# Du Châtelet's Rejection of Leibniz's World Apart Doctrine

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**Abstract***:* Leibniz endorses the world apart doctrine, according to which a substance is that which is independent of all other things except God. However, I will argue that in what appears to be a radical departure from the causal version of the world apart doctrine, Du Châtelet—whose metaphysics appears to be Leibnizian from a distance—embraces the causal connectedness of created substances. I further show that Du Châtelet's rejection of Leibniz's claim that a substance is causally independent of all other created substances can be traced back to a more fundamental anti-Leibnizian commitment on Du Châtelet's part concerning the in-principle accessibility of natural (i.e., non-divine) sufficient reasons by finite minds and to her commitment to a causal theory of intentionality.

Leibniz famously writes that "each substance is like a world apart, independent of all other things, except for God".[1] According to the standard reading of Emilie Du Châtelet's metaphysics as laid out in her *Institutions de Physique*—a reading that has come under increasing pressure in recent commentaries—Du Châtelet's metaphysics is inherited from Leibniz.[2] Yet, in a remarkable departure from Leibniz's 'world apart doctrine', Du Châtelet endorses the view that created substances stand in transeunt causal relations to one another, or so I will argue. To be sure, this apparent endorsement sits oddly with Du Châtelet's own claim in her preface that her goal in the first chapters is to explain "the principal opinions of M. Leibniz on metaphysics".[3] But by her own admission, Du Châtelet's knowledge of Leibniz's metaphysics came to her filtered through other Leibnizians, including Wolff, and so may be incomplete as well as inaccurate. [4] My goal in this paper is not primarily to examine the extent to which Du Châtelet's stated views about substance come apart from Leibniz's views and trace other sources of influence, but to address what is in the first instance a philosophical question: does Du Châtelet's commitment to creaturely transeunt causation between substances (i.e., to causation whereby one created substance productively or efficiently causes an accident in another created substance), and consequently her rejection of the

[1] 'Discourse on Metaphysics', §14/AG 47.

[2] Cf. Lascano (2011) and Stan (2018). Lascano (p. 742), for instance, writes that "[m]any commentators have written about the *Institutions*, but the metaphysical sections are almost always described as a mere retelling – and somewhat inaccurate one at that – of Leibniz."

[3] See IP, Preface (XII). I cite the 1740 edition of the *Institutions* (abbreviated 'IP'*)* by section, and use translations from chapters of the *Institutions* translated by Brading et al (https://www.kbrading.org/translations) and from Bour and Zinsser (2009).

[4] It is worth noting that Du Châtelet does herself distinguish between the views of Leibniz and those of Wolff, writing the following at IP §119: "Few people in France know anything of this opinion of M. Leibniz's but the word, *monads*; the books of the famous Wolff, in which he explains so clearly and eloquently M. Leibniz's system, which, in his hands, *took a totally new form*, have not yet been translated into our language." (emphasis added). It is also significant that Du Châtelet does not herself use the term "monads" for her elements or simple substances, which suggests that she may consciously be putting some distance between her views and those of Leibniz's.

causal version of Leibniz's 'world apart' doctrine, flow from or inform some of her other metaphysical commitments? I will argue that it does. In particular, I will show that Du Châtelet's commitment to creaturely transeunt intersubstantial causation is philosophically undergirded by her commitment to a conception of a natural or non-divine sufficient reason as a reason that is in principle accessible by some finite mind or other, as well as by her causal account of intentionality.

I proceed as follows. In §1, I discuss Leibniz's world apart doctrine, with a particular focus on the causal independence of substance. In §2, I argue that Du Châtelet, unlike Leibniz, embraces the possibility of transeunt causation both amongst simple substances which ground bodies and between souls and simple substances that ground bodies. In §3, I trace Du Châtelet's commitment to transeunt intersubstantial causation to her commitment to the view that any natural (i.e., non-divine) sufficient reason is in principle accessible by us (that is, by a finite mind or other), and to a causal theory of intentionality. Finally, in §4, I put Du Châtelet's characterizations of sufficient reason and of substance into sharp relief by contrasting them with Leibniz's characterizations of sufficient reason and substance, both of which inform Leibniz's commitments about causation.

**§1 Causal Independence in Leibniz**

As stated above, Leibniz is committed to the doctrine that each substance is independent of all other things, except for God. If a substance is independent of *all* other created entities, it is *a fortiori* independent of all other created substances.[5] Leibniz endorses the independence of substance along several distinct dimensions. Among other senses, Leibniz holds that substances are modally independent (where something is modally independent just in case it does not require the existence of any other created substance), conceptually independent (where something is conceptually independent just in case its concept does not contain the concept of any other created substance), and causally independent (where something is causally independent just in case it does not causally depend on any other created substance).[6] For the purposes of this paper, I focus exclusively on Leibniz's commitment to the causal independence of substance, for it is the independence of substance in this sense that (I will argue) Du Châtelet most directly rejects.

Leibniz puts forward two main objections to the possibility of transeunt causation between created substances (henceforth sometimes just 'intersubstantial causation').[7] According to the first, intersubstantial causation requires the transfer of accidents from one substance to another; but accidents, as dependent entities, cannot detach themselves from substances, and so intersubstantial causation is unintelligible.[8] For example, he writes in the *Monadology*:

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[5] If independence is meant to function as a (partial) *criterion* for substance for Leibniz, then an elucidation of the relevant notion of independence cannot itself involve the notion of a created substance. However, if Leibniz's world apart doctrine is not meant to function as a *criterion* for substance, then independence can be characterized in terms of independence from other created substances (see Harmer (2016) who distinguishes three varieties of independence in Leibniz—causal, ontological and phenomenal—and characterizes them in this way).

[6] Other varieties of independence may also play a role for Leibniz, such as mereological or constitutional independence (x mereologically/constitutionally independent just in case x there is nothing that is a part of x or constitutes x) and predicational independence (x is predicationally independent just in case there is nothing that it inheres in or is predicated of). Harmer (2016) isolates and discusses yet another notion of independence: phenomenal independence. He writes that "every (created) substance is phenomenally independent of all the others, i.e., the truth of a substance's phenomena (roughly, what it sees) does not require the existence of any other substances except God." (p. 39). I bracket these other senses for present purposes.

[7] Cf. Watkins (1995, p. 297).

[8] If causation is construed more broadly such that counterfactual dependence suffices for the obtaining of a causal relation between two substances, one could say that Leibniz too is committed to causation between created substances, for Leibniz's substances exist in the kind of preestablished harmony that would satisfy counterfactual dependence

> There is also no way of explaining how a monad can be altered or changed internally by some other creature, since one cannot transpose anything in it…The monads have no windows through which something can enter or leave. Accidents cannot be detached, nor can they go about outside of substances, as the sensible species of the Scholastics once did. Thus, neither substance nor accident can enter a monad from without.[9]

See also Leibniz's letter to de Volder of 20 June 1703/AG 176:

> Properly speaking, I don't admit the action of substances on one another, since there appears to be no way for one monad to flow into another.[10]

And another of Leibniz's letters to de Volder (written in 1704 or 1705) (emphasis added):

> It is necessary that these simple substances exist everywhere and that they be self-sufficient (with respect to one another), since an influx of one into another is *unintelligible*, beyond the fact that such an influx is something placed in things for no purpose, and established by no argument.[11]

According to Leibniz's second objection, transeunt intersubstantial causation involves a violation of the law of conservation of motion. As Leibniz writes in §80 of the *Monadology*:

> Descartes recognized that souls cannot impart a force to bodies because there is always the same quantity of force in matter. However, he thought that the soul could change the direction of bodies. But that is because the law of nature, which also affirms the conservation of the same total direction in matter, was not known at that time. If he had known it, he would have hit upon my system of pre-established harmony.[12]

Yet, even as Leibniz rejects the intelligibility of transeunt causal relations between created substances, he does not reject all causal activity when it comes to created substances. Leibniz endorses *intra*substantial causation, i.e., causation within a substance. Indeed, it is essential for Leibniz that substances are causally active: in his *Principles of Nature and Grace, Based on Reason*, Leibniz defines a substance as "a being capable of action".[13] Nor does Leibniz reject all transeunt (i.e., efficient or productive) causation *between* substances: God, for Leibniz, creates the world and acts on it, albeit not through a transfer of accidents from God to created substances.[14] I will return to Leibniz's rejection of intersubstantial causation, and its relationship to his account of substance, in §4.

## §2 Du Châtelet on Causal Interaction

between created substances. But the sense of causation relevant to Leibniz's denial of causation between substances, and thus the sense relevant to this paper, is much narrower: it refers to transeunt (or productive or efficient) causation.

[9] §7, G VI 607/AG 214.
[10] G II 241/AG 176.
[11] G II 275/AG 181.
[12] G VI 620-621/AG 223.
[13] G VI 598/AG 207.
[14] Jolley (2005, pp. 55-56).

I will argue that, unlike Leibniz, Du Châtelet is committed to transeunt causation between created substances. In what follows, I will make a textual case for this commitment, and then briefly address whether her divergence from Leibniz on the question of intersubstantial causation may be traced to the views of Christian Wolff. Let us begin, however, with a preliminary question: what sorts of entities qualify as substances for Du Châtelet?

Unlike Leibniz, who at times explicitly endorses a commitment to composite substances, and at times even commits himself simultaneously to both substances that are corporeal and those that are immaterial, Du Châtelet writes at IP §127 that "simple beings are the *real* substances, beings that are durable and susceptible to the modifications which their internal force produces" and at IP §128 that "the *real* substances (that is to say), simple beings, are active, since they carry in them the principle of their changes" (emphasis added).[15] A simple being, for Du Châtelet, is "a being without extension and without particles".[16]

It is unclear from her discussion whether Du Châtelet means to commit herself to the strong claim that simple beings are the only substances, or the weaker claim that simple beings constitute one class of substance (the "real" substances), leaving room for a lesser kind of substance.[17] I remain neutral on this question, and my occasional use of 'simples' to refer to the substances that ultimately underlie or ground phenomena on Du Châtelet's view should not be taken to imply that simples are the only substances for Du Châtelet.

I present two distinct text-based arguments for the claim that Du Châtelet endorses transeunt causation between created substances, one less direct than the other. Let us begin with the less direct argument, which proceeds from a claim about causal interaction between bodies. It is clear that Du Châtelet holds that bodies act upon one another. She writes, for example, in chapter 11, §259 (emphasis added):

> This resistance that all bodies present when one wants to change their current state is the foundation of the Third Law of motion, by which the reaction is always equal to the action.
>
> The establishment of this law was necessary so that bodies might act on one another [*afin que les Corps puffent agir les uns fur les autres*], and that motion, being once produced in the universe, might be communicated [*communiqué*] from one body to another with sufficient reason.

Du Châtelet's claim above implies not only that bodies act on one another, but that a body can "communicate" motion to another body. Du Châtelet is here endorsing a transeunt account of causation that goes beyond a mere counterfactual relation between the states of two bodies: she is endorsing a variety of physical influx.[18]

However, that bodies act on one another, and so stand in causal relations to one another, does not automatically entail that the simple substances that underlie bodies also stand in causal relations to one another. There are at least three ways in which such an entailment might be blocked. First, a body could stand in a causal relation to another body partly or entirely in virtue of something other than the activity of simples. It could, for example, stand in a causal relation to another body partly or wholly in virtue of what God perceives, or in virtue of an *a priori* condition

[15] For the observations about Leibniz, see especially Garber (1985, 2009) and McDonough (2013, 2016).
[16] IP §120.
[17] See Carus (2024) for a recent discussion of Du Châtelet's theory of simple beings. Carus argues that Du Châtelet takes a novel, 'faculty-centred' approach to simple beings, in terms of their explanatory role.
[18] Cf. Brading (2018, p. 85).

for the possibility of experience, such as a Kantian category. Second, a body could stand in a causal relation to another body in virtue of causal activity *within* simples (as Leibniz might hold), and not in virtue of any relation that obtains between those simples. Third, even if causal relations between bodies obtain in virtue of relations between simples, the causal relations that obtain between bodies may be explained by *non-causal* relations that hold between simples.

Are there textual or other grounds on which we might rule out the above possibilities? I believe there are. With respect to the first option—on which the causal relations that obtains between bodies obtain in virtue of something other than the activity of simples—Du Châtelet is clear that the sufficient reason for any interaction between bodies lies in simples. She writes:

> The original reasons for all that happens in bodies lie necessarily in the elements of which they are composed. It follows that the original reason for the connection of bodies to each other, insofar as they coexist and succeed each other, lies in simple beings. So, the connection of the parts of the world depends on the connection of the elements, which is the foundation and the first origin. [19]

This passage suggests that bodies stand in relationships to one another in virtue of the fact that the elements or simples that 'compose' them stand in certain relationships. Barring overdetermination or a disjunctive account, it follows that causal relations between bodies do not obtain in virtue of something other than relationship between simples (such as God's perception or a Kantian category). Du Châtelet's claim that "the original reason for the connection of bodies to each other, insofar as they coexist and succeed each other, lies in simple beings" does not explicitly rule out any other (partial or full) ground for causal relations between bodies. However, the absence of any textual evidence that might point to some other ground suggests—even if it does not entail—that the *complete* reason for the connection of bodies to one another lies in simple beings. The above passage also rules out the second option—one on which the causal relation between bodies obtains in virtue of causal activity within, rather than between, simples—for it states that "the connection of the parts of the world depends on the *connection* of the elements" (emphasis added).

What about the third option? Even if the causal relations between bodies obtain in virtue of relations between simples, it does not yet follow that simples stand in causal relations to one another. That conclusion follows only if it is also *not* the case that a causal relation obtains between bodies in virtue of some other type of relation that obtains between simples. However, there is no textual evidence that suggests that for Du Châtelet, bodies stand in causal relations to one another in virtue of *non-causal* relations between simples. In the absence of evidence to the contrary, we should at least provisionally conclude that Du Châtelet holds that transeunt causal relations obtain between simples. Thus, transeunt causal interaction between bodies, along with Du Châtelet's premise that "the original reason for the connection of bodies to each other…lies in simple beings" provides an indirect argument for thinking that Du Châtelet endorses transeunt causation between simples.[20]

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[19] IP §131. See also IP §133: "So, this connection between our soul and the entire universe comes from the union of the elements among themselves, and from the relationships they all have with one another…"

[20] Others have also noted that Du Châtelet seems to be committed to transeunt intersubstantial causation. Cf. Brading (2018, p. 63), Stan (2018) and Jacobs (2020, pp. 12-13). Stan writes: "Du Châtelet has no official theory of efficient causation, but we can still infer her most probable view. For one, she claims to follow Wolff on the nature of elements, and he did assert that elements interact by efficient causation…For another, Du Châtelet affirms that *bodies* interact, and that the elements' action and resistance is the sufficient ground of corporeal inter-agency. Short of Leibniz's

But we also have a more direct, text-based argument available for the conclusion that Du Châtelet is committed to transeunt intersubstantial causation. Du Châtelet endorses the view that Beings interact with one another. She writes, for example:

> And when one considers this Being as placed in the order of things, and linked with the other Beings that surround it, one must show how a Being depends upon its neighbor, and which causes gave actuality to the modes that were simply possible when the Being was considered as isolated and outside the order of things.[21]

Du Châtelet's conception of a Being, however, appears to be more inclusive than that of substance. A 'being' for her is "that which can exist, and whose determinations do not imply any contradiction, whether this Being exists, or whether it is only possible."[22] By contrast, a 'substance' for Du Châtelet is a "[b]eing that endures and is modifiable".[23] A substance is modifiable in virtue of the variation in its modes. By contrast, a being that is not modifiable, and thus not a substance, is an accident, such as a colour. As Du Châtelet writes, "the least modification of this color changes it into another, and it cannot be modified without being changed."[24] Du Châtelet's claim that beings depend upon their neighbors when we consider them as placed in the order of things, and in particular, the claim that merely possible modes had by a being are rendered actual in virtue of the causal activity of its neighbors, strongly suggests that substances, as beings, belong to a causal order.

Moreover, unlike Leibniz, Du Châtelet distinguishes between those features of a being that flow from its essential determinations and those whose actuality depends on an external cause. In the absence of intersubstantial causation, all truths would follow from the "essential determinations" or essential properties of the substance (as a being). But Du Châtelet draws a distinction between the attributes and modes of a being. Attributes, she writes, "have their sufficient reason in the essential determinations"[25] of a being, but these essential properties determine only the *possibility* of modes, since "if the essential determinations contained the reason for the actuality of the modes, the modes would become attributes, since it would be impossible for them not to be found in the Being."[26] For Du Châtelet, the actuality of modes is instead determined through an external cause.[27]

Thus far, I have shown that at the very least, Du Châtelet endorses transeunt causation between the simple substances that ground bodies. Yet, textual evidence also points to a commitment to transeunt causation between souls and other simple substances. In Chapter 7, entitled 'Of the Elements of Matter' Du Châtelet writes:

> For example, I have a very clear idea of this paper, on which I write, and of the pen I use; however, how many dim representations are enclosed and hidden, so to speak, in this clear idea…For the fibers, their differences and their arrangement subsisting, there is no reason

way—which she did not take—transeunt substantial causation is the only other intelligible ground of outward bodily action." (p. 492).

[21] IP §50.
[22] IP §35.
[23] IP §52.
[24] IP §52.
[25] IP §42.
[26] IP §43.
[27] See, for example, IP §34.

> why they would not cause impressions on my organs, and consequently representations in my soul; but these impressions being too weak and too compounded, I cannot distinguish them all and they cause dim representations in my soul.[28]

The above passage makes it clear that Du Châtelet thinks that objects (such as paper and the fibers that compose them) *cause* impressions on our organs, and *consequently* representations in our souls. The language of causality occurs again in the last line of the quoted passage, where she writes that impressions *cause* dim representations in our soul.

The claim that representations in our soul are caused by impressions is further bolstered by her claim earlier in §132 that "if at a certain distance the representations that the objects excite in our Soul were to cease, even though the impressions that they make on our senses were to continue, there would be a leap in Nature, which would be contrary to the principle of sufficient reason (§13); for there would be no reason for the clarity of an idea to gradually diminish proportionately to the impression up to a certain point, and then at this point end as if in a leap, even while the reason for its continuation still subsists." Du Châtelet here clearly implies that "the reason" for the continuation of the representation consists in its corresponding impression. If there was no transeunt causation between our organs and souls, and if Du Châtelet instead subscribed to pre-established harmony (even a pre-established harmony restricted to the relationship between the body and the soul), then the sufficient reason for a representation in the soul would surely consist in a prior representation in the soul. Yet, her discussion in §132 makes it clear that she thinks that the representations in the soul can be caused by organs, and the impressions on our organs in turn caused by objects.

In a recent paper Ansgar Lyssy argues that Du Châtelet follows Leibniz in rejecting transeunt causation between simples.[29] However, the textual evidence pointing to this conclusion is not decisive. For example, Lyssy cites §13, where Du Châtelet writes that the "each state in which a being finds itself must have its sufficient reason why this being is in this state rather than in any other, and this reason can only be found in the preceding state." Lyssy takes this passage to suggest that Du Châtelet endorses "primarily self-acting simple beings".[30] However, Du Châtelet's claim occurs in the context of her discussion of the law of continuity according to which "a being does not pass from one state to another without passing through all the different states that one can conceive of between them."[31] As Du Châtelet writes:

> For if there was a state possible between the current state and that which immediately preceded it, the nature of the being would have left the first state without yet being determined by the second to abandon the first. Thus, there would be no sufficient reason why it should pass to this state rather than to any other possible state.[32]

Du Châtelet here derives her law of continuity from the principle of sufficient reason. But her appeal to the principle of sufficient reason (henceforth 'PSR') does not imply that the sufficient reason for a state of a being is to be found *entirely* in the previous state of the being, as opposed to also in an external cause. The passage instead seems to suggest that the contribution of the being

[28] IP §132.
[29] See Lyssy (2022).
[30] Lyssy (2022, p. 211).
[31] IP §13.
[32] IP §13.

to its state *s* is exhausted by the state that immediately precedes *s*. It does not follow from this claim that there is no external cause for the state. In particular, Du Châtelet's claim that the sufficient reason for the state of the being "can only be found in the preceding state" does not, when taken in the context of the law of continuity, imply that there is no external cause that contributes to the state of the being. It instead implies only that insofar as the contribution of the being goes, the sufficient reason for the state is to be found in the state that immediately precedes it. Moreover, "the preceding state" can also be construed broadly so as to include external causes (for example, the state that immediately precedes one where a piece of paper is burning might be one where a candle is held to the piece of paper).[33] It is thus far from clear that Du Châtelet's discussion supports the claim that the sufficient reason for the state of the being consists entirely in the preceding state, considered in isolation from other beings, and it would be too hasty to conclude on the basis of the above passage that Du Châtelet rejects transeunt intersubstantial causation. Additionally, the claim that a created substance actively brings about its own states, even if completely, does not suffice to rule out a commitment to transeunt intersubstantial causation, for the state of a substance may be causally overdetermined.[34] There is no evidence that Du Châtelet explicitly rules out such overdetermination.

Despite rejecting the possibility of transeunt causation between substances, Leibniz (by his own admission) does sometimes talk as though substances act upon one another.[35] For example, in a revealing passage from the *Theodicy* (also discussed by Lyssy), Leibniz writes:

> And in so far as the soul is imperfect and as its perceptions are confused, God has accommodated the soul to the body, in such sort that the soul is swayed by the passions arising out of corporeal representations. This produces the same effect and the same appearance *as if* the one depended immediately upon the other, and by the agency of a physical influence…The same thing must apply to all that we understand by the actions of simple substances one upon another. For each one is *assumed* to act upon the other in proportion to its perfection, although this be only ideally, and in the reasons of things, as God in the beginning ordered one substance to accord with another in proportion to the perfection or imperfection that there is in each.[36]

Could it be that, like Leibniz, Du Châtelet's talk of causation between bodies and between the soul and bodies should not be taken literally? I contend that we lack grounds for treating Du Châtelet's talk of transeunt causation non-literally, for unlike Leibniz, she does not—at least to my knowledge—ever indicate that she intends to talk merely *as if* created substances stand in transeunt causal relations to one another when in fact the causal activity of a simple is restricted to its ability to cause its own future states. Such an omission would be glaring and inexplicable, especially since Du Châtelet was likely also aware of Wolff's commitment to transeunt intersubstantial causation (more on this below), and also could not have taken for granted that Leibniz's distinction—that between what is in fact the case and what we suppose to be the case with respect to intersubstantial causation—was common knowledge amongst her readers.

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[33] The same point applies to another passage Lyssy discusses (IP §126).

[34] See Amijee (manuscript) for a discussion of why such overdetermination would have been problematic for Leibniz, given his commitment to the 'collection of requisites' conception of a sufficient reason. By contrast, there is no evidence that Du Châtelet conceived of a sufficient reason for existence in terms of a collection of requisites for an entity's existence.

[35] See also Lyssy (2022, p. 212).

[36] H 159, §66 (emphasis added).

Du Châtelet's position on intersubstantial causation does not appear to be Leibnizian, but it may be Wolffian, at least to some extent.[37] As Jacobs writes, "Wolff…was dissatisfied with Leibniz's substance idealism and moved to a realist view on which fundamental substances are physical elements which lack representational capacities but *are* capable of genuine causal interaction."[38] And as Du Châtelet herself admits, her exposure to Leibniz was mediated through Wolff. She writes in the preface to the *Institutions*:

> I explain to you the principal opinions of M. Leibniz on metaphysics; I have drawn them from the works of the celebrated Wolff, of whom you have heard me speak so much with one of his disciples….[39]

It is also likely that Wolff's knowledge of Leibniz's objections to intersubstantial causation was incomplete. As Watkins (2005, p. 39) writes, we need to distinguish between the "public" Leibniz and the "private" Leibniz, for the two come apart in significant ways. Many of what we now regard as Leibniz's main texts (his 'Discourse on Metaphysics', 'Primary Truths' and 'The Monadology') were not published during his lifetime. And Leibniz writes the following in a July 1714 letter to Nicolas Remond:

> Mr. Wolff has adopted some of my opinions, but since he is very busy with teaching, especially in mathematics, and we have not had much correspondence together on philosophy, he can know very little about my opinions beyond those which I have published.[40]

Thus, it appears likely that Du Châtelet did not set out to consciously reject Leibniz's denial of intersubstantial causation, but was simply influenced by Wolffian ideas more so than Leibnizian ones. The combination of Wolff's limited exposure to Leibniz's considered views and the fact that Du Châtelet's exposure to Leibniz seems to have been mediated through Wolff explains both why Du Châtelet may have had limited (if any) exposure to Leibniz's arguments against intersubstantial causation, and also why she may have been inclined to adopt the Wolffian view on which there is transeunt causation between created substances. Yet, if my earlier arguments succeed, then Du Châtelet's commitment to transeunt intersubstantial causation is more thoroughgoing that Wolff's, for Wolff seems to have endorsed pre-established harmony between substances at least with respect to mind-body relations.[41]

That said, my goal in this paper is not to trace historical influence. Instead, I wish to examine the philosophical motivations for Du Châtelet's commitment to transeunt causation between created substances. In the next section, I will tentatively argue that Du Châtelet's commitment to intersubstantial causation is philosophically undergirded by her commitment to a causal theory of intentionality, along with her distinctive conception of a natural (i.e., non-divine)

[37] Cf. Stan (2018).
[38] Jacobs (2020, p. 2).
[39] The disciple that Du Châtelet is referring to here is Samuel König, who was a student of Wolff's and Du Châtelet's tutor.
[40] Leibniz (1989*b*, p. 657).
[41] See Watkins (2005, p. 45).

sufficient reason. On this conception, a natural sufficient reason is such that it can be grasped by us (i.e., finite intelligent beings).[42]

**§3 Tracing Causal Interaction**

What philosophical motivation might Du Châtelet have had to endorse intersubstantial causation between simples? I will put forward and defend a hypothesis: Du Châtelet's distinctive account of what qualifies as a sufficient reason, together with her causal theory of intentionality, motivates a commitment to transuent causation between created substances.

Du Châtelet shares with Leibniz, Wolff, and other rationalists a core commitment to the PSR, the principle (broadly speaking) that everything has an explanation. As we will see, however, there is little agreement between Leibniz and Du Châtelet about what the principle requires, beyond this very broad gloss.

Leibniz formulates the PSR in several distinct ways: he sometimes states it as the claim that nothing happens without reason (NE 179, AG 31), or the claim that nothing happens without a cause (AG 31, G. VII. 309), or that every fact or true assertion has a sufficient reason for why it is thus and not otherwise (AG 217), or that nothing happens without a sufficient reason that determines why it is so and not otherwise (AG 210) or that "a reason must be given" for every truth (G. VII. 309), or finally, as the claim that every truth has an *a priori* proof (G. VII. 309). The above formulations differ in what they take to be the ontological category of the *explanandum*: some take it to be an event while others take it to be a fact or truth. The formulations also differ in what they take to be the ontological category of the *explanans* or sufficient reason: some formulations take it to be a cause, some take it to be a reason, and at least one takes it to be an *a priori* proof. Finally, they differ in logical form: some formulations are contrastive, whereas others are not.[43]

What is interesting about these various formulations for my purposes is that none involves reference to what finite intelligent beings or finite minds can grasp. And indeed, as we will see in the next section, Leibniz is explicit that most sufficient reasons (and all sufficient reasons for contingent truths) are beyond *our* grasp. By contrast, Du Châtelet builds reference to a finite mind into her characterization of a sufficient reason.

I make a detailed case for the claim that Du Châtelet's conception of natural sufficient reason and natural cause involves reference to a finite mind in Amijee (forthcoming). But I rehearse some of the highlights of that case for present purposes. First, Du Châtelet often characterizes a sufficient reason as a reason that enables understanding for us. Du Châtelet introduces the PSR in the first chapter of her *Institutions*, where she says in §8 that a sufficient reason is a "reason that makes us understand why this thing is what it is, rather than something completely different". She further writes in §10 that "a cause is good only insofar as it satisfies the principle of sufficient reason" and that a cause that "contains nothing that helps *us to understand*

[42] In Amijee (forthcoming) I argue on both textual and philosophical grounds that Du Châtelet is committed to epistemic causal idealism about natural sufficient reasons and causes. As I construe it, epistemic causal idealism about natural sufficient reasons and causes is the claim that it is *constitutive* of any natural sufficient reason and any natural cause that it is knowable by finite minds.

[43] At least one passage from 1686 (as conjectured by Parkinson (1974)) suggests that we should treat them as versions of the same principle. Leibniz writes: "There are two first principles of all reasonings, the principle of contradiction…and the principle that a reason must be given, i.e. that every true proposition, which is not known *per se*, has an *a priori* proof, or that a reason can be given for every truth, or, as is commonly said, that nothing happens without a cause." (G. VII. 309). This passage is from an essay entitled "*Specimen inventorum de admirandis naturae Generalis arcanis"* ("A specimen of discoveries of marvelous secrets of a general nature").

how the vegetation of which I seek the cause operates" (emphasis added) cannot be admitted. On the plausible assumption that a sufficient reason could not enable understanding if we could not access it, it follows that any (natural) sufficient reason is such that it is in principle accessibly by us.[44]

Second, in §8 of the *Institutions*, Du Châtelet argues that the truth of the PSR is needed for the possibility of making judgements on the basis of causal reasoning. Yet the PSR can only play this role if sufficient reasons are, at least in principle if not always in practice, accessible by us. To see why, consider an example Du Châtelet herself provides, where the PSR is employed in causal reasoning. She writes:

> Thus, for example, if I have a ball made out of stone, and a ball of lead, and I am able to put the one in the place of the other in a basin of a pair of scales without the balance changing, I say that the weight of these balls is *identical*, that is the same, and that they are identical in terms of weight. If something could happen without a sufficient reason, I would be unable to state that the weight of the balls is identical, at the very instant when I find that it is identical, since a change could happen in one and not the other for no reason at all…"[45]

Du Châtelet's point in the above passage seems to be that we could not judge that the two balls weigh the same unless the PSR is true. While it is not obvious from the above passage that the cognitive state that Du Châtelet has in mind is knowledge, her claim earlier in the same section that "as soon as one accepts that something may happen without sufficient reason, one cannot be sure of anything" suggests that she has more than mere belief in mind. [46] Moreover, insofar as Du Châtelet intends to argue for the *truth* of the PSR, a charitable reconstruction of her argument depends on the claim that the PSR is needed for the possibility of acquiring *knowledge* through causal reasoning, and not mere belief or justified belief. Briefly, this is because the possibility of arriving at a mere belief (or even justified belief) through causal reasoning does not seem to require the *truth* of the PSR, but a mere belief in, or commitment to, the principle.[47]

Now suppose (for *reductio*) that we could not access natural sufficient reasons. We could not then justifiably conclude that the weight of the balls is identical given that we can put one in place of the other without the balance changing, for we could not rule out the obtaining of various defeaters. For example, it may be that the balance is defective and stuck in equilibrium, in which case the sufficient reason for why one ball can be put in place of the other without the balance changing is not that the balls weigh the same, but that the balance is defective. But if this sufficient reason obtained yet could not be accessed by us in principle, we could not justifiably conclude that the two balls weighed the same.[48]

On the assumption that for Du Châtelet natural sufficient reasons are accessible by us, I

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[44] In Amijee (forthcoming), I argue that natural sufficient reasons and causes, for Du Châtelet, must not only be accessible by us, but *knowable* by us. A defense of this claim goes beyond the scope of the present paper.

[45] IP §8.

[46] IP §8, p.129.

[47] See also Amijee (forthcoming) for additional discussion, and in particular the foundational role of the PSR in securing knowledge for Du Châtelet. My argument in this paper, however, does not depend on the claim that, for Du Châtelet, the truth of the PSR is needed to secure the possibility of knowledge acquired through causal reasoning.

[48] My point here is not that Du Châtelet, in introducing her example of the beam balance, is claiming that various defeaters must be ruled out in order for us to be 'sure of anything'. It is rather than the success of her argument for the claim that the truth of the PSR is needed for us to be sure of anything requires that any natural (i.e., non-divine) sufficient reason is such that it is in principle accessible by finite minds.

argue she must also hold that natural *causes* (where a natural cause is just one that is not divine) are accessible by us. This is because Du Châtelet holds that a cause must contain (*contienne*) both the principle of actuality (which brings about the effect) and the sufficient reason (which enables us to grasp how and why the effect occurs).[49] On this view, to grasp a (causal) sufficient reason just is to grasp the cause that functionally 'contains' it.[50] In then follows that if natural sufficient reasons are in principle accessible by us, then so are natural causes.

We are now in a position to ask whether Du Châtelet's commitment to transeunt causation between created substances is in any way informed by her commitment to the claim that natural causes are in principle accessible by finite minds. I will argue that it is. In particular, I will show that Du Châtelet's commitment to a conception of sufficient reason as a reason that is in principle accessible by finite minds, along with her commitment to a causal theory of intentionality, commits her to the possibility of transeunt causation between created substances.

Let us return to Du Châtelet's discussion at IP §132. Du Châtelet there writes that our organs "receive impressions" from "all the motions that happen in the Universe", and in turn cause representations in the soul. It is moreover clear that these representations are *of* the objects that cause impressions on our organs, and thereby representations in our souls (see, for example, IP §132, quoted above). Du Châtelet thus expresses a clear commitment to a causal account of intentionality. Our *a posteriori* access to the external world, for Du Châtelet, therefore depends on what can causally affect us. This now brings us to the question: what *can* causally affect us on her view?

I argued above that natural causes for Du Châtelet are in principle accessible by finite minds, for causes on her view functionally contain sufficient reasons and natural sufficient reasons are, for her, in principle accessible by finite minds. Yet, the class of natural causes is fairly broad, and includes *all* worldly causes, including causes at the level of simple substances. But Du Châtelet, like Leibniz, also holds that what we encounter directly in nature are merely phenomena, and that our access to simple substances is at best confused, where phenomena are "images or appearances that originate from the confusion of several realities."[51] How then might our access to causes at the level of simple substances be possible on Du Châtelet's framework? I propose that a case can be made on Du Châtelet's behalf for our access to causation at the level of substances through a causally mediated inference.

As we saw above, Du Châtelet holds that there is genuine causal interaction between phenomena, and relations at the level of phenomena obtain in virtue of relations between simple substances. Now suppose that a billiard ball $b_1$ comes into contact with another billiard ball $b_2$. As I argued in §2, Du Châtelet holds that there is a transeunt causal relation between $b_1$ and $b_2$, which obtains in virtue of some causal relation or relations between simples. This grounding relationship between facts about causation between bodies and facts about causation between simples permits us indirect access to causation at the level of simples. Confused perception aside, we do not have access to simples through experience. But we can nevertheless have access to causation at the level of simples by description. For example, we might use the description 'the causal relations that ground the causal relation between $b_1$ and $b_2$' to pick out causal relations at the level of simples, and then come to believe (or even know) that such relations obtain by inferring their existence from knowledge that a causal relation obtains between $b_1$ and $b_2$. In this way, we might have

[49] IP §9.
[50] I defend a functional reading of Du Châtelet's claim that a cause 'contains' a sufficient reason in Amijee (forthcoming).
[51] IP §154.

indirect access to causation between simple substances, even if this access falls short of insight into how precisely simple substances are connected with one another.[52]

Importantly, my claim is not that Du Châtelet endorses the above story for how we might be able to have access to causation between simple substances. My claim is simply that such access is not ruled out on her view, and that we can make sense of how we could have indirect access to the causal activity of simples even if all we perceive in experience are phenomena.

Divine sufficient reasons do seem to be beyond our grasp in principle, on Du Châtelet's view. Du Châtelet holds that we cannot grasp God's reasons, for the grasp of divine reasons requires an infinite mind. Du Châtelet writes at IP §26:

> It is true that we cannot see all of this grand tableau of the universe, nor show in detail how the perfection of the whole results from the apparent imperfections we believe we see in some parts, for this would require envisaging the entire universe and being able to compare it with all the other possible universes, which is an attribute of the Divinity. [53]

The finitude of our minds—in contrast to the infinitude of God's mind—thus poses an in-principle barrier to our ability to grasp God's reasons (for example, God's reasons for thinking that our world is the best of all possible worlds).[54] By contrast, there is no such in-principle barrier to our ability to grasp reasons at the level of simple substances.

We are now in a position to see how Du Châtelet's commitment to the claim that any natural sufficient reason is such that it is accessible by us, the intimate connection she endorses between causes and sufficient reasons, and her commitment to a causal account of intentionality, all commit her to the possibility (and thus metaphysical coherence) of transeunt causation between substances.

I have argued that Du Châtelet is committed to the in-principle accessibility by us of all natural sufficient reasons, and thus natural causes. It follows that every natural cause is such that our souls (i.e., finite minds) can access, and thus represent it. When supplemented with the causal theory of intentionality, we then get the claim that every natural cause is such that, in virtue of being able to represent it, our souls can stand in a causal relation to it. As mentioned above, simples, for Du Châtelet, are causally active. It then follows that there can be a causal relation

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[52] Du Châtelet writes at §134: "And there remains to us, of the confused ideas that we have of each of these simple Beings, only an idea of several things coexisting and linked together, without us knowing distinctly how they are linked…". While it may seem that Du Châtelet is here claiming that we cannot have knowledge of or grasp the causal activity of simples, this would be too quick: Du Châtelet is here concerned with our ability to *perceive* simple beings distinctly, and her point cannot be generalized to our access to simple beings more generally.

[53] See IP §24 and §26. See also Amijee (forthcoming) for a more detailed discussion of why we cannot access divine reasons.

[54] Carus (forthcoming) argues that Du Châtelet's claim that God created our world because it is the best of all possible worlds is inconsistent with the correct application of her PSR. This is because the PSR, when applied correctly, tells us how and why something occurs, but the mere claim that God created this world because it is the best does not, as a sufficient reason, satisfy this requirement. On Carus's reading, Du Châtelet is inconsistent, and mistakenly endorses the doctrine held by some of her predecessors that our world exists because God created the best of all possible worlds, namely ours. In contrast to Carus's reading, I read Du Châtelet's claims about our ability to grasp sufficient reasons more restrictedly, as applying to only natural (or non-divine) sufficient reasons. On my reading, only natural sufficient reasons must be such that they enable understanding for *us*. Thus, even if an explanation in terms of God's choosing the best, and our world being the best, qualifies as a sufficient reason on Du Châtelet's view yet fails to be illuminating, Du Châtelet's conception of a natural sufficient reason as that which enables understanding for finite minds is not undermined.

between our souls and simples. Thus, Du Châtelet's commitment to the possibility of transeunt causation between created substances, and in particular, between souls and other simples, appears to be philosophically undergirded by her commitments to the causal theory of intentionality and the view on which every natural cause is such that it is accessible by a finite mind.

The above argument can be extended to the possibility of transeunt causation between simples that underlie bodies. Not every simple can *directly* cause representations in a finite mind; most simples must cause representations in a finite mind by causally affecting some intermediate entity, such as our sense organs. As discussed earlier, Du Châtelet holds that objects (such as a piece of paper) impress upon our organs, which then cause representations in our soul. Given that organs are bodies, and on the assumption that every natural cause is such that we can access it in principle, it follows that a natural cause—whether it consists in a body or a simple—can act on the organ. We then have the following possibilities: (1) A body acts on another body (i.e., the organ); (2) A simple acts on a body (i.e., the organ). With respect to the first possibility, we saw earlier that Du Châtelet holds that causal interactions between bodies are ultimately explained in terms of causal relations between simples. But if the causal activity of bodies is ultimately explained in terms of simples, the same is arguably true of simple-body causal relations, and so the simple acts on the organ by acting on the simples that underlie the organ. So, the metaphysical possibility of transeunt causation between non-mental simples follows as long as simples can cause representations in the soul by directly acting upon intermediate bodies (i.e., organs). Thus, Du Châtelet's commitment to her causal theory of intentionality—together with her conception of a natural cause—also requires the metaphysical possibility of transeunt causal relations between non-mental simples, that is, the simples that underlie our organs and other bodies.

I have shown that Du Châtelet's commitment to the metaphysical possibility of transeunt causation between created substances is philosophically undergirded by some of Du Châtelet's other core commitments. First, it is undergirded by her conception of a natural cause, a conception on which every natural cause is such that a finite mind can access it. This conception in turn depends on her conception of a natural sufficient reason, on which every natural sufficient reason is such that a finite mind can access it. Second, it is undergirded by Du Châtelet's commitment to a causal theory of intentionality. In the next and final section, I turn once more to Leibniz.

**§4 Ignorance of Sufficient Reason in Leibniz**

Unlike Du Châtelet, Leibniz does not seem to endorse a view on which natural sufficient reasons and causes must be such that finite minds can access them. As we saw above, none of the ways in which Leibniz formulates the PSR involves reference to what a finite mind can access. Indeed, Leibniz is explicit that at least some sufficient reasons *cannot be known* by us. He writes:

> [the principle] by virtue of which we consider that we can find no true or existent fact, no true assertion, without there being a sufficient reason why it is thus and not otherwise, although most of the time these reasons cannot be known to us [*ne puissent point nous être connues*]. (*Monadology* §32; GP 6.612/AG 217)

Leibniz's account of the distinction between the contingent and necessary in terms of an infinitely long or finitely long analysis provides a clue as to why Leibniz might have thought that some sufficient reasons could not be known by us. The account of contingency in terms of an infinitely long analysis that only God can grasp, along with Leibniz's claim (referenced above) that a

sufficient reason is an *a priori* proof (or proof sequence), explains why Leibniz might have thought that sufficient reasons for contingent truths are beyond the grasp of finite minds.[55]

McDonough and Soysal (2016, 2018) argue that Leibniz's account of contingency in terms of an infinitely long analysis does not suggest that contingent truths are just those that lack finite demonstrations. Instead, "Leibniz's core thought is that there is no procedure, no algorithmic process or rule, that we can follow that would allow us to find proofs of contingent propositions."[56] But whether Leibniz's theory of contingency is committed to saying that contingent truths lack finite demonstrations, or whether it instead says merely that a proof for contingent truths cannot be found by appeal to a formal algorithm (i.e., definitions in an ideal language and logic), the theory provides at least one explanation for why Leibniz might have thought that some sufficient reasons—namely, the sufficient reasons for contingent truths—are beyond our grasp. The finitude of our minds would prevent us from completely grasping an infinitely long analysis both because we are not eternal, and because we cannot grasp something with infinite complexity.[57]

One might argue that Du Châtelet's view could be reconciled with Leibniz's if Du Châtelet's commitment to the accessibility of natural sufficient reasons was taken to apply to merely partial, and not complete sufficient reasons. One might then argue that even Leibniz could admit partial grasp of sufficient reasons for contingent truths. Grasp of a few steps of an infinitely long analysis would plausibly constitute such a partial grasp. However, there is no evidence that suggests that Du Châtelet means to restrict the accessibility-by-us of natural sufficient reasons to merely partial sufficient reasons, and textual evidence supports that, for her, non-ultimate explanations qualify as complete sufficient reasons.[58]

Absent any reason—textual or philosophical—to think otherwise, we should not read Du Châtelet as claiming that a non-ultimate cause contains a merely partial sufficient reason, where the complete reason is contained in the ultimate, and in principle inaccessible, cause.

Leibniz appeals to the conceptual independence of substance, and in particular, his conception of a substance as that which corresponds to a complete individual concept—a concept that contains within it all predicates that are true of it[59]—as providing independent logical grounds for rejecting the possibility of intersubstantial causation. He writes:

> We could therefore say in some way and properly speaking, though not in accordance with common usage, that one particular substance never acts upon another particular substance nor is acted upon by it, if we consider that what happens to each is solely a consequence of its complete idea or notion alone, since this idea already contains all its predicates or events and expresses the whole universe.[60]

And:

> Strictly speaking, one can say that *no created substance exerts a metaphysical action or influx on any other thing*. For, not to mention the fact that one cannot explain how

[55] See, for example, *On Contingency*; AG 29 and *Discourse on Metaphysics* §8, G IV 433/AG 41.
[56] McDonough and Soysal (2016, p. 454).
[57] Cf. McDonough and Soysal (2016, p. 452).
[58] See, for example, IP §129.
[59] See, for example, *Discourse* §8 and *Primary Truths*, §32.
[60] *Discourse on Metaphysics* §14, G IV 439-40/ AG 47.

> something can pass from one thing into the substance of another, we have already shown that from the notion of each and every thing follows all of its future states.[61]

Thus, Leibniz's logical conception of a substance as that which is independent of all other created substances seems to underwrite (for Leibniz) his denial of transeunt causation between created substances.

In endorsing transeunt intersubstantial causation, Du Châtelet rejects Leibniz's world apart doctrine. What, then, is Du Châtelet's conception of substance? Du Châtelet presents a positive account of substance in the third chapter of her *Institutions*, and writes at §52:

> …one can define Substance, *that which conserves the essential determinations and the constant attributes, while the modes in it vary and succeed one another*, that is to say, a durable and modifiable subject: for insofar as it has an essence and properties that flow therefrom, endures and continues to be the same, and insofar as its modes vary, it is modifiable.

Prior to presenting her own account of substance, Du Châtelet critiques the accounts of the Scholastics, Descartes and Locke. According to Du Châtelet, the Scholastics defined substance in terms of independence, as "a Being that subsists by itself & is the sustainer of accidents".[62]

What is wrong, according to Du Châtelet, with an account of substance in terms of independence? Du Châtelet writes that "when one wants to know what it is *to subsist by itself, to sustain accidents, and the way in which they are sustained*, one receives nothing in response but new words to define, and to which no distinct idea is attached."[63] Du Châtelet's complaint seems to be that a characterization of substance in terms of independence does not render intelligible what a substance is. If my argument in this paper succeeds, then Du Châtelet's rejection of the independence of substance goes deeper: it is explained ultimately in part by the fact that natural sufficient reasons and natural causes must be graspable by us, a requirement that (given Du Châtelet's other commitments, especially her causal account of intentionality) cannot be satisfied on an independence-based account of substance.

**§4 Concluding remarks**

I began by showing that Du Châtelet rejects the causal version of Leibniz's world apart doctrine, for she embraces transeunt causation between created substances. In particular, she endorses transeunt intersubstantial causation *both* between souls and the simples that underlie bodies and between the simples that underlie bodies. I then argued that Du Châtelet's commitment to a conception of a natural sufficient reason and cause as that which is in principle accessible by finite minds, along with her causal account of intentionality, can explain her thoroughgoing commitment to the metaphysical possibility of transeunt intersubstantial causation.

By drawing together various threads in Du Châtelet's metaphysical and epistemological framework, I hope to have shown that Du Châtelet's divergence from Leibniz's metaphysics, and potentially Wolff's, is both principled and systematic.

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[61] *Primary Truths*, A VI, 4,1647/AG 33 (emphasis added)
[62] IP §51.
[63] IP §51.

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