

## The Failure of Leibniz's Correspondence with De Volder\* Paul Lodge, Tulane University<sup>1</sup>

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### 1. Introduction

The correspondence with Burcher de Volder has long been recognized as one of our most important sources for understanding Leibniz's mature metaphysics. It has proved a perennial source for quotations and references in studies of Leibniz's thought,<sup>2</sup> and, more recently, passages from the correspondence have been subject to particular scrutiny in debates over the precise nature of Leibniz's ontological commitments, and apparent differences in these commitments over time.<sup>3</sup> We still have much to learn from the correspondence about issues such as these. However, in this paper, I want to focus on broader concerns. Instead of subjecting passages to detailed analysis in the service of an intricate thesis, I shall present an account of the correspondence as whole. And, in particular, I shall explain why the seven or so years of interchange between the two philosophers was a failure.

### 2. Background to the correspondence

In the early summer of 1698, Leibniz's friend Johann Bernoulli visited Leiden where he "met often" with Burcher de Volder, a professor at the University, who had been known throughout his career as a Cartesian sympathizer.<sup>4</sup> On his return, Bernoulli reported his conversations with De Volder to Leibniz, informing him that De Volder admired his work, though not whole-heartedly. By late September of that year, Bernoulli had communicated with De Volder and Leibniz several more times, all the while relaying the views of one to the other,<sup>5</sup> and these efforts finally precipitated a direct overture.

In his letter to Bernoulli of September 20, 1698, Leibniz included a post-script, explicitly intended for De Volder, in which he gives details of his account of body.<sup>6</sup> In particular, Leibniz notes that he "deduce[s] the nature of body and forces in general from soul or form", and describes these forms as "laws intrinsic to the nature of body", which has "the force and striving for observing them" (GM III, 545). Bernoulli passed the postscript on and when he received a reply from De Volder, it was directed to Leibniz himself. With this letter the De Volder correspondence proper begins.<sup>7</sup>

De Volder's first letter is concerned primarily with issues in Leibniz's physics.

However, he also shows an interest in Leibniz's comments about the nature of body,<sup>8</sup> observing that many problems could be solved "if we had an *a priori* demonstration that every substance is active" (GP II, 151), including the problem of the "cause of motion in bodies" (*ibid.*).<sup>9</sup> De Volder was no friend of occasionalism, and, in Leibniz, he thought he saw someone who could provide an account of body that obviated the need to resort to this doctrine.<sup>10</sup>

This first letter fixes the basic agenda for the entire correspondence. Although a number of other issues arise between the two men, De Volder's mission remains steadfast throughout. He is hopeful that Leibniz has an account of substance that is sufficient to explain bodily change, and is eager to learn more.<sup>11</sup>

De Volder's desire was never satisfied and therein lies the basis for what I am calling the "failure" of the correspondence. However, this leaves the question of why this happened, and providing an answer to this question will be my principle aim in what follows. I shall suggest that three main obstacles to success can be found, each of which stems from the fact that Leibniz and De Volder have radically different conceptions of fundamental issues. The first is concerned with methodology; the second follows from disagreements over the nature of extension; and the third arises in the context of Leibniz's attempts to articulate his positive views about material reality.

### 3. What exactly did De Volder want?

We have already seen something of the motivation behind De Volder's participation in his correspondence with Leibniz. He would like, among other things, an *a priori* demonstration of substantial activity. But, before we move on, it is worthwhile spelling this out in a little more detail. De Volder's aspirations are revealed more clearly in the letter of February 18, 1699. Speaking of Leibniz's views on the natural activity of bodies, he observes:

If you would like us to agree with you without any worries, I believe it will be necessary to descend to the notion of substance and demonstrate that it is necessarily active from its nature. (GP II, 166)

De Volder's demands are in fact stricter than they might have appeared previously. Leibniz must first produce an account of the notion of substance, and then deduce the activity of all substances, including corporeal substance, from this notion. Furthermore, it becomes clear later in the correspondence that the relevant notion of substance should be produced through reflection on the concept that we all possess.<sup>12</sup>

Later in the correspondence, De Volder provides an example of the kind of

thing that he would find acceptable:

[L]et us imagine that I were to ask which figure it is that has angles equal to two right angles. I would be satisfied if I were first given the notion of a triangle, or of a figure comprehending three straight lines, and if it were then explained that the properties follow from this. (GP II, 274)

The methodology here is one that is traditionally associated with seventeenth century rationalism.<sup>13</sup> De Volder wishes to see Leibniz's views set out with the kind of "geometrical order" that can be traced back to Euclid's *Elements* and which again found favor in the seventeenth century in works such as Spinoza's *Ethics*.<sup>14</sup> Leibniz's response to this demand provides one of the main bones of contention during the following seven years of correspondence.

#### 4. Leibniz's response to De Volder's challenge

De Volder requests an *a priori* demonstration of the activity of substance, or corporeal substance, in no less than fourteen of his eighteen letters. However, Leibniz never once attempts to satisfy this demand. There appear to be two distinct reasons. Sometimes Leibniz claims that he doesn't have a demonstration to give. But, as the correspondence proceeds, it also becomes apparent that Leibniz does not really believe that this kind of proof is required.

##### 4.1 No demonstration to give

Leibniz's initial reply to De Volder's challenge, in the letter of December 17, 1698 is as follows:

Would that I could explain my metaphysical meditations concerning the nature of substance, and the things depending on it, just as clearly, or that I might have the issues laid out as I do the mathematical part of my Dynamics.

Truly, there would be no delay in communication on my part. (GP II, 162)

Leibniz's response here is cautious. He does not suggest that his metaphysical views cannot be demonstrated, rather, he points to the fact that he cannot set them out as clearly as he would like.<sup>15</sup> Indeed, in a passage deleted from the letter of January 9/20, 1700, Leibniz notes:

I hope to show at some point that all substances have a force of acting, indeed that they always act. But since my thoughts into this matter generally consist of many things abstracted from sense and remote from common use, I do not dare promise that which I do not know I will be able to execute in a worthy manner. (GP II, 206)<sup>16</sup>

On the basis of these considerations, it would seem that Leibniz sees his failure to provide a demonstration of the kind that De Volder demands as due to lack of time

and ability. He would like to provide one some day, but hasn't managed it yet.

#### 4.2 *No demonstration is needed*

Lack of time and ability may be Leibniz's official defense again De Volder's constant request for a demonstration of substantial activity. However, on other occasions, he appears less conciliatory. In the letter of March 24/April 3, 1699, Leibniz claims that what he cannot yet demonstrate will "commend itself as a hypothesis which is clear and beautifully consistent within itself and with the phenomena" (GP II, 168/L 515). And, later in the same letter he notes that "agreement with philosophical teachings and the phenomena, and internal consistency are among the most powerful tests of truth" (GP II, 172/L 518).

Here Leibniz seems to suggest that lack of demonstrative proof should provide no barrier to the acceptance of his views. The same attitude is displayed even more forcefully, in the letter to Bernoulli of June 26, 1699:

[S]o long as my position is taken as a hypothesis, I believe that [the evidence of the whole of nature] is enough to justify it in the eyes of reasonable judges. (GM III, 592)<sup>17</sup>

Leibniz's commitment to this methodology is borne out by the various attempts that he does make to justify his claim that substances are essentially active. In the letter of January 12, 1700, he provides the following argument, based on the observation of change, which he describes as "the roughest sketch of a proof" in his accompanying letter to Bernoulli (GM III, 621):

If we admit that one substance is not able to influence another, which we may concede, from there it follows that any substance you please is active *per se*. For it is not reasonable to call in God, nor would it explain anything. (GP II, 206)<sup>18</sup>

Leibniz presents versions of the same argument on several more occasions and appears to regard it as adequate to the task.<sup>19</sup> He is prepared to accept the activity of substances, without anything that De Volder would recognize as a demonstration. And, by November 1703, Leibniz's offers no apology for this argument, claiming to be unable to: "see how [De Volder] could have doubts about the internal tendency to motion", adding that it is "demonstrated *a posteriori*." (GP II, 258).

All this is evidence of Leibniz's commitment to a very different conception of the justification of metaphysical claims than that which is espoused by De Volder. For it seems clear that Leibniz did not think he needed to give De Volder the demonstrative proof that he desired in order for his claims about the nature of

body to count as knowledge. A *posteriori* arguments, grounded in the observation of contingent facts about the world, appear to give conclusions that are sufficiently robust.<sup>20</sup>

Before moving on, it is worth pausing to examine De Volder's response to Leibniz's preferred way of arguing. Unsurprisingly, he is never anything but cool. Upon receiving Leibniz's initial "demonstration" he notes that he has "never doubted the firmness of the conclusion of [Leibniz's] a *posteriori* argument" (GP II, 207).<sup>21</sup> But this is clearly not enough to satisfy De Volder. We can see why from the response that he makes to Leibniz's earlier suggestion that: "if an opinion follows necessarily from premises that are understood, we may consider it itself to be understood" (GP II, 194/L 522).

I recognize [that] as adequate [...] if [the proposition] follows from things that are understood *a priori*, but not a *posteriori*. Indeed, I would understand the nature of gravity best if I had understood that the descent of bodies necessarily follows from the universal system of the world or, in particular, from our earth [...] I would not have understood it at all, had I inferred from the fact that I saw bodies descend that a certain cause of why this happened was required, which I called gravity. (GP II, 198)

It is clear that De Volder regards Leibniz's a *posteriori* proofs as inadequate because they are uninformative. Indeed, the choice of the example of gravity might well be a veiled reference to the "bare qualities" postulated by the scholastics—principles which a modern such as De Volder would have regarded as nothing more than place holders for causes that are not understood at all.<sup>22</sup>

Leibniz believes that he can do a little better than postulating a bare quality as the cause of bodily change. However, it is clear that we have discovered a fundamental divide between the two men with respect to the issue of acceptable methodology when doing metaphysics. Whereas Leibniz is prepared to accept the activity of substances as an empirically adequate hypothesis, independently of an account of how their nature gives rise to this activity, De Volder demands an *a priori* demonstration.

### 5. Leibniz's attack on extended substance

I have suggested that De Volder remained unconvinced of Leibniz's views because he never received a demonstration of the activity of substance. However, after his initial request for a demonstration of substantial activity, in the letter of December 1698, De Volder adds: "For unless this is demonstrated *a priori*, it will not be easy, certainly for me, to consider the existence of mathematical body an

utter contradiction” (GP II, 166). This reveals a second obstacle to the success of the correspondence: De Volder’s lingering commitment to the Cartesian idea that there is a substance whose nature is constituted by extension, construed mathematically.

Later in the same letter, De Volder justifies this view a priori on the basis of the concepts of extension and substance that he favors:

You seem to me to deny that extension is a substance, when [...] that, if anything, is conceived through itself, that is, conceived in such a way that its concept represents one thing to the mind. (GP II, 166)

Here De Volder relies on his definition of substance in terms of *per se* conceivability,<sup>23</sup> and claims that, since the concept of extension “represents one thing to the mind”, it must be the concept of a substance. This argument meets with an immediate negative response.<sup>24</sup> However, Leibniz also provides reasons for rejecting extended substance that are independent of the support that De Volder offers, arguing that the notion of a substance whose nature is mathematical extension, or a “mathematical body”, is incoherent. I shall consider each of these below.

### *5.1 Mathematical extension cannot constitute a substance*

Perhaps the clearest statement of Leibniz’s view of “mathematical extension”<sup>25</sup> can be found in the *Reply to Bayle*, which Leibniz sent to De Volder for comments on August 19, 1702:

I acknowledge that time, extension, and motion and the continuum in general, as we understand them in mathematics are only ideal things, that is things that express possibilities, just as numbers are. [...] But to speak more accurately, extension is the order of possible coexistence, just as time is the order of possibilities that are inconsistent, but nonetheless have a connection. (GP IV, 568/L 583\*)<sup>26</sup>

Here Leibniz notes that the concept of extension, as well as those of number and time, is “ideal”. They pertain to the realm of possibility, rather than to those things that actually exists. As he puts it elsewhere, mathematical extension is the “order of possible coexistents” (GP II, 253/L 529), and “a numerical determination [...] which remains the same under any change whatever” (GP II, 227/L 525-26\*). In virtue of its “ideality”, mathematical extension is clearly unsuitable to play the role accorded it in Cartesian metaphysics. As Leibniz explains in the letter of June 30, 1704:

[F]rom the very fact that a mathematical body cannot be resolved into first

constituents, it may be inferred that it is certainly not real, but something mental, signifying nothing other than the possibility of parts, not something actual. Indeed, a mathematical line is like the arithmetical unit; in both cases the parts are only possible and completely indefinite. A line is no more the aggregate of the lines into which it can be divided, than the number 1 is a aggregate of the fractions into which it can be broken up. [...] But in real things, namely, in bodies, the parts are not indefinite [...] but actually assigned in a certain way in accordance with how nature actually institutes divisions and subdivisions [...] and although it may be the case that these divisions proceed to infinity, nonetheless, they all result from certain first constituents, or real unities, though infinite in number. (GP II, 268/L 535-36\*)

Here a mathematical body is contrasted with “real things”, or “bodies”. The latter “result from certain first constituents, or real unities”, albeit an infinite number of them, and are divided up in a determinate manner. In contrast, a mathematical body is infinitely divisible in a different sense, since it admits an infinite number of possible partitions, and has no real parts.<sup>27</sup>

In the passage above, Leibniz points to the fact that the reality of any thing must be grounded in constituents which are “real unities”. This idea is made more explicit in the letter of January 21, 1704, where Leibniz observes that by “unities” he means “what cannot be divided into many”, and that “that which can be divided into parts has no reality unless there are things in it which cannot be divided into parts” (GP II, 261).

The claim that there must be unities, or indivisibles in order that there be real things, receives no direct support in the correspondence with De Volder, and little support in the rest of Leibniz's works. However, we should not so surprised by this. Consider what is perhaps the most famous statement of the view in question from the letter to Arnauld of April 30, 1687:

I hold as axiomatic this basic proposition, which varies only in emphasis: that what is not truly *one* being is not truly *one being* either. It has always been thought that one and being are reciprocal things. (GP II, 97/LA 121\*)

Here Leibniz takes the unity of true beings, or real things to be *axiomatic*,<sup>28</sup> and, as this passage suggests, it may be the case that Leibniz is simply expressing adherence to an Aristotelian idea with which he was schooled as a young man, which seemed self-evident and in need of no further justification.<sup>29</sup>

But, whatever its foundation, with this axiom in place, Leibniz's denial of the reality, or substantiality, of mathematical extension is easy to understand. As we

have seen, extension in this sense admits an infinite number of possible partitions, and has no indivisible parts. Thus, it is impossible for mathematical extension to constitute anything real, and there could not be an substance whose nature was constituted by extension as the Cartesians suggest.

De Volder's response to this line of argument reveals another fundamental difference of opinion. In the letter of May 31, 1704, he concedes Leibniz's claim that "indivisible unities cannot be assigned within the mass [*mole*] of bodies" and that "each body consists of parts, and these again of others, and so on to infinity" (GP II, 265). But he insists that this does not impugn the unity, and substantiality, of mathematical body. We can see why if we examine what De Volder says in the following letter:

I have admitted already in previous letters that indivisible unities are not to be found in a mathematical body. But I should add at the same time, that I still wonder whether there is not such unity in a infinite extended mass. For the parts that we conceive as distinct in this mass seem not to be really divided up, since no part can be either established or conceived, except when all of them are (GP II, 272)<sup>30</sup>

Here, De Volder agrees that the parts conceived in mathematical extension are not "real". The distinctions between them are grounded in the fact that a single extended substance is subject to complex modification.<sup>31</sup> But this does nothing to undermine its reality.

De Volder is not moved by Leibniz's suggestion that a mathematically extended substance could not contain a determinate partition into real constituents. He is happy with the idea of an infinite extended whole whose parts are modally distinct in different ways at different times. As for Leibniz's insistence that a continuous magnitude would be *indefinite* in a way that precludes the determinacy required for substantial reality, De Volder grants that there is a sense in which mathematical extension may "exhibit possible and indefinite parts", but only where extended substance is "regarded in itself" and "abstracted from the modes by which it is effected" (GP II, 273).

There is clearly room further investigation here.<sup>32</sup> However, for now, I shall do nothing more than note the difference between the two conceptions of mathematical extension held by Leibniz and De Volder, since this distinction prevents any serious communication with regard to the objection we were considering here. Instead, I want to turn to Leibniz's second attack on the claim that there is extended substance. This arises from consideration of the argument that De Volder

offers in its favor—namely that extension is conceivable *per se* and thus satisfies the concept of substance. Leibniz's strategy here is complex. As well as claiming that extension is not conceivable *per se*, he presents a number of arguments against the claim that *per se* conceivability is constitutive of substantiality.<sup>33</sup> However, I shall restrict the present discussion to the first of these.

5.2 *Extension is not conceived per se*

As we have seen, De Volder supports the substantiality of extension by direct appeal to his account of substance. But we need to understand the content of this view in a little more detail if we are to understand Leibniz's rejection of it. Consider the following from the letter of October 18, 1700:

[If] a concept represents one thing to me, and I can remove nothing from this representation without the whole thing perishing [...] I say that this concept is the concept of a thing or substance. (GP II, 215)

De Volder claims a substance is that which has a concept that: 1) represents a single thing; and 2) is simple, in the sense that nothing can be taken away from that concept without it ceasing to be. In plainer terms, the concept of a substance is always an unanalysable concept of a single thing.<sup>34</sup>

Given De Volder's understanding of *per se* conceivability, the simplicity, or primitiveness, of the concept of extension is an essential component in the justification that he offers for the existence of extended substance.<sup>35</sup> But, according to Leibniz, the concept of extension is not simple. In the letter of March 24/April 3 1699, we learn that he considers it "an analyzable and relative notion, for it is resolved into plurality, continuity and coexistence, or the existence of parts at one and the same time" (GP II, 169/L 516\*).

Leibniz's claim is straightforward: the concept of extension is far from simple, since it is analyzable into the concepts of plurality, continuity and coexistence.<sup>36</sup>

Leibniz is never explicit about the source of this concept. However, it seems unlikely that it is derived from mathematical extension, which, for him, does not have actually coexisting parts. It more closely expresses another kind of extension that Leibniz recognizes, which is a genuine feature of material reality.<sup>37</sup> Extension, in this sense is an attribute, or permanent feature, of many substances that have been unified through the activity of a mind, to form what he calls an aggregate.<sup>38</sup> But, whatever the source of Leibniz's concept, it provides the basis for yet more fundamental disagreement between the correspondents.

Unlike Leibniz, De Volder refuses to accept that the concept of extension includes the concept of a plurality,<sup>39</sup> presumably, because of his commitment to the

idea that the concept of extension expresses the single mathematical body that he identifies with the material world. In addition, De Volder insists that the concepts of continuity and coexistence do not enter into the concept of extension, in such a way that they impugn its simplicity. They are different ways of conceiving of extension, rather than conceptual constituents of the same concept, since there “is a necessary and reciprocal connection between them” (GP II, 231).

In his reply from December 27, 1701, Leibniz appears to grasp De Volder’s position on continuity and coexistence, but regards it as an inadequate response. He responds:

You admit that existence and continuity, which are united in the notion of extension, differ from it formally, and I wish for nothing more: and indeed that whose notion is composed from different formal concepts, is not primitive. (GP II, 233/W 174\*)

This amounts to little more than a denial of De Volder’s view, and leaves one wondering how Leibniz’s talk of “composition from formal concepts” will be received by De Volder. But, unfortunately the line of inquiry comes to a frustrating halt at this point and is never revived.

Thus, we are left with an impasse. Leibniz takes the concepts of continuity and coexistence to *constitute* the complex concept of extension, thus precluding De Volder’s claim that the concept of extension is the concept of a substance on his own terms. De Volder regards extension as the primary attribute, or principal way of conceiving of extended substance, and continuity and coexistence as different ways of conceiving of this very attribute; and the existence of these distinct modes of presentation does nothing to impugn the simplicity of its concept. Thus, although both men acknowledge that there can be no concept of extension without the concepts of continuity and coexistence, the relations that they recognize between these concepts, and their attendant ontological commitments, are radically different.

### 6. Leibniz’s account of body

We have seen that Leibniz was unable or unwilling to provide De Volder with the kind of account of substantial activity that he demanded, and that he could do nothing to undermine the coherence of the idea that there is a substance whose nature consists of extension alone. This might well have been enough to preclude the possibility that the correspondence have a successful outcome. However, there was yet another serious obstacle to fruitful agreement.

As well as trying to disabuse De Volder of his Cartesian confusions, Leibniz

spends a good deal of time offering an account of the material world in his own terms, by providing a metaphysical hypothesis that involves the essential activity of substance and body. Furthermore, it is clear that, methodological misgivings notwithstanding, De Volder is willing to *try* to understand.

We do not have time here to explore the complex account that Leibniz develops. However, it is important to note that it involves a commitment to the view that the reality of the material world is, at least in part, phenomenal, or mind-dependent, and grounded in complex representational relations between the perceptual and volitional states of an infinite number of immaterial, and unextended, monads.<sup>40</sup> De Volder's attempt to grasp this view is woefully unsuccessful, and appears to have been the proximate cause of his abandoning the correspondence in 1706. However, we should not assume that he was entirely responsible for this lack of understanding. And, in the space that remains, I want to give a brief account of some of the main difficulties that he encountered.

An important part of the problem here can, I think, be attributed to two expectations that De Volder brought to the correspondence. As we have already seen, he hoped that Leibniz would account for material reality by augmenting the Cartesian conception of substance in such a way that the activity of bodies could be deduced from it. But he also seems to have assumed that this would involve some kind of appeal to Leibniz's account of the "pre-established harmony" between mind and body.

De Volder had grasped the basic idea behind the pre-established harmony—the states of the mind and the body evolve autonomously, but in such a way that the states of the mind are always representations of the states of the body<sup>41</sup>—and he was enthusiastic about the view. Despite his Cartesian sympathies, he could not see how Descartes could account for mind-body interaction.<sup>42</sup> But, for all its appeal, the pre-established harmony of mind and body still appeared to leave open the nature of the active principle, or "entelechy", in bodies that enabled them to change autonomously.

In the letter of May 13, 1699, De Volder suggests three "possibilities" for the nature of the entelechy from within his broadly Cartesian perspective: (1) extension itself; (2) some modification of extension; or (3) some further substance, independent of extension.<sup>43</sup> But, it seems likely that De Volder is more concerned with laying down the gauntlet than with presenting serious suggestions. After all, the first two invoke entities that he regards as entirely passive, and the third resurrects the problem of intersubstantial interaction.

Two letters later De Volder discovered that Leibniz regarded entelechies as his things “which do not differ in kind from the soul” (GP II, 198). And, despite earlier insistence that these active principles are “prior to extension and constitutive of the substance itself which is in an extended thing” (GP II, 187), De Volder understood Leibniz’s view as a version of the third option — after all, Leibniz was prepared to postulate a “primary matter [...] whose nature consists in inertia and antitypy,” (GP II, 199) and entelechy “certainly differs” from this. To De Volder, it seemed that Leibniz *must* be dealing with two distinct substances, and given this assimilation of Leibniz’s suggestion to the Cartesian view, he remained baffled as to how entelechies could effect any change in an extended thing.<sup>44</sup>

By the letter of July 25, 1702, De Volder appears to have realized that Leibniz was attempting to move away from Cartesian dualism. He attributes to Leibniz the view that “corporeal substance is composed from matter to which ... [he] ascribe[s] impenetrability and inertia, and activity from a force or entelechy” (GP II, 241). However, on closer examination, this apparent departure from a Cartesian reading of Leibniz turns out to be nothing more than that. Since De Volder cannot conceive of force without matter, but *can* conceive of matter without force, he insists that the relation between the two must be that of substance and mode.<sup>45</sup> Entelechy, as De Volder understands it here, is simply a modification of extended substance.

It was at this point in the correspondence that De Volder received a copy of Leibniz’s *Reply to Bayle* in place of a direct response to his worries. After reading this piece De Volder had a better grasp on Leibniz’s view of bodily reality. More precisely, he realized that it involved a commitment to the existence of many corporeal substances, each of which has a separate entelechy and infinitely divisible mass, which in turn consists of further corporeal substances.<sup>46</sup> But there were still problems. For De Volder appears to have understood Leibniz as a having a dualistic version of the view that Daniel Garber famously attributed to Leibniz in his “middle years”<sup>47</sup>—with corporeal substances analogous to Descartes’ human beings—and this did nothing to appease. Even leaving aside issues of the unity of these corporeal substances, De Volder could not see past the, now innumerable, instances of the problem of Cartesian interaction that this view seemed to bring.<sup>48</sup>

Around this point in the correspondence, things begin to get even more complex. De Volder latched on to Leibniz’s use of the term ‘primitive force’ to refer to entelechy. But this simply added to his frustration. The only notion of force that

De Volder understood distinctly was what Leibniz calls “derivative force”, the physical quantity measured in terms of size and the square of velocity. To speak of entelechy as primitive force “from which derivative forces flow” (GP II, 266) seemed to be nothing more than a smoke screen. Indeed, in a letter to Bernoulli written at the same time, De Volder complains bitterly:

Instead of being given a proof that substance is essentially active, I am being asked to accept his terminology of entelechies, and primitive force containing all changes within itself. I can understand nothing of this. (GM III, 753)

Bernoulli passed this report on to Leibniz, and, perhaps as a conciliatory move, Leibniz presented his most explicit account yet of the entelechies — as aspects of immaterial substances with natures analogous to our own. However, at the same time, he included the following famous claim:

Indeed, considering the matter carefully, it must be said that there is nothing in the world except simple substances and in them, perception and appetite. Matter and motion, however, are not really substances or things as they are the phenomena of perceiving beings, whose reality is located in the harmony of the perceiver with itself [...] and other perceiving beings. (GP II, 270/L 537\*)

This was the final nail in the coffin. Despite Leibniz’s subsequent insistence that “the same view [had] already been suggested in previous letters” (GP II, 275/AG 181), De Volder’s letter of November 14, 1704 indicates that he was genuinely surprised by the appearance of the claims in this statement, and utterly confused by it. Could Leibniz really have intended all along that corporeal reality be reduced to appearances of mental acts, and “bodies got rid of altogether” (GP II, 272)? Furthermore, with the real world apparently reduced to immaterial substances, another problem loomed for De Volder. How could “extension arise from their repetition”(GP II, 273)? De Volder’s tone in this letter is one of understandable exasperation. With hindsight, we can perhaps read these theses into the earlier correspondence, but for the unwary correspondent, there are very few clues.

Leibniz tried to smooth things over in his reply, but with his phenomenalism in full view, the correspondence was essentially over. De Volder sent one more very brief letter, in which he reiterated his basic complaint about failing to understand Leibniz’s active principle and the difficulties over how extension might arise from unextended things.<sup>49</sup> And, although Leibniz replied quickly, trying once more to explain these issues, De Volder never responded and the correspondence came to an end.

### 7. Conclusion

Despite its promising beginnings, the De Volder correspondence ended with a whimper, and there can be little doubt that, for De Volder, it had well and truly failed. He had not received the demonstration of substantial activity that he desired so badly, and had been given no compelling reason to reject Cartesian orthodoxy, as far as the nature of bodily reality was concerned. But perhaps worst of all, De Volder had found himself at loggerheads with a famous philosopher, whom he admired and respected, but who seemed happier to confuse than enlighten.

For his part, Leibniz seems not to have been at all worried. He never once expresses concern to Bernoulli at the demise of the correspondence, and De Volder is mentioned only a few more times in passing, prior to his death in 1709. One might speculate over the extent to which Leibniz thought that he profited from the interaction, but there are few places where he expresses anything that would lead one to draw any conclusions one way or another. Thus, the failure of the correspondence in De Volder's eyes cannot really be mitigated by taking Leibniz's perspective.<sup>50</sup>

It must be admitted, however, that the correspondence was not a failure in at least one respect. It contains some of the most detailed considerations of Leibniz's attitude toward Cartesian philosophy of nature and some of the most candid and revealing statements of the metaphysic that he himself had developed by this stage. Indeed, perhaps as a result of its initial failure, the correspondence with De Volder provides some of the most successful attempts that Leibniz ever made at articulating his often bewilderingly complex views.

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Notes

<sup>1</sup>A version of this paper was read to HOPOS 98 and the Houston Leibniz Group. I should like to thank the audiences at these talks for their suggestions. I am particularly grateful to Antonia LoLordo and Andrew Pavelich for helpful comments on an earlier draft, and to Martha Bolton and Roger Woolhouse for numerous discussions of the issues involved in the De Volder correspondence over the last couple of years.

<sup>2</sup>Examples include Russell (1937); Broad (1975); Adams (1994); and Rutherford (1995).

<sup>3</sup>Again there are many examples, including Garber (1985); Hartz (1992); Adams (1983 and 1994); and Rutherford (1990a, and 1990b).

<sup>4</sup>The best source of information about De Volder's life and works is Jean Le Clerc's "Elogé de feu Mr. De Volder ...", written on the occasion of De Volder's death in 1709 (LeC). For more recent accounts, all of which draw heavily on Le Clerc, see De Pater (1975, 314-21); Ruestow (1973, 74-148), and for a reading of De Volder as a "crypto-Spinozist", Klever (1988).

<sup>5</sup>Bernoulli's initial report is found in his letter of July 5, 1698 (GM III, 505-06). Further information about De Volder's attitude toward Leibniz emerges in the series of letters that follow (cf. GM III, 517-18; GM III, 528-29; GM III, 539-40). Bernoulli continued to play the role of intermediary until the end of the correspondence in 1706.

<sup>6</sup>Cf. GM III, 534-45.

<sup>7</sup>Cf. GP II, 148-52.

<sup>8</sup>De Volder's interest was raised not only by the post-script and previous letters from Bernoulli, but he also reports having read Leibniz in the *Acta Eruditorum* (cf. GP II, 151). As Gerhardt suggests (GP II, 151n) this is almost certainly a reference to the paper *On the Correction of First Philosophy and the Concept of Substance* which appeared in the *Acta Eruditorum* of March 1694 (GP IV, 468-70/L 432-34). Although it is possible that De Volder also has in mind the first part of the *Specimen of Dynamics* (GM VI, 234-54/L 435-52), which appeared in the issue of April 1696, and *On Nature Itself* which appeared in September 1698 (GP IV, 504-16/L 498-508).

<sup>9</sup>One of De Volder's background assumptions is that material reality is substantial. Indeed he favors, what he takes to be, the Cartesian view that the material world is a single corporeal substance, whose nature is constituted by extension alone, and that bodies are modes of this substance (cf. GP II, 255). It is interest-

ing to note that Leibniz disputes this reading, suggesting that “Descartes and others” believe that bodies have the same nature but are distinct substances (cf. GP II, 271/L 537).

<sup>10</sup>Cf. GP II, 242; GP II, 254. Thus, it is hard to agree with Robert Adams’ assessment of De Volder as “one inclined to occasionalism” (1994, 312).

<sup>11</sup>Bernoulli picked up on this eagerness with great zeal. In his forwarding letter, he points out that De Volder is ripe for conversion, and would propagate Leibniz’s ideas if he could understand them properly. For Bernoulli, as well, there was a job to be done. If Leibniz could convince De Volder of his views, in conjunction with a published version of his dynamics, they could spread his new philosophy — the badly needed synthesis of traditional and modern — in the lecture halls of Leiden and throughout the Netherlands (cf. GM III, 558).

<sup>12</sup>Cf. GP II, 215. De Volder never goes as far as claiming that this concept is innate. However, this seems the most likely reading, especially in light of his overall adherence to a Cartesian epistemology of metaphysical concepts. This is documented, with reference to other works by De Volder, by Edward Ruestow (1973, 91-93). Thanks to Larry Carlin for focussing my attention on this aspect of De Volder’s claim.

<sup>13</sup>Use of the term ‘rationalism’ is fraught with difficulty. However, for a useful summary of the ideas traditionally associated with the term see Cottingham (1984, 5-11).

<sup>14</sup>Cf. SO 41-308/CSW I, 408-617. De Volder’s commitment to this methodology in other works is documented by Edward Ruestow (1973, 90-93).

<sup>15</sup>Also see GP II, 168 and GP II, 172; GM III, 559-60; GM III, 592; and GM III, 609. As we shall see below, one might wonder whether Leibniz and De Volder understand what is being sought here in the same way.

<sup>16</sup>Also see GP II, 172/L 518; GP II, 206n; and GM III, 609.

<sup>17</sup>Also see GM III, 559-60.

<sup>18</sup>The argument here relies on a very quick rejection of occasionalism, with regard to bodies. However, as I noted above, De Volder is as opposed to this alternate explanation of bodily change as Leibniz.

<sup>19</sup>Cf. GP II, 258; GP II, 271/L 538.

<sup>20</sup>On the basis of the passages in this section, we might wonder whether Leibniz is even less sympathetic to De Volder’s method. Might it not be the case that his apparent concessions to the need for demonstration express nothing other than the desire to produce an *a posteriori* argument? Such a reading would provide sup-

port for Stuart Brown's (1984, 63 and 73-75) suggestion that, after 1686 or so, Leibniz adopted something closer to a "hypothetico-deductive" method. However, as Donald Rutherford observes (1996, 186 n.15) Leibniz's use of the term "demonstration" is ambiguous, occasionally embracing a weaker sense than that intended by De Volder. With this in mind, it seems reasonable to regard the correspondence with De Volder as compatible with the view, also advocated by Rutherford (1995, 71-79; 1996), that Leibniz never gave up on the view that metaphysics should ideally take the geometric form.

<sup>21</sup>Indeed, had Leibniz really wanted to, he could have ascertained this from the very first letter of the correspondence (cf. GP II, 151) or the letter of May 13, 1699 (cf. GP II, 179).

<sup>22</sup>In the Preface to the French edition of the *Principles of Philosophy*, Descartes cites "weight" as an example of a principle that the scholastics had put forward "of which they did not possess perfect knowledge", adding that "although experience shows us very clearly that bodies we call "heavy" descend [...] we do not have any knowledge of the nature of what is called "gravity"" (AT IXB, 8/CSM I, 182-83).

<sup>23</sup>Also see GP II, 178; GP II, 215; and GP II, 222.

<sup>24</sup>Cf. GP II, 169/L 516

<sup>25</sup>This term is Leibniz's (cf. GP II, 276/AG 182; and GP II, 249/L 529). In addition to the present notion, Leibniz uses the term 'extension' in two other ways, during the correspondence. Often 'extension' refers to a genuine feature of material reality (cf. GP II, 183/L 519; GP 187; and GP II 184/L 520), and, sometimes, to the universal that is abstracted from this (cf. GP II, 269/L 536). On one occasion, it is also used to refer to matter (cf. GP II, 195/L 523), though this is merely an attempt to accommodate De Volder and plays no important role in Leibniz's thinking.

<sup>26</sup>The full title of this essay is *Réponse aux réflexions contenues dans la seconde édition du Dictionnaire Critique de Mr. Bayle, Article Rorarius, sur le système de l'Harmonie préétablie* (GP IV, 554-71/L 574-85). For the history of its transmission to De Volder, see Lamarra (1989, 89-92). Here and elsewhere, I use an asterisk (\*) to indicate that my translation deviates, significantly or otherwise, from the secondary source cited.

<sup>27</sup>Cf. GP II, 276/AG 182; and GP II, 278-79/Russell, (1937, 245).

<sup>28</sup>Also see the letter to Sophie Charlotte from 1702 (GP VI, 516); the *New Essays* (NE 146; and NE 211); and the letter to Des Bosses of March 11, 1706 (GP II,

304).

<sup>29</sup>As Robert Adams points out, “A long Aristotelian tradition connects being and unity so closely that for Francisco Suárez an entity can be said to have *being per se or being per accidens* on the basis of its having *unity per se or per accidens*.” (1994, 246 — cf. MD IV iii, 2-3). Robert Sleigh Jr. is less specific, but also notes that Leibniz’s equation of true being and true unity “expresses an attitude that has had a remarkable hold on Western thought.” (1990, 121).

<sup>30</sup>Also see GP II, 166; GP II, 178.

<sup>31</sup>Also see GP II, 188; and GP II, 243.

<sup>32</sup>For one thing, Leibniz’s views here have not gone without criticism. For example, see Earman (1989, 16).

<sup>33</sup>Cf. GP II, 169/L 516; GP II, 182-83/L 519; GP II, 225-26/L 524-25; and GP II, 239/L 526.

<sup>34</sup>In fact, Leibniz reads two distinct accounts into the presentation of the single view that De Volder intended. As well as the one presented above, he claims to see a more “metaphysical account” in terms of independent conceivability (cf. GP II, 220)—i.e., whether a thing can be thought of, without thinking of anything else. It never becomes clear whether De Volder accepts this charge. However, he does claim that the two, in fact, coincide (cf. GP II, 222).

<sup>35</sup>In Leibniz’s eyes at least, this premise is not unique to De Volder. In a number of letters he attributes such a view directly to “the Cartesians” (cf. GP II, 234/W 174; GP II, 239/L 526; GP II, 241/L 527; and GP II, 269/L 536-37), and, in others, as a view that is common among his contemporaries (cf. GP II, 249/L 528; and GP II, 227/L 525).

<sup>36</sup>This analysis of the concept of extension is not new with the De Volder correspondence. As Daniel Garber points out (1995, 285), Leibniz presents essentially the same analysis as early as 1693-94 in letters to Malebranche (GP I, 352) and the editor of the *Journal des savants* (GP IV, 467) respectively.

<sup>37</sup>Cf. GP II, 187; GP II, 183/L 519; GP II, 184/L 520; GP II, 227/L 525; GP II, 234/W 174-75; and GP II, 269/L 536.

<sup>38</sup>Leibniz uses the term ‘attribute’ to refer both a “permanent predicate” and the foundation in things for such a predicate. See the table of definitions, from 1702-04 (C 241); and the New Essays (NE 63; and NE 213). For the mind-dependence of aggregates, see GP II, 184/L 519; GP 250/L 529; GP II, 261; and GP II, 267.

<sup>39</sup>Cf. GP II, 178.

<sup>40</sup>For further discussion of these issues, see Lodge (1998, chs. 5-7).

<sup>41</sup>Cf. GP II, 167.

<sup>42</sup>In his letter of November 12, 1699, De Volder responds to Leibniz's veiled suggestion that he is a slavish follower of Descartes (cf. GP II, 194/L 522), by citing his dissatisfaction with Cartesian accounts of mind-body interaction (cf. GP II, 198).

<sup>43</sup>Cf. GP II, 180.

<sup>44</sup>Cf. GP II, 189.

<sup>45</sup>Cf. GP II, 243. For De Volder, modes are the things which are *not* conceivable *per se* (cf. GP II, 215).

<sup>46</sup>Cf. GP II, 245.

<sup>47</sup>Cf. Garber (1985). Also see Broad (1975, 67-86).

<sup>48</sup>Cf. GP II, 247.

<sup>49</sup>See the letter of January 5, 1706 (GP II, 279-81).

<sup>50</sup>Nor, of course, was there any prospect of Bernoulli's hopes, as outlined in note 11 above, being satisfied.

#### Abbreviations

**AT** *Ouvres de Descartes*. Ed. by C. Adam and P. Tannery, P. Paris: J.Vrin (1964-74). Cited by volume and page.

**CSM** *Descartes' Philosophical Writings*. Ed. and trans. by J. Cottingham, R. Stoodhoff, and D. Murdoch. Cambridge: Cambridge University Press, 1984-85. Cited by volume and page.

**CSW** *The Collected Works of Spinoza*. Ed. and trans. by E. Curley. Princeton: Princeton University Press (1985-). Cited by volume and page.

**LeC** "Elogé de feu Mr. De Volder Professeur en Philosophie et aux Mathematiques, dans l'Academie de Leide." *Bibliothèque choisie, pour servir de suite a la Bibliothèque universelle*, t. XVIII, 346-401. Ed. by J. LeClerc. Amsterdam: Chez Henri Schelte (1703-13).

**MD** *Disputationes Metaphysicae*. In Francisco Suárez, *Opera Omnia*, ed. by C. Berton, vols. 25-26. Paris: Vivès (1866). Cited by disputation, chapter, and section.

**NE** G. W. Leibniz. *New Essays on Human Understanding*, 2nd ed. Ed. and trans. by P. Remnant and J. Bennett. Cambridge: Cambridge University Press, (1996).

**SO** *Spinoza Opera*, 4 Vols. Ed. by C. Gebhardt. Heidelberg: Carl Winters (1972).

**W** *Leibniz Selections*. Ed. by P. P. Wiener. New York: Scribners (1951)

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