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## THE “FOURTH HYPOTHESIS” ON THE EARLY MODERN MIND-BODY PROBLEM

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One of the most pressing philosophical problems in early modern Europe concerned how the soul and body could form a unity, or, as many understood it, how these two substances could work together. It was widely believed that there were three (and only three) hypotheses regarding the union of soul and body: (1) physical influence, (2) occasionalism, and (3) pre-established harmony. However, in 1763, a fourth hypothesis was put forward by the French thinker André-Pierre Le Guay de Prémontval (1716–1764). Prémontval’s hypothesis, given the grand name of “psychocracy” (i.e., the dominion or the rule of the soul), held that there was a real influence between soul and body, but that this was an immaterial kind of influence as opposed to the physical kind that had been entertained heretofore. Prémontval’s hypothesis is the focus of this paper. I shall begin by sketching out the details of Prémontval’s hypothesis (Section 1), then proceed to consider its claims to constitute a true fourth hypothesis distinct from the other three (Section 2), before closing by briefly considering two objections and the responses either that Prémontval himself made or that may be made on his behalf (Section 3).

**D**ESCARTES’S decision to separate the human being into two separate substances—soul (mind) and body—struck many in the early modern period as introducing a new problem, namely how these two substances could form a unity, or, as many understood it, how these two substances could be in commerce with each other. In the years that followed, a number of distinct solutions to this problem were put forward. According to Leibniz’s assessment at the end of the 17<sup>th</sup> century, there were three hypotheses regarding the union of soul and body: (1) physical influx (or influence), (2) occasionalism, and (3) pre-established harmony.<sup>1</sup> According to the physical influx hypothesis (or Leibniz’s

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1. See Leibniz (1997: 62, 106). Leibniz sometimes referred to the first as “the way of influence,” and the second as “the way of assistance.”

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presentation of it anyway),<sup>2</sup> the soul is able to act on the body and the body is able to act on the soul, with this typically conceived in terms of a transfer of parts or qualities.<sup>3</sup> According to occasionalism, soul and body do not act upon each other, and instead a third being, God, acts to produce certain modifications in the soul on the occasion of certain movements of the body, and certain modifications in the body on the occasion of certain thoughts or feelings in the soul. And according to pre-established harmony, soul and body do not act upon each other, but they nevertheless correspond perfectly merely by adhering to their own laws which God arranged from the outset.

In the second edition of his *Dictionnaire historique et critique* (1702), Pierre Bayle accepted Leibniz's claim that there were only these three hypotheses,<sup>4</sup> and the claim was repeated well into the 18<sup>th</sup> century by a number of other thinkers such as Johann Billeb,<sup>5</sup> Christian Wolff,<sup>6</sup> Friedrich Baumeister,<sup>7</sup> and Samuel Formey.<sup>8</sup> At the same time, others such as Georg Bilfinger,<sup>9</sup> Samuel Hollmann,<sup>10</sup> Andreas Böhm,<sup>11</sup> Alexander Baumgarten,<sup>12</sup> and Immanuel Kant,<sup>13</sup> made the much stronger claim that only these three hypotheses were possible. Böhm (1767: 420, §624),

2. O' Neill (1993) has argued that the theory of physical influx Leibniz discusses appears to be his own invention, and that what Leibniz presented as the hypothesis of physical influx was in fact a complex of various neo-Platonic, Scholastic, and corpuscular models. While I am sympathetic to O' Neill's claim (1993: 52) that the theory of physical influx was "an artificial construction" rather than "a particular position that had avowed supporters," it is notable that many early modern opponents of physical influx did think of the theory in the way outlined by Leibniz.

3. There were of course other 17<sup>th</sup> century theories regarding the relationship between soul and body, such as Hobbes's materialist view and Spinoza's identity (or double aspect) theory, but these were often ignored because they rejected the initial assumption at the heart of the problem of soul-body union, namely that soul and body are distinct types of substances.

4. Bayle (1702: III, 2610, article Rorarius, note L). English translation: Bayle (1991: 245).

5. Billeb (1725: 8, §4).

6. Wolff (1737b: 270, §553).

7. Baumeister (1754: 470–473, §720).

8. Formey (1766: 364).

9. Bilfinger (1723: 13, §17): in the matter of the agreement of soul and body, "either one is the determining cause of the other (see *influx*), or both are determined by the same cause, and that either by an action that is always repeated and immediate (see *Malebranchism*) or by means of some order established in the beginning (see *pre-established harmony*)." Unless otherwise indicated, all translations in this paper are my own.

10. Hollmann (1724: 6, §2): "For if two very diverse substances should conspire with each other in their operations, it is necessary either that one directs and moves the other, or that a common mediator intervenes between them, or each perpetually acts of itself but in agreement with the other."

11. Böhm (1767: 418, §623): "There are three systems that have been invented by philosophers hitherto." And (1767: 421, §624): "*besides these three systems there is no fourth.*"

12. Baumgarten (1750: 133, §458): "Aside from the universal systems of pre-established harmony, physical influence, and occasional causes, no fourth simple universal system is possible."

13. Kant (1998: 436, A390): "The three usual systems that have been thought up about this [sc., the community between soul and body], really the only possible ones, are those of physical influence, of preestablished harmony, and of supernatural assistance."

for example, explains that there can be only three hypotheses because if we suppose two conspiring substances, we can see that the reason for their agreement has to be found (1) in each substance itself (in which case the pre-established harmony is true), or (2) in the other substance (in which case the hypothesis of physical influence is true), or (3) in some third substance (in which case occasionalism is true), with these exhausting the available possibilities.

By the middle of the 18<sup>th</sup> century, the claim that only these three hypotheses were possible had become part of the philosophical orthodoxy, but in 1763 it came under challenge from the French thinker André-Pierre Le Guay de Prémontval (1716–1764) who put forward a purported fourth hypothesis in a series of memoirs read at the Berlin Academy of Sciences, of which he was a member.<sup>14</sup> Prémontval's own hypothesis, to which he gave the grand name of "psychocracy" (i.e., the dominion of the soul), suggested that there was a real reciprocal action between soul and body, but that this was an immaterial or non-physical kind of action as opposed to the physical kind that had been entertained heretofore. Prémontval's hypothesis is the focus of this paper. I shall begin by sketching out the details of Prémontval's hypothesis (Section 1), then proceed to consider its claims to constitute a true fourth hypothesis distinct from the other three (Section 2), before closing by briefly considering two objections and the responses either that Prémontval himself made or that may be made on his behalf (Section 3).

## 1. Prémontval's Psychocracy

In the meeting of the Berlin Academy of 14 April 1763, its permanent secretary, Samuel Formey, delivered a short memoir on the union of the soul and body,<sup>15</sup> prompted by his reading of an article published four years earlier in the *Nova*

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14. Prémontval was not the first to claim to have invented a fourth hypothesis. For example, in a short tract published in 1738, Johann Ernst Schubert offered a "new way of explaining the commerce between the soul and the body" which he called "the system of agreement." He attributed to the soul a faculty of observing and perceiving the changes that are excited in body's sensory organs, and of subsequently representing these changes in itself through its own representative power. However, according to Schubert, there is no action of soul upon the body, as the body merely follows the natural laws of motion when bringing about its changes, with God having paired up bodies and souls in such a way that a soul willing its body to do X was united with a body that he knew would do X at that time. On this basis, the suggestion by two modern scholars that "Actually, his [Schubert's] theory was a form of pre-established harmony" does not seem too wide of the mark, though it is worth noting that Schubert supposed that his hypothesis offered a new way of understanding the relationship between soul and body because each perception in the soul is not transmitted from the body to the soul, is not produced by the action of God, and is not the consequence of any preceding perception either. See Schubert (1738, especially 9–16). For the "two modern scholars," see Klemme and Kuehn (2016: 699).

15. Subsequently published as Formey (1766).

*Acta Eruditorum* by Johann Jacob Hentsch (1759), which sought to defend a new interpretation of the hypothesis of physical influx (we shall learn more of Hentsch's hypothesis later). In his memoir, Formey surveyed first occasionalism, then pre-established harmony, and finally the hypothesis of physical influx, concluding that each hypothesis had its difficulties and that therefore the problem of the union of soul and body was one that had not yet been answered satisfactorily. Prémontval, who was present at the reading of Formey's memoir, felt stirred enough by it to present his own solution to the problem. What provoked Prémontval was not Formey's analysis or conclusion, but his suggestion, or rather assumption, that there were only three hypotheses on the problem of the union of soul and body (see Formey 1766: 365). Believing that he had developed a fourth hypothesis, and in fact had already presented much of it, albeit obliquely, to the Academy back in 1755 in his memoir "La théologie de l'être,"<sup>16</sup> Prémontval set to work developing his hypothesis. He ended up writing so much material that it had to be delivered in six separate memoirs that were read at the Berlin Academy between June and November 1763,<sup>17</sup> and subsequently published in successive volumes of the Academy's proceedings as three lengthy essays.<sup>18</sup>

The six memoirs on the union of soul and body were entitled "On Psychocracy; or On the dominion and governance of the soul over the multitude of beings—likewise simple but of an inferior nature—of which the body is composed. Fourth hypothesis on the union of the body and the soul." In a novel opening move, Prémontval states that there are really two main hypotheses on the union of soul and body: the first recognizes a real action between soul and body, while the second recognizes only an apparent action between them. He then claims that each of the two hypotheses can be further subdivided into two systems, the hypothesis of apparent action into the systems of occasionalism and pre-established harmony, and the hypothesis of real action into the systems of physical influx and his own psychocracy.<sup>19</sup> The situation as he sees it can be depicted thus (I have indicated who he takes to be the chief representative of each system):

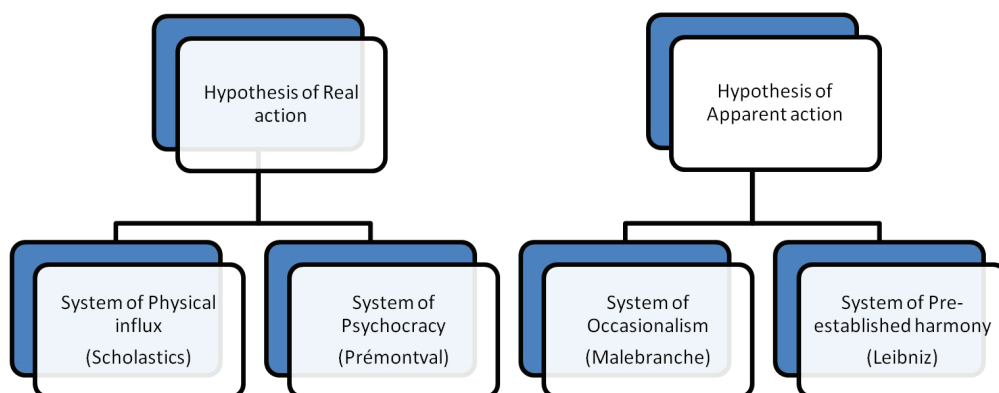
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16. Prémontval (1757). English translation: Prémontval (2018: 169–196).

17. The dates were 16 June, 21 July, 25 August, 29 September, 10 November, and 17 November. See the registers for these dates held by the Archiv der Berlin-Brandenburgischen Akademie der Wissenschaften under the shelfmark I IV 31/12, Bl. 18, 21, 23, 25, 28 and 29.

18. (1) Prémontval (1766). English translation: Prémontval (2018: 239–271). (2) Prémontval (1768a). English translation: Prémontval (2018: 273–295). (3) Prémontval (1768b). English translation: Prémontval (2018: 297–333).

19. Prémontval (1766: 378–379/2018: 244). When citing Prémontval's works, I give the original language reference first followed by the English translation.



With this classification in place, Prémontval outlines his own system before proceeding to examine the alternatives. His exposition begins with an outline of his ontology, much of which is drawn—verbatim—from an earlier memoir, “La théologie de l’être,” which had been read at the Academy in 1755 and published in its proceedings in two parts (one in 1757, the other in 1759).<sup>20</sup> It starts thus:

That which exists is only a single being, or there are several beings.

If there is something that is only a single being and not several beings, I call it *simple being*.

If there is something that is several beings and not a single being, I call it *composite being*.

Every composite being, or every collection of several beings, is not a single being, but several beings . . . .

*Several* presupposes the *unity* of that of which there are several.

*Several beings* presuppose the *unity of beings*.<sup>21</sup>

Several beings presuppose something that is only one being and not several beings.

Every composite presupposes the simple.

If there are beings, there are simple beings, and strictly speaking there are only simple beings.

That is, strictly speaking, every composite being is not a being, but a collection of several beings.

20. Prémontval (1757). The second part of the piece was published as Prémontval (1759); English translation: Prémontval (2018: 197–218).

21. In Prémontval (1757) this line reads: “*Several beings* presuppose the *unity of being*.”

Lastly, I lay it down as an axiom *that a being is not several beings, but a single being*. (Prémontval 1766: 380/2018: 250; 1757: 476–477/2018: 170–171)

Much of this reads like the opening sections of Leibniz's "Monadology" (see Leibniz 2014: 14, "Monadology" §§1–3), though Prémontval claims that his inspiration was not Leibniz but rather a brief passage on unity in a mathematics textbook written by Nicolas de Malezieu.<sup>22</sup> Nevertheless, Prémontval makes a number of other claims that again map well on to those found in the "Monadology," for example that every simple is different from every other (Prémontval 1766: 389/2018: 251; 1757: 477/2018: 171–172; cf. Leibniz 2014: 15, "Monadology" §9), that every simple has a plurality (possibly even an infinity) of properties (Prémontval 1766: 394/2018: 254; 1757: 478–479/2018: 172; cf. Leibniz 2014: 15–16, "Monadology" §8, §13), giving each simple being different degrees of force (Prémontval 1766: 404/2018: 261), and that change in composites presupposes change in some or all of the simples that compose it (Prémontval 1766: 404–405/2018: 261–262; 1757: 481/2018: 174; cf. Leibniz 2014: 15, "Monadology" §8). Prémontval stops short of adopting a full-blown Leibnizian monadology by refusing to accept that simples have only a force or power to act upon themselves.<sup>23</sup> Moreover, while Leibniz recognized three grades of monad or simple substance, namely bare monads (which have only confused perceptions), souls (which also have distinct perceptions and memory), and minds (which are souls that also possess reason and a moral identity), Prémontval appears to recognize only two, claiming that all simples are "capable of feeling" and some also capable of thought (1755b: 210/2018: 69). Despite these differences, it is clear that Pré-

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22. Malezieu (1705: 135): "when I consider attentively the existence of beings, I very clearly understand that existence belongs to unities, and not to numbers. I will explain. Twenty men exist only because each man exists. Number is only an external denomination, or to put it in a better way, a repetition of unities, to which alone existence belongs. There cannot ever be numbers if there are no unities. There cannot ever be twenty men unless there is one man. This being rightly conceived, I ask you: is this cubic foot of matter a single substance, or is it several? You cannot say that it is a single substance, for then you could not divide it in two. If you say that it is several substances, because there are several of them in it, this number, whatever it is, is composed of unities. If there are several existing substances, it must be the case that there is one of them, and this one cannot be two of them. Therefore matter is composed of indivisible substances. Here is our argument reduced to strange extremes. Geometry shows us the divisibility of matter to infinity, and we find at the same time that it is composed of indivisibles."

23. Prémontval (1768a: 356/2018: 283) reasons as follows: on Leibniz's view, "God has given a force to every being, not to act upon another being but to act upon itself," and this because he supposed it was "easier . . . to conceive the action of a being upon itself than to conceive the action of one being upon another being." But according to Prémontval, "Both actions are just as inconceivable. If we deny one, we must deny the other; if we affirm one, we must affirm the other." Consequently, if a being can act upon itself (as both Leibniz and Prémontval accept), there is no reason to suppose—pace Leibniz—that it cannot act upon others also.



Prémontval's simples, like Leibnizian monads, are neither material nor extended, as he reserves the terms "matter" and "extension" for the collection of all imperfect simples, that is, all but God.<sup>24</sup> Nevertheless, Prémontval supposes that bodies are composites of these unextended simples.<sup>25</sup>

With his quasi-Leibnizian ontology in place, Prémontval insists that in the great question of the commerce between soul and body, the issue is not the commerce between soul and body considered as two substances, but rather "*between one simple being and a multitude of simple beings subordinate to it,*" which in turn boils down to "*the commerce between one simple being and another simple being, either of the same nature or of an inferior nature*" (Prémontval 1766: 382/2018: 246). Having reframed the problem in this way, Prémontval proceeds to sketch out his system of psychocracy, which holds not only "that the soul and the body have a *reciprocal action* upon each other" but that "this action is *real*, and very real, but not *physical*" (1766: 380/2018: 245). Or more fully,

The soul *really acts* on the body, and the body *really acts* on the soul. What does this mean? It means that *changes* occur in the body which have their cause and their ground not in the *preceding states* of the body or in the *intervention* of a third being different from the soul and the body, such as God, but in a *modification of the soul*; and likewise, *changes* occur in the soul which have their cause and their ground not in the *preceding states* of the soul or in the *intervention* of a third being different from the soul and the body, such as God, but in a *modification of the body*. (Prémontval 1766: 380/2018: 245)

What Prémontval appears to have in mind here is a direct action between soul and body. Although he never explicitly describes it that way, it is difficult to see what else would be consistent with his assertion that "action, ultimately,

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24. "Therefore supreme wickedness does not reside in an intelligent individual, or in an un-intelligent individual (that much is clear), but in the collection of all individuals, all imperfect beings, both intelligent and sentient and brute. This is what is called *extension* or *matter*" (Prémontval 1755a: 383r/2018: 215). Also: "Matter is not an unknown something *which serves as the basis for everything, or that of which everything is composed, without tendency, without force*. On the contrary, it is *that which is composed of everything, that which contains everything, that which has all forces, all tendencies*" (Prémontval 1759: 410/2018: 200).

25. Prémontval (1766: 385/2018: 248). Unfortunately Prémontval does not explain how bodies arise from simples, though given his ontology is closely related to that of Leibniz and Wolff it is possible he would have adopted an answer offered by both, namely that bodies are to be understood as phenomena. In any case, given Prémontval's understanding of extension and matter as the collection of all imperfect simples, he could not have considered the question of how bodies arise from simples as one of how these simples are compounded to make extended or material things, which is how it is apt to be understood today. For Leibniz and Wolff, see Leibniz (1989: 181), and Wolff (1737a: 172–173, §§224–226).



only ever occurs *from individual to individual, only from simple being to simple being*" (Prémontval 1766: 385/2018: 248). But as the title and subtitle of Prémontval's psychocracy memoirs makes clear, not all simples are equal—the soul has "dominion and governance" over the multitude of simples that compose the body. What this dominion and governance amounts to is not made clear, thanks to some frightful editing by Formey, who prepared the memoirs for publication. In the first memoir on psychocracy, Prémontval read out to the Academy the first six sections of his earlier memoir "La théologie de l'être," interspersed with very lengthy exposition. However, the published version of the first memoir on psychocracy contains only the first four sections of the "La théologie de l'être" along with the accompanying exposition; the text ends just as Prémontval is about to read out section five ("On thinking being") of "La théologie de l'être." Formey noted that the first psychocracy memoir was too long to be published in its entirety (Prémontval 1766: 374 editor's note/2018: 268). However, the omitted material from the first memoir is not to be found elsewhere; it was not printed in the remaining memoirs, and Prémontval's original manuscripts are no longer extant.<sup>26</sup> This is unfortunate, not least because section six of "La théologie de l'être," entitled "On the body and soul," touched upon the soul's relationship to the body. In "La théologie de l'être" this is treated very cursorily, because the aim of the text is to develop a proof for the existence of God rather than a theory of soul-body relations, and the analysis goes no deeper than this:

I see in it [sc., my body] different composites, very distinct, more or less united into a whole, through which I am affected and which I affect in turn. It is therefore a multitude of beings, subordinate to me, upon which I exercise a kind of authority, but in a way that is not always equally peaceful. It is far from being the case that I reign as absolute sovereign, nor can I maintain order as I want, preventing all seditions and revolts. (Prémontval 1757: 484/2018: 176)

We may surmise that in the first psychocracy memoir, when discussing this passage (and indeed the entire section of the text from which it comes) Prémontval would have developed this thought and given some indication of how the dominance of the soul and the subordination of the simples of the body affected their action upon each other. But since this part of the memoir is now lost, we lack an important piece of information about how exactly the soul is dominant (doubly regrettable given that the name of Prémontval's system—psychocracy—

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26. But that he did read out and expound upon the first six sections of "La théologie de l'être" is confirmed in the final document of the psychocracy memoirs, in which Prémontval states "I have already inserted in this work the first six sections of my 'Theology of Being,' accompanied by reflections and clarifications" (1768b: 374/2018: 299).

suggests this is an important feature). Nevertheless, in what remains of the first psychocracy memoir, we do learn that every simple acts upon every other—which means that the soul must act on the entire body rather than just the brain or a part thereof, and vice versa—and are also told what this action is not:

I hold that they [sc., the simple beings of the soul and body] all have a *real action* upon each other, and at the same time it is clear that the most real action of a simple being has nothing *mechanical*, nothing *physical*, and that it is nothing *composite* and *material*. (Prémontval 1766: 384/2018: 247)

We may read this as a denial that the action between soul and body involves the sort of operations that would or could fit under any of the various models of mechanical causality that were prevalent at the time. As there is no prospect of a transfer of parts or accidents or properties between simple beings (for, as simple beings, there is nothing that could break away from them to transfer to another),<sup>27</sup> their interaction cannot be “composite and material,” and given that simples are immaterial their interaction cannot involve contact, contiguity, or collision, and so cannot be “mechanical” either. Moreover, when Prémontval asserts that action between simples is non-physical this is all he means, that is, that the nature of the action is such that it falls outside the domain of the natural sciences and so is not the sort of thing that can be investigated by natural scientists.<sup>28</sup> There is no suggestion that he takes this action to be in some way unnatural or supernatural, for example as being beyond the natural powers of the simple beings involved or requiring the intervention of a supernatural agent. Unfortunately some of his examples of non-physical action look apt to promote such a misunderstanding. For example, he avers that “A real and true action that is *immaterial*, or which has nothing *mechanical*, nothing *physical*, is not a new thing among philosophers who acknowledge *simple and indivisible* spiritual beings acting on each other” (Prémontval 1766: 380–381/2018: 245). Although Prémontval does not elaborate further, he might have in mind here the claim, made by Pseudo-Dionysius (Dionysius the Areopagite 1949: 52) and Aquinas (1981: 521, I.106.1) amongst others, that angels impart knowledge to each other, although this was obviously not couched in Prémontval’s eighteenth-century language of action between simple beings. Another of Prémontval’s examples involves the action of God on a cre-

27. Such an observation prompted Leibniz’s famous claim that monads are windowless:

Monads have no windows through which anything could enter them or depart from them. Accidents cannot become detached, or wander about outside of substances, as the sensible species of the Scholastics once did. Thus neither substance nor accident can enter a monad from outside. (Leibniz 2014: 15, Monadology §7).

28. We may surmise that it was not Prémontval’s intention to subvert physics (“a fine and useful science,” he insists), for his position does not in any way rule out there being higher order physical laws that are grounded in the metaphysical. See Prémontval (1761: II, 326/2018: 155).

ated monad;<sup>29</sup> he claims that God's action, "according to the Leibnizians, is very real, and not physical. Well! I say as much, not only of the action of the soul on the body, but of the action of the body on the soul" (Prémontval 1768a: 343/2018: 274). Here, Prémontval is not insinuating that God's action is unnatural per se, or unnatural for God, only that it falls outside the purview of physics, as does the action between soul and body (or indeed between angels). The clear implication is that the proper domain of such action is metaphysics, not physics. Accordingly, since the action occurs between simple beings rather than the compound structures formed therefrom, it would be just as legitimate to call it metaphysical action, though this is not a term Prémontval employs, preferring instead immaterial or non-physical action.

The non-physical or immaterial nature of such action would obviously rule out the soul directly impressing the physical quality of motion on the body. Instead, given that all simples are endowed with force, the process looks to be that the force of the soul directly brings about a change in the force of the elements of the body, which is then translated into motion. The reverse process would involve the force of the body's elements directly bring about a change in the force of the soul, which is then translated into a sensation or feeling. This is certainly a natural reading of Prémontval's claim that, on his hypothesis, "it is a simple being, that is, a being which is not several beings, which acts on other beings like it, and receives their action as they receive its action" (1768a: 366/2018: 290).

The claim that psychocracy involves one being acting on "other beings like it" could be construed as Prémontval exploiting the fact that on his system, both the simple soul and the simples of the body have one thing in common, namely their simplicity. This is important inasmuch as the rival system of physical influx was often thought to be undermined by what R. C. Richardson has termed the "problem of heterogeneity" (1982: 20), that is, the fact that soul and body are both very different kinds of thing. The problem has its roots in a remark by Pierre Gassendi in the objections prepared in 1641 to Descartes's

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29. Prémontval (1768a: 368/2018: 291). Compare with Leibniz: "There is also no way of explaining how a monad could be internally altered or changed by any other created thing" (2014: 15, *Monadology* §7). Leibniz here explicitly rejects one created monad affecting another but seems to leave open the possibility that God could alter or change them. There are other texts in which Leibniz appears to claim that God does modify monads, e.g., when he writes to Des Bosses in 1713: "The modifications of one monad are the ideal causes of the modifications of another monad . . . insofar as reasons appear in one monad which, from the beginning of things, prompt God to produce modifications in another monad" (Leibniz 2007: 299). However, the action of God referred to here is not on a monad as such, but rather on the *idea* of a monad. Others have argued, plausibly I believe, for a deflationary reading of passages such as this, in which Leibniz is to be understood as claiming that when God creates a particular set of monads (whose essences are fixed and unalterable) that harmonize with each other it is *as if* he had modified them so as make them harmonious. See, e.g., Puryear (2010: especially 789–794).

*Meditations*. Faced with Descartes's assertion that soul and body form a union, Gassendi objected,

There can be no intermingling between things unless the parts of each of them can be intermingled. And if you are something separate, how are you compounded with matter so as to make up a unity? Moreover, since all compounding, conjunction or union takes place between the component parts, must there not be some relationship between these parts? Yet what relationship can possibly be understood to exist between corporeal and incorporeal parts? (Gassendi, "Fifth set of objections," in Descartes 1984–1991: II, 238)

In the 18<sup>th</sup> century, the problem of heterogeneity was forcefully pressed by Leibniz (1985: 155, §59), and then by Bilfinger (1723: 60–61, §59), who insisted that there was no "common proportion" between soul and body, and hence there could be no "society" or connection between them (as the physical influxionists supposed) since such society presupposes a common proportion. This led some influxionists to reconceive the soul in order to give it the common proportion with the body that they felt it needed. For example, Andreas Rüdiger (1727: §21) supposed that as all action involved contact, the soul must be extended and so in a position to make contact with the body. Christian August Crusius (1747: 146, §80), meanwhile, supposed that the soul must be in motion in order to impart motion to the body. On the other hand, influxionists who approached the problem of union of soul and body with a broadly Leibnizian or Wolffian ontology of simples were largely untroubled by the problem of heterogeneity, and certainly did not feel the need to effectively "physicalize" the soul in the ways envisaged by Rüdiger and Crusius. Johann Peter Reusch (1735: 537, §794), for example, argued that the physical action between soul and body was no more or less problematic than that between different bodies, given that in both cases the action in question was merely that between simple substances. Although it is not obvious how the property all simples have in common—namely their simplicity—makes the action between them more intelligible (given that there is no suggestion that action is in any way facilitated through simplicity), Prémontval likewise showed no signs of being troubled by the problem of heterogeneity, perhaps for the same reason identified by Reusch.

With his psychocracy sketched out, Prémontval proceeds to consider the rival systems of soul-body commerce. He quickly rejects the system of physical influx as unsuitable. Following Leibniz's lead, Prémontval associated the system, as many early moderns did, with the Scholastics or Peripatetics (see, e.g., Prémontval 1768a: 343/2018: 274). Accordingly, the stock objection to physical

influx (derived from Leibniz) was that it involved a transfer of parts or qualities, which was inconceivable between simple substances (see, e.g., Leibniz 2014: 15, “Monadology” §7). However, this is not the objection Prémontval makes. Instead, he points out that, under Scholasticism, action could not occur between simple beings, but only between a simple soul and an infinitely-composite body. For according to Scholasticism, he claims, the body

is a *mass*, composed of other *masses* again composed of other *masses*, composed of an infinity of *masses*, again composed of an infinity of *masses*, and always of *masses*, to infinity. Consider the action of the soul on one of these masses to the thousandth or hundred-millionth subdivision: it is the same thing as to the first subdivision, or as on the whole universe. It is always upon an *infinity of masses* that the soul must act at once, and it is always an *infinity of masses* which must act at once upon the soul. There is no purchase anywhere. Nowhere *beings*, everywhere an *infinity of beings*. (Prémontval 1766: 383/2018: 246–247)

Needless to say, as a depiction of Scholasticism this is something of a caricature, as a variety of positions can be found among Scholastic thinkers. For example, some denied the infinite divisibility of bodies outright, some claimed that bodies were infinitely divisible in thought but not in actuality, while yet others allowed that prime matter was infinitely divisible but sensible matter was not. Nevertheless, there were some medieval thinkers, such as Richard of Middleton and Marsilius of Inghen, who did hold something like the position Prémontval ascribes synecdochically to the Scholastics here (for details, see Duhem 1985: 35–45). In such a case, where the body is infinitely divisible, Prémontval argues that the soul would find no purchase, being unable to find any simple beings upon which it could act, and so the process of physical influx could not get started. Physical influx is thus rejected on the slightly oblique grounds that, as it is a Scholastic hypothesis, and as Scholasticism does not recognize the body as a collection of simple beings, it could not explain how one simple being (the soul) can have commerce with other simple beings (constituting the body), which for Prémontval was the real issue when it came to explaining the union of soul and body.

But quite why Prémontval restricted himself to characterizing physical influx as a Scholastic hypothesis is unclear, as by 1763 a variety of physical influx theories had been developed, as we have already seen.<sup>30</sup> Moreover, Prémontval was surely aware of at least some of these theories. To give one example, in a 1759 paper Johann Jacob Hentsch had sketched out a version of physical influx theory which held that “*the human mind is endowed with a force or tendency to move the*

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30. For further details of some of these theories, see Watkins (1995) and Watkins (1998).



*subtlest fluids in the nerves of the body through action at a distance, without any force passing from the mind to the body.*"<sup>31</sup> Prémontval was clearly aware of Hentsch's version of physical influx theory because he was present during Formey's discussion of it in the Berlin Academy, as noted earlier.

Nevertheless, having shown to his own satisfaction that physical influx was an unsuitable system for explaining the commerce of simple beings, Prémontval turns his attention to the other two rival systems, occasionalism and pre-established harmony, subjecting them to a sustained and sometimes brutal critique. He attempts to show that when considered properly, the two systems ultimately amount to the same thing, with the only difference being the language in which they were couched (with Leibniz's being by far the more obscure, according to Prémontval) (Prémontval 1768a: 365/2018: 289). Prémontval (1768a: 357/2018: 284) also charges that both occasionalism and pre-established harmony destroy human freedom because God does everything in both systems (given the notion of continued creation that both endorse and Prémontval rejects). Prémontval's objections to the two systems are worthy of a longer treatment than is possible here.

While Prémontval sometimes indicates that his aim in the psychocracy memoirs is the modest one of showing that his system is possible (e.g., Prémontval 1766: 379/2018: 244), there is no doubt that he takes his system to be superior to the other three. As for why it took so long for this apparently superior system to emerge, Prémontval claims that his psychocracy might have been developed much earlier had it not been for the unfortunate way Leibniz had chosen to illustrate the other three systems in a well-known 1696 paper on his pre-established harmony. The offending passage is this one:

Imagine two clocks or watches which perfectly agree. Now this could happen in three ways. The first consists in a mutual influence. The second is to have them managed by a worker who sets them right at each moment. The third is to make them with such skill and accuracy that we could be certain of their agreement from then on. Now put the soul and the body in the place of these two clocks. The first way is the way of *influence* of ordinary philosophy; the second is the continuous assistance of the creator in the system of *occasional causes*; the third is the *pre-established harmony*.<sup>32</sup>

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31. Hentsch (1759: 558). A curious feature of Hentsch's hypothesis is that interaction goes only one way, namely from soul to body, for while the body is modified directly by the soul's action at a distance, the soul is modified only by itself, in light of changes it observes in the body rather than by the body itself.

32. Prémontval (1768a: 367/2018: 290–291). Prémontval here quotes from Leibniz (1740: II, 397–398). However, Prémontval's quote is more of a summary than a quotation proper. The passage actually reads:



According to Prémontval, the problem with the two clocks example is that it automatically steers one to thinking of action as physical rather than immaterial, the latter being highly unlikely to come to mind.<sup>33</sup> Prémontval claims that he was not misled only because he had developed his own solution to the problem of soul-body unity prior to undertaking a study of Leibniz, which enabled him not only to forge a new system but also to see why others had missed it.

## 2. A “Fourth Solution”?

Nevertheless, in spite of his claims to have discovered a distinct fourth solution to the problem of the union of soul and body, Prémontval fully expected “the Leibnizians” to conclude that his psychocracy “is only the peripatetic hypothesis, *physical influence*, explained differently” (1768a: 343/2018: 274). Certainly there is no prospect of anyone supposing that the system of psychocracy could ultimately boil down to either occasionalism or pre-established harmony. The question, then, is whether Prémontval’s system is distinct from the hypothesis of physical influx or merely a variation thereof.

There is, as far as I know, no literature that explicitly addresses this question, though a recent claim by Eric Watkins, although not made with Prémontval’s system in mind, nevertheless implies that it would have qualified as a version of physical influx. In a discussion of the development of physical influx theory, Watkins writes, “Physical Influx is not a theory that applies only to material substances. Accordingly, the term ‘physical’ in physical influx should be taken not literally (as corporeal), but rather as natural (as opposed to hyperphysical or supernatural)” (1995: 296, Note 4). If Watkins is correct it means Prémontval’s system of psychocracy would automatically qualify as a version of physical influx theory in spite of his claims to the contrary. However, Watkins offers no evidence to support his claim or its implication that any theory of interaction between soul and body would automatically qualify as physical influx irrespec-

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Imagine two clocks or watches which perfectly agree. Now this could happen in three ways. The first consists in a mutual influence. The second is to have them managed by a skilful worker who sets them right and then keeps them in agreement at each moment. The third is to make these two clocks with such skill and accuracy that we could be certain of their agreement from then on. Now put the *soul* and the *body* in the place of these two clocks; their agreement or sympathy will also happen by one of these three ways. The way of *influence* is that of ordinary philosophy, but as we cannot conceive material particles which can pass from one of these substances into the other, we are obliged to abandon this view. The way of continuous *assistance* of the creator is that of the system of occasional causes. But I hold that this is to invoke a *Deus ex machina* in a natural and ordinary thing, where according to reason God should only intervene in the way that he concurs with all other natural things. Thus there remains only my hypothesis, that is, the way of *harmony*.

33. And conversely, he claims, had Leibniz chosen as his example two monads, that would have automatically steered readers to think of action as immaterial rather than physical, the latter again highly unlikely to come to mind. See Prémontval (1768a: 367/2018: 291).

tive of how this action was conceived. In any case, it strikes me as unlikely that we will be able to reach a definitive answer as to whether Prémontval's system constitutes a distinct fourth hypothesis simply by asking whether the "physical" in "physical influx" meant "natural" or something else, especially since 18<sup>th</sup> century thinkers typically didn't state precisely what they meant by it. Accordingly, a more fruitful way of assessing the distinctiveness (or otherwise) of Prémontval's system is to compare it with various models of physical influx.

When we make such a comparison, we find that the evidence for distinctiveness is mixed, as Prémontval's system is very different from some models of physical influx while ostensibly quite similar to others. To begin with, recall the features of some of the models of physical influx we have already encountered, namely Rüdiger's suggestion that the soul is extended and so can make contact with the body and Crusius's suggestion that the soul must be in motion in order to impart motion to the body. To these we can add Martin Knutzen's (2009: 71) suggestion that the soul (or mind) is in space and has the property of resistance, by which it is able to act on the body as well be acted upon by it. While these influxionists surely did conceive of the action between soul and body as natural, they also conceived it in much the same way as the physicists of the day conceived action between bodies.<sup>34</sup> In each case, the model of physical influx works by physicalizing the soul, that is, by supposing the soul has some physical or corporeal property (extension, motion, resistance) by means of which it is able to act upon the body in the same way that bodies act upon each other. Prémontval's system is very different, in that it neither physicalizes the soul nor supposes that the action between soul and body occurs via some physical or corporeal property. Compared to Rüdiger, Crusius, and Knutzen's theories of physical influx, Prémontval's system does look quite distinct.

However, not all physical influx theories had the features we see in those of Rüdiger, Crusius, and Knutzen. Other models refrained from physicalizing the soul and explicitly departed from classical models of mechanical causality in important ways. For example, in 1733 Johann Gottsched claimed that when he spoke of physical influence, "The word 'influence' is taken in a metaphorical or indirect sense; but it is easy to understand that only the transitive effects from one being into the other are understood thereby" (1762: 582, §1067). Gottsched thus gestures towards a conception of physical influence in terms of a direct

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34. This is true also of Hentsch, who supposed that the soul acted on the body via action at a distance, a model of corporeal causality that was seen as respectable in some quarters due to its association with Newton's theory of universal gravitation. Isaac Watts, for example, argued that the success of Newton's action-at-a-distance model of causation among bodies meant that it could plausibly be extended to apply to the action of soul upon the body. See Watts (1733: 152–154).

action rather than a true influence (literally *flowing-in*) of anything.<sup>35</sup> While Prémontval tended to reserve the term “influence” for the hypothesis of physical influx, he did claim that the reciprocal action he recognized between body and soul could be characterized as “an *influence*, if you will, but . . . not a *physical influence*” (Prémontval 1766: 380/2018: 245), indicating that he did not want to use the term any more literally than did Gottsched. Some later influxionists followed Gottsched’s lead and sought to characterize physical influx in ways that presented the theory as involving a form of causality quite different from the models of mechanical causation prevalent at the time. In 1735, for example, Johann Peter Reusch argued that the action of one substance on another was based on the first determining changes in the other, by serving as the occasion for the other to change its own force with respect to tendency or impetus, though he was adamant that this involved no transfer of force. Hence he claims “No force is transferred from one substance into another through influx, but some new limitations arise through its own force of substance, which is incited by a[nother] substance in a contingent way.”<sup>36</sup> Here again, physical influx does not literally involve an influx; as Reusch conceives it, one substance has the power or capacity to incite a change in another, in what looks to be a direct, unmediated way.

Now although none of the aforementioned influxionists commented on Prémontval’s system of psychocracy, we might suppose that while some (Rüdiger, Crusius, Knutzen) might have construed Prémontval’s psychocracy as something quite distinct from physical influx theory, given its great differences from their models thereof, others (Gottsched, Reusch) might have construed it *as* a model of physical influx due to its similarities with their own models of this theory. But given the vast range of different models that fell under the rubric of physical influx theory, it must remain entirely conjectural as to whether these or other proponents of the theory would have identified Prémontval’s system as something distinct from it or not. Ultimately, the only way to answer the question “was Prémontval right that he found a fourth hypothesis?” is relative to various notions of physical influx, and there is no clear way of privileging one notion over another. Accordingly, the safest conclusion to draw is that Prémont-

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35. Taking “influence” in a metaphorical sense was nothing new. Even Francisco Suarez—sometimes thought to be the originator of influx theory—had made a similar claim, asserting, “that word ‘inflow’ should not be taken strictly, in the way it is usually attributed to the efficient cause in particular, but more generally, as equivalent to ‘giving’ or ‘communicating’ being to another” (Suarez 1630: 243, XII.2.4). As O’Neill has pointed out, “in the 17<sup>th</sup> century philosophical lexicons it was standard practice to explicitly mark as metaphorical the use of the term ‘inflow’ to characterize a cause” (1993: 39).

36. Reusch (1735: 534, §792). Although not couched in the same language, Reusch’s suggestion bears more than a passing resemblance to Aquinas’s claim that, when acting, the agent does not pass anything to the patient, but merely induces change out of the patient’s own potentiality. See Aquinas (1956: 235, 69.28).

val's psychocracy represents an option distinct from physical influx according to some notions of physical influx but not according to others.

### 3. Conclusion

By way of a conclusion, it is worthwhile considering how successful Prémontval's system is as a solution to the problem for which it was designed, namely that of how soul and body could form a unity. While I do not propose to undertake a full-blown assessment, it is helpful to consider the two known objections to Prémontval's system, both of which were made after his death.

The first objection is found in an anonymous review of the 1764 edition of *Histoire de l'Académie Royale des Sciences et des Belles-Lettres de Berlin*, the volume which contains the first of the three psychocracy essays. The reviewer writes that Prémontval "maintains that the action of these two beings upon each other [sc., soul and body], although very real, is not physical. What is it then? Mr D. P. should have explained it, and rendered his metaphysics a little less unintelligible."<sup>37</sup> Here, the reviewer's complaint is that Prémontval has not sufficiently explained his notion of non-physical action, which is understandable because it is surely true that Prémontval provides little detail about it. That being said, since he appears to understand this action as something direct and immediate it is difficult to see what level of detail he could provide beyond giving the sort of examples he does (namely spiritual beings like angels acting on each other, and God acting on a created monad). In any case, Prémontval often makes it very clear that he is unprepared to speculate further about how immaterial action works on the grounds that he simply doesn't have the details to give. In such a case, he suggests, silence is the best policy.<sup>38</sup> It should be noted that a similar response was sometimes used by proponents of physical influx theories to charges that the mechanism of causation between body and soul was vague or obscure. For example, in 1733, in a defence of his own model of physical influx, Johann Gottsched (1762: 552, §1081) conceded that we no more know how the soul acts on body than we know how one body acts on another but that in light of our ignorance of the latter it is no objection that his theory could not adequately explain the former. Prémontval's response is clearly cut from the same cloth.

The second objection to Prémontval's system (and the only other critique of it I have been able to find) was written in 1851 by Christian Bartholmèss, in his

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37. *Journal Encyclopédique, dédié à Son Altesse Sérénissime, Mgr. le Duc de Bouillon, &c &c. &c 1. Aout 1766* (1766: 13).

38. Prémontval (1768a: 366/2018: 290): "I am careful not to throw myself into details where all philosophers have failed, and where I have no doubt I would fail like the others. I am silent about what I do not know."

history of the Berlin Academy. There, Bartholmèss offers a broadly sympathetic account of Prémontval's system, but claims that Prémontval's failure to explain how the inferior simples of the body can have an effect on the superior simple of the soul meant that his system could not be reckoned an improvement over the others.<sup>39</sup> Underpinning Bartholmèss's concern is the old Scholastic question of how the lower could act upon the higher, which for many medieval thinkers was the main concern when seeking to explain the relationship between soul and body (see Rozemond 1999: especially 437–444). The problem of hierarchy, as we might call it, troubled some 18<sup>th</sup> century thinkers too, and led some proponents of physical influx to suppose that action could go only one way, from soul to body.<sup>40</sup> However, most proponents of physical influx were simply untroubled by this problem, and accordingly it might seem unreasonable to expect Prémontval to have been much concerned with it either. Certainly, given the central claim of his system, he would have rejected any suggestion that the lower couldn't in principle act upon the higher, though this in itself does not address the objection, which is concerned with *how* the lower could act upon the higher. As noted in Section 1, it is likely that Prémontval was alert to this issue, but if he did address it in his psychocracy memoirs then the relevant part has not survived, due to Formey's poor editing. But even though we do not have Prémontval's own answer, we can speculate as to the shape it might have taken. Thus we might suppose him saying that since each body contains an infinite number of simples, it is the sheer quantity of these simples that explains how the inferior simples of the body can act on the superior soul, for although the action of each one is minimal and inefficacious in its own right, the accumulation of all these actions is sufficient to have an effect on the soul. This is, of course, entirely speculative, but at least gives us an idea of how Prémontval's system could explain the action of the inferior simples of the body on the superior simple of the soul.

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39. Bartholmèss (1851: 222): "But how do these beings of an inferior nature have an influence upon the soul, their master? Prémontval forgets to inform us of this. His hypothesis therefore has no advantages over the rival hypotheses."

40. E.g., Hentsch; see Footnote 31.



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