that I am not satisfied about it. In the first place, one would have to be sure that bodies are substances and not merely true phenomena like the rainbow. But once that is granted, I believe one can infer that bodily substance does not consist of extension or divisibility; for it will be conceded that two bodies set apart from one another, for instance two triangles, are not really one substance[...]. [GP.II.71-2 = MA.88]

As Sleight points out, Leibniz did not explicitly confess that he was not sure about the existence of substantial forms (Sleight 1990, p. 103). Rather, he just argued that one needs to grant that bodies are substances to conclude that body does not consist of extension alone. But Leibniz did not declare that he was sure that bodily substance exists.⁵ After the quoted passage, as Sleight notes in the following, Leibniz was not given the chance to discuss the case in which bodies are not substances:

5 As Sleight argues, Leibniz was suggesting two possible scenarios in a letter to Arnauld. He was eager to pursue both of them, and consider conclusions coming from assumptions on which these scenarios are based. But Leibniz came to understand that Arnauld was not interested in the possible scenario that bodies are not substances at all, and Leibniz thought it was better not to talk about it anymore.

Surely, part of Leibniz's purpose in sending the quoted passage was to pique Arnauld's interest in the possibility that there are no corporeal substances, so that he and Arnauld might engage in a serious discussion of alternative theories, including, one would conjecture, the spiritual theory[...]. In truth, in the correspondence Arnauld never gave serious consideration to the hypothesis that there are no extended items that are substances, and so never gave serious thought to the spiritual theory. [Sleigh 1990, p. 103]

According to the "spiritual theory," all the substances are conscious minds, and bodies are phenomena in perceiving minds (Sleigh 1990, p. 98). Sleigh goes on to argue that Arnauld was not so interested in the spiritual theory, and he was not willing to discuss it. But Leibniz himself, even when he was exchanging letters with Arnauld, was thinking of the theory as one possible option.

The spiritual theory obviously implies that body is a mere phenomenon that only exists in a perceiving mind, and sensation does not show the existence of substances in the external world. This kind of skeptical worry, however, ceased to show up in later discussions. Leibniz started to be sure that body is at least a collection of many substances.⁶ In a letter to Bayle of 1702, Leibniz declared that "there must be simple beings," namely, simple substances or monads, since "otherwise there would not be composite beings or being through aggregation" (GP. III.69). Here Leibniz granted that body is an aggregate of substances, and it certainly requires the existence of simple substances that compose it. Also, in the letter to De Volder of 30 June 1704, Leibniz argued that "there are indivisible unities in things" since a physical thing or body must "borrow" some reality from these unities (GP. II.267). Leibniz tried to establish the existence of indivisible unities, namely simple substances, on the basis of the premise that body has some reality, and it is not a mere appearance within a perceiving mind.

Leibniz seems to utilize his natural theology to show that body is an aggregate of substances. In fact, he held that there is no vacuum, and any extended object is an aggregate of substances. Leibniz states that though God can destroy a body and create a vacuum God does not do so since "that is not in agreement with the natural order" (GPV.227 = NE.2.27.23). This comment suggests that God actually created many substances which constitute a body in such a way that there is no vacuum. Leibniz suggests that every part of space is full of matter, however small it is (GP.II.170). According to Leibniz, God realizes the perfect harmony (GPV.286 = NE 3.6.12; GP.VI.41; GP.VI.604 = AG.211). For Leibniz, harmony is unity in variety (Grua.12). So God is supposed to maximize the variety and the order in this universe (Brown 2007, p. 9). As a result, this universe is "a cosmos, full of ornament" (GP.VII. 290), and there is no vacuum in nature. So every mental phenomenon in a perceiver corresponds to other substances. God instituted the correspondence among created substance since it is the best way to maximize the harmony or perfection of this universe. But again, the discussion above was introduced much later, and Leibniz took a significant amount of time to arrive at this view after exchanging letters with Arnauld.

6 In a letter to De Volder of 1704, Leibniz wrote that "[m]atter and motion, however, are not so much substances or things as they are the phenomena of percipient beings" (GP.II.270 = L.537).

Abbreviation

- A. = *Sämtliche Schriften und Briefe*. Herausgegeben von der Deutschen Akademie der Wissenschaften zu Berlin. Darmstadt, 1923 ff., Leipzig, 1938 ff., Berlin, 1950 ff. Cited by series, volume, and page.
- AG. = *G.W. Leibniz: Philosophical Essays*. Trans. and ed. R. Ariew and D. Garber. Indianapolis: Hackett.
- DM. = *Discours de métaphysique*. Cited by section number.
- DSR. = *De Summa Rerum*, Trans. and ed. by G. H. R. Parkinson, Yale University Press.
- GP. = *Die philosophischen Schriften von G. W. Leibniz*. Ed. C. I. Gerhardt. Berlin: Weidmann, 1875-1890. Reprint, Hildesheim: Georg Olms, 1978. Cited by volume and page.
- Grua. = *Textes inédits*. Ed. by Gaston Grua. Paris: Presses Universitaires de France, 1948.
- L. = *Philosophical Papers and Letters*. Trans. and ed. by Leroy E. Loemker. 2nd ed. Dordrecht and Boston: Reidel, 1969.
- M. = *Monadology*. Cited by section number.
- MA. = *The Leibniz-Arnauld Correspondence*. Trans. and ed. by H.T.Mason. Manchester: Manchester University Press, 1967.
- NA. = *Nouveaux Essais sur l'Entendement*. Cited by book, chapter, and section.
- RA. = *The Labyrinth of Continuum*. Trans. and ed. R. Arthur. New Haven: Yale University Press.

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