When the Mind Became Un-Natural: De la Forge and Psychology in the Cartesian Aftermath

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1. Introduction

Descartes’ notorious conclusion that mind and body exist independently of one another seems to imply that psychology, which studies the mind, and physics, which studies the body, must be similarly independent. In the *Principia philosophiae*, for example, Descartes describes his efforts in physics to ‘accept, or require’ only the principles ‘of geometry and pure mathematics; these principles explain all natural phenomena, and enable us to provide quite certain demonstrations.’ Psychology, by contrast, only exploits the techniques of practiced introspection to discover innate ideas, as taught in the *Meditations de Prima Philosophia*. In Meditation Two, in particular, we each learn ‘I am … a thing that thinks; that is, I am a mind, or intelligence, or intellect, or reason – words whose meaning I have been ignorant of’ precisely because practiced introspection had

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1 ‘Physica’ is a much older word than ‘psychologia’, which appears for the first time in Germany in the sixteenth century, in J.T. Freigius’ *Catalogus Locorum Communium* of 1575, or possibly earlier in the lectures of Phillip Melancthon. See F.H. Lapointe, ‘Who Originated the Term “Psychology”?’, *Journal of the History of the Behavioral Sciences*, 8 (1972), 328–335. Provocative reflections on the history of psychology can also be found in G. Canguilhem, ‘Qu’est-ce que la psychologie?’, *Revue de métaphysique et de morale*, 63 (1958), 12-25. To my knowledge, Descartes never uses ‘psychologia’ or its cognates.

yet to be exploited by psychologists. For Descartes, it looks as though psychology and physics are as independent as mind is from body.

The full implications of Descartes’ dualism between mind and body can easily be seen if we accept two less controversial claims: (1) the natural world is identical with the physical world, as defined by the subject matter of physics or natural science, and (2) psychology -- the study of the mind -- qualifies as a science. Adding (1) and (2) to Descartes’ dualism, we can infer that (3) psychology is not a natural science but an unnatural science. It also follows that (4) the mind is not part of the natural world. In other words, the mind is un-natural.

There can be little doubt that (3) and (4) are rejected by psychologists and the majority of philosophers today, even if (1)-(4) are thought to accurately convey Descartes’ position. Nevertheless, in this paper I will argue that Descartes does not unambiguously embrace (4). Rather, he diffuses the chain of inferences from (1) to (4) by hesitating about psychology’s independence from physics. Interestingly, Descartes does this in a way that parallels the Peripatetic hesitation on display in the commentary tradition on Aristotle’s *De anima*. More interestingly still, Descartes’ hesitation does not appear to trouble the majority of first generation Cartesians who, contrary to the current interpretive trend, allow physicists or natural scientists to study the mind, at least in part. The exception, and the Cartesian who explicitly takes psychology out of the hands of the physicist and gives it to the metaphysician is Louis de la Forge (1632–1666). This is the major claim defended in this paper: that it was De la Forge, and not Descartes, who first saw (4): that the mind is un-natural.

To substantiate these claims, I begin in the next section by recalling that the mind was part of the natural world for Aristotle and a number of Renaissance *De anima* commentators. In section three, I turn to Descartes and show why we must resist efforts to portray him as rejecting the natural scientific study of the mind. Specifically, I identify the presence of two types of arguments in Descartes, one of which supports what I will

3 AT VII, 27; CSM 2, 18. Besides the idea of the mind or self, the other prominent innate idea delivered by Descartes’ practiced introspection is the idea of God in Meditation Three and geometrical extension in Meditation Five. Significantly, one of the themes in the *Meditationes* is that the senses and sensory ideas are the obstacles to discovering innate ideas and the *Meditationes* is tasked with equipping us to distance ourselves from the senses in the pursuit of knowledge (see, e.g., AT VII, 162). By contrast, the methods of physics cannot do without the senses (see, e.g., AT VI, 64-5).

4 AT III, 233, and again on 234.
call a ‘natural psychology’ – ‘the inclusion argument’ – and one of which supports what I will call an ‘un-natural psychology’ – ‘the exclusion argument’. In section four, I trace these arguments into Louis de la Forge’s work and contrast his position with that of Antoine Le Grand, another prominent early Cartesian. I argue that unlike Le Grand, De la Forge shows no sensitivity to the inclusion arguments Descartes inherited from the De anima commentaries. As a result, De la Forge rejects natural psychology. I conclude, in section five, with a suggestion about why De la Forge may have chosen to put psychology in the hands of the metaphysician: it is likely the occasionalism De la Forge found in Descartes that prompted De la Forge to think of the mind as wholly un-natural.

2. Is the soul natural for Aristotle?

Aristotle was admirably clear in the opening chapter of De anima that the soul, the rational part of which is the mind, is not only open to scientific study but that the science of the soul -- ‘scientia de anima’ -- was part of physics and therefore natural science. Aristotle went on to specify in De anima I.1 what the methods of the physicist imply for ‘scientia de anima’, including in particular that all four causes – material, formal, efficient and final – have a role in psychological demonstrations. The possible exception, referred to many times throughout De anima before being ruled out in book III, is thinking or intellection. It is ‘the most probable exception’ because intellection does not obviously require a body or a material cause as does, ‘e.g. anger, courage, appetite, and sensation generally.’ For Aristotle, what hinges on the requirement that there exist a material cause of the soul and its operations is nothing less than the naturalness of our mental lives and the possibility of ‘scientia de anima’ conforming to the standards and principles of physics or natural science.

Were De anima Aristotle’s final word on the study of the soul, he would have bequeathed a fairly clear picture of the nature and methodology of ‘scientia de anima’, notwithstanding the cryptic passages in book III. Just like the early commentators, however, we have to contend with De partibus animalium. Mirroring the definition of the

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soul from *De anima*, Aristotle reasons in *De partibus animalium* I.1 that if ‘the form of a living thing is the soul, or part of the soul, or something that without the soul cannot exist … then it will come within the province of the natural scientist.’ Yet, the question remains:

Whether it is the whole soul or only some part of it, the consideration of which comes within the province of natural science. Now if it be of the whole soul that this should treat, then there is no place for any other philosophy beside it [i.e. beside physics or natural science]. For as it belongs in all cases to one and the same science to deal with correlated subjects – one and the same science, for instance, deals with sensation and with the objects of sense – and as therefore the intelligent souls and the objects of intellect, being correlated, must belong to one and the same science, it follows that natural science will have to include everything in its province. But perhaps it is not the whole soul, nor all its parts collectively, that constitutes the source of motion [in a living being] … Thus then it is plain that it is not the whole soul that we have to treat [in natural science]. For it is not the whole soul that constitutes the animal nature, but only some part or parts of it.7

Charged with studying living beings, the physicist is required to consider the soul because the soul is the form to the matter of the living body. It is in this sense that the soul is a ‘part’ of what ‘constitutes’ the animal. Yet, the soul can be the form of the living body not because it exists separate from the living body but precisely because the soul itself depends on the body as its material cause. What Aristotle is adding in *De partibus animalium* is that the soul has parts unrelated to its role as the form of a living body; indeed, it is the ‘intellectual part’ or the mind that does not play a role in ‘animal nature’. Contrary to the impression given in *De anima* then, the soul is not, in its entirety, meant to be studied by the natural scientist. For Aristotle, the ‘intellectual part’ of the soul is un-natural.

In the *Ethica Nicomachea* X.7, we also find Aristotle committing himself to two distinct views of our soul and its place in nature. There the question is what kind of life is best for us. What will make us the happiest? Aristotle answers that the intellect is the best part of us. It is divine, supernatural even, and so a life of intellection or ‘contemplation’

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is our route to happiness and immortality.\(^8\) Aristotle is telling us that we should not be overly fixated on our bodily existence, for being so fixated we will think that:

such a life would be too high for man; for it is not in so far as he is man that he will live so, but in so far as something divine is present in him; and by so much as this is superior to our composite nature [of matter and form] is its activity superior to that which is the exercise of the other kind of excellence. If intellect is divine, then, in comparison with man, the life according to it is divine in comparison with human life. But we much not follow those who advise us, being men, to think of human things, and being mortal, of mortal things; but must, so far as we can, make ourselves immortal, and strain every nerve to live in accordance with the best thing in us; for even if it be small in bulk, much more does it in power and worth surpass everything ... For man, therefore, the life according to intellect is best and pleasantest, since intellect more than anything else is man. This life therefore is also the happiest.\(^9\)

We aspire to immortalize ourselves, to transcend our natural composite state of soul (form) and matter. It is this uniquely human capacity and aspiration that places us at the pinnacle of Aristotle’s ‘scala naturae’. While our composite nature limits us to the natural world of living things, our intellect or mind, because of its independence from the body and material causes, connects us to the supernatural and divine.

For clarity’s sake, and to summarize the difficulty we face in reconciling Aristotle’s stated positions, it will help to identify a distinctive study of intellection or the intellectual part of the soul. I will henceforth call this distinctive study ‘un-natural psychology’ because it stands apart from natural science. Contrast this with ‘natural psychology’, which either treats the other parts of the soul besides the intellect — i.e., those requiring a material cause — or blind to un-natural psychology takes a unified view of the study of the soul making no exception for the intellect. In Aristotle’s case the texts noted above imply that there is either an un-natural psychology and a natural

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\(^8\) Immortality is also the topic in *De anima* III.5, 430a17-18, 22-3, where the ‘active intellect’ is introduced as the part of the soul that is immortal and therefore acts without a bodily organ.

psychology complementing one another or there is just natural-psychology. Nowhere does Aristotle contemplate that there is never just un-natural psychology.\(^{10}\)

The evidence for this conclusion is: first, from *De anima* I, that the majority of our emotional and cognitive states require a body or material cause. This suggests that the study of the soul belongs to natural psychology. Second, there is the likely exception of intellection or thinking, which for a time in *De Anima* Aristotle allows us to believe does not have a material cause. This possibility suggests the existence of an un-natural psychology complementing Aristotle’s natural psychology. Third, there is the definition of the soul as the form of living beings in *De anima* II and the claim that human beings are composite beings like other natural bodies in the *Ethica Nicomachea*. This, again, suggests the study of the soul falls within natural psychology. Fourth, there is the claim from *De partibus animalium* that the intellect is not a principle of motion in the living body, apparently defying the definition of the soul from *De anima* II. And relatedly, fifth, there is the claim that the intellect is divine and potentially immortal from the *Ethica Nicomachea*. These last two claims suggest that the study of the soul is distinct from natural science and therefore imply that Aristotle accepts the existence of an un-natural psychology in addition to a natural psychology.\(^{11}\)

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\(^{10}\) Applying this terminology to Descartes, contemporary readers tend to present him as Aristotle’s opposite and as only willing to accept an un-natural psychology. Showing that this view of Descartes is incorrect is the topic of the next section.

\(^{11}\) These five claims were all recognized by the early commentators, who took sides on the presence or absence of a material cause for the intellect and intellection, effectively trying to arrive at a consistent Aristotelian position. See H.J. Blumenthal, *Aristotle and Neoplatonism in Late Antiquity: Interpretations of the De anima*, London 1996, 77ff. Most prominently, Alexander and later Avicenna and Averroes emphasized that the soul and even intellection were subjects for the natural sciences. For these Peripatetics, there is only a ‘scientia de anima’ and no psychology. Themistius and Simplicius, on the other hand, excluded the intellect from natural scientific study. They endorsed psychology as a distinctive science. What kind of science psychology was supposed to be if not a natural science was a further problem but, regardless, even for Themistius and Simplicius the ‘scientia de anima’ remained part of natural science; it was, again, only the intellect that was exceptional. For (pseudo-) Simplicius’ description of Aristotle’s position, and its importance in Renaissance commentaries on *De anima*, see P.J.J.M. Bakker, ‘Natural Philosophy, Metaphysics, or Something in Between? Agostino Nifo, Pietro Pomponazzi, and Marcantonio Genua on the Nature and Place of the Science of the Soul,’ in: P.J.J.M. Bakker and J.M.M.H. Thijsen (eds.), *Mind, Cognition and Representation. The Tradition of Commentaries on Aristotle’s De anima*, Aldershot 2007, 151-177. For the relevant passage, see Simplicius, *Commentaria in tres libros De anima Aristotelis*, transl. Evangelista
When the *De anima* commentary tradition was revitalized in the sixteenth century, the ontological status of the soul and its operations led to elaborate disputes about the nature and methods of 'scientia de anima', many of which hinged on the evidence just outlined. For the Christian Aristotelians, our immaterial and immortal lives favored treating the study of the soul as a kind of theological or metaphysical study (un-natural psychology). Our embodied mortal lives, however, favored treating the study of the soul as exhaustively belonging to physics or natural science (natural psychology). In these disputes it mattered what counted as science, not just natural science, and it mattered what counted as the human soul and its distinctive operations. What was the subject of *De anima* -- soul or composite -- and what kind of a science did it purport to be? Was it part of metaphysics, natural science, or theology? Was it some combination of the three? Did the soul afford the prospect of a unified science? How did the human soul’s immortality affect answers to these questions? What of its immateriality? What should be said about the soul’s dependence on matter? Was the whole soul a principle of motion?

Whose prerogative it was to study the soul and whether the soul was wholly natural were live questions at the beginning of the seventeenth century. They were still being asked when Descartes was formally exposed to scholastic commentaries at the *collège de plein exercice* at La Fleche in the 1610s. He would later recount a memory of having read ‘some of the Conimbricenses, Toletus and Rubius’ in his school days, and even in this Jesuit sampling there was disagreement about the study of the soul. Franciscus Toletus

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took the position that the soul, including intellection, fell within the purview of the natural scientist. For Toletus therefore, there was no un-natural psychology. For him the soul was natural. Toletus’ student Antonius Rubius and the Coimbra commentary on *De anima* were more open to un-natural psychology, however, explicitly accepting that the soul’s existence apart from the body as well as its operations in such a state were subjects for metaphysics or first philosophy and not natural science. For them, the study of the soul did not necessarily require natural science; the soul, at least in part, was un-natural.

3. Is the mind natural for Descartes?

Descartes’ dualism between mind and body answers many of the questions driving the debates in the *De anima* commentaries. Nevertheless, there is more ambiguity in Descartes’ position than is often recognized, and it is an ambiguity with striking similarities to the one we just encountered in Aristotle. Accommodation will have to be made for Descartes’ assimilation of the soul to the mind – i.e. his elimination of the soul’s function as the form of the living body – and his denial of the need for phantasms or species originating in bodies in each and every thought. The point remains, however, that the mind appears natural in some passages and un-natural in others. It is specifically

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not obvious whether Descartes thinks of the mind as part of the subject matter of
metaphysics, physics, or something in between.  

The ambiguity in Descartes’ position can be brought out by two very short
arguments, each of which attends to the subject matter of physics or natural science as
Descartes explicitly describes it. On the one hand, Descartes appears to exclude the
study of the mind from physics. When he began to work in the late 1620s on what has
come to us as *Le monde*, he tells us that by “nature” I do not mean some goddess or any
other sort of imaginary power. Rather, I am using the word to signify matter itself. 

Add to this Descartes’ reference to *Le monde* as ‘his physics’ and it looks as though the
subject matter of physics or natural science is body to the exclusion of everything else.

This short argument is relevant to us here because it supports (1) -- the claim that the
natural world is the physical world as defined by physics or natural science -- which
precludes the possibility of a natural psychology. I will call this argument, which cites

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16 I have co-opted this phrasing from Bakker, ‘Natural Philosophy.’ It is worth noting that in
speaking of the disciplines of physics or natural science and metaphysics as they relate to Descartes, we
want to avoid misleading implications about the historical antecedent of the disciplinary questions I am
exploring here. In the case of physics, Descartes’ repeated statements that it is nothing but mechanics or
geometry imply that for him physics is more a mixed-mathematical science than a speculative or
theoretical science, as it was characterized by, among others, Franciscus Toletus in his Commentaria una cum
questionibus in octo libros Aristotelis De physica auscultatione. For an account of Toletus’ views, see W.
seems to understand it, is also not simply a mirror of the discipline as conceived by his scholastic
predecessors. What Descartes considered metaphysics was, for the scholastic textbook writers, the
metaphysical aspects of physics, i.e. general metaphysics, commonly taught in a course of physics and not
metaphysics proper, i.e. particular metaphysics. Nowhere does Descartes offer anything that could stand as
a work of particular metaphysics addressing the issue of being qua being. It is true that *Meditations*
contains proofs for the existence of God and the real distinction between mind and body, but contrast the
metaphysics of the *Meditations* with the one in What about the proofs for the existence of God and the
proof for the real distinction of mind and body, i.e. immortality of the soul? [GM: I believe the changes
I’ve made respond to Sander’s question.]Spinoza’s explication and expansion of Descartes’ *Principia* or
with Clauberg’s *Ontosophia* and the metaphysical lacuna in Descartes will be apparent. For more on this
point, see R. Ariew, ‘Descartes, the First Cartesians, and Logic,’ in: D. Garber and S. Nadler (eds.), Oxford

17 AT XI, 36-7; CSM 1, 92.

18 AT I, 70 and 194; CSMK, 7 and 29, respectively.
matter as the subject of physics, the ‘exclusion argument’. But this does not refer to psychology?

There is another equally short argument to consider that suggests Descartes did imagine the physicist or natural scientist studies the mind. Returning again to *Le monde*, it was not long after he began the work that Descartes announced he had experienced a change of heart. Instead of ‘explaining just one phenomenon (presumably light GM) I have decided to explain all the phenomena of nature, that is to say, the whole of physics.’\(^{19}\) What would be published in 1664 as *Le monde de M. Descartes ou le traitté de la lumière* was only the first part of Descartes’ revised project. Not included, and published separately that same year, was *L’homme de Rene Descartes*.Yet, not even the contents of the *Traité de la lumière* and *L’homme* together convey the full scope of Descartes’ *Le monde*. For, in Discourse Five we learn that this early ‘physics’ included in its final section a discussion of the human ‘rational soul’ or mind, followed by a discussion of the union of mind and body.\(^{20}\) This is contrary to what we would expect given the exclusion argument. Thus, it would seem that the mind, according to Descartes’ own description, is an object of study for the physicist or natural scientist. Descartes, in other words, has a natural psychology, which means that for him the mind is natural.\(^{21}\) To give this short argument for the naturalness of the mental a name, I will call this second argument the ‘inclusion argument’.\(^{22}\)

\(^{19}\) AT I, 70; CSMK, 7. Three years later, Descartes expanded *Le monde* even more: ‘My discussion of man in *The World* will be a little fuller than I had intended, for I have undertaken to explain all the main functions of man’ (AT I, 262-263; CSMK, 40).

\(^{20}\) AT VI, 59-60; CSM I, 141.

\(^{21}\) The different significations of ‘nature’ were an important part of texts on logic and natural philosophy in the Renaissance and before, on which see I. Maclean, *Logic, Signs and Nature in the Renaissance: the Case of Learned Medicine*, Cambridge 2002 (Ideas in context, 62), and D. Des Chene, *Physiologia: Natural Philosophy in Late Aristotelian and Cartesian Thought*, Ithaca (NY) 1996. For more on this point as it relates to Descartes, see G. Manning, ‘Naturalism and Un-Naturalism among the Cartesian Physicians,’ *Inquiry*, 51 (2008), 441-463.

Between these two short arguments, it is the exclusion argument that is most often taken as Descartes’ considered position. It is, after all, the one representing his most original contribution to psychology and the disciplines. In the remainder of this section, however, I want to elaborate on these two arguments and the ontological and methodological assumptions underlying each. To balance out our picture of Descartes I will be emphasizing the persistence of the inclusion argument throughout his mature period (1629-1650). On the basis of its persistence, I will suggest that for Descartes it remained the case, as Simplicius wrote of Aristotle, that ‘the study of the soul is neither simply natural nor simply metaphysical, but belongs to both.’

Descartes’ forays into metaphysics -- queen of the un-natural sciences -- began just before he started to work out the details of his mature physics in 1629. In his correspondence Descartes explains that he sought and in fact found ‘the foundations of physics’ in knowledge of God and himself, by which he appears to mean knowledge of himself as a mind or thinking thing. The fact that God and the mind appear together as foundations is suggestive: physics cannot include the study of the mind unless God is a subject for the physicist too. But this is obviously not the case. God is not studied by the natural scientist. Descartes associates God and the soul in at least two places. First, the announcement in the subtitle of the *Meditationes de Prima Philosophia*, that the work would include a discussion of God and our immortal souls, indicates that together God and the soul are subjects for first philosophy or metaphysics, not natural science. Second, in the time between his letter of 1629 and the *Meditationes* appearing in print in 1641, Descartes published the *Discours de la méthode*. Here too, metaphysical truths about God and the mind set the foundations for all other knowledge, including knowledge in physics. All together then, the picture of metaphysics that takes shape in 1629 and runs through 1641 indicates that the mind is not studied by the physicist or natural scientist. This is a protracted instance of the exclusion argument.26

23 Cited in Bäcker, ‘Natural Philosophy,’ 153.  
24 AT I, 144.  
25 Recall as well the tree of philosophy described by Descartes in the French letter preface to the 1647 French edition of the *Principia*, which identifies metaphysics as the roots out of which grows the trunk of physics (AT IXB, 14).  
26 Emphasizing Descartes’ manifest interest in avoiding substantial forms and real qualities in his physics, as well as what she sees as the expectation that ‘science’ only applies to domains of knowledge where clear and distinct ideas are to be had, Lilli Alanen makes the following claim in support of the exclusion argument: ‘To meet Descartes’s requirements of clearness and distinctness, scientific
After the publication of the *Meditationes* Descartes began a correspondence with Princess Elisabeth of Bohemia, the content of which also lends support to the exclusion argument. Specifically, as part of his effort to answer Elisabeth’s queries about how to conceive of mind-body interaction, Descartes wanted to distinguish

… three kinds of primitive ideas or notions, each of which is known in its own proper manner and not by comparison with any of the others: the notions we have of the soul, of body and of the union between the soul and the body … Metaphysical thoughts, which exercise the pure intellect, help to familiarize us with the notion of the soul; and the study of mathematics, which exercises mainly the imagination in the consideration of shapes and motions, accustoms us to form very distinct notions of body. But it is the ordinary course of life … that teaches us how to conceive the union of the soul and the body.\(^{27}\)

These three notions are meant to be independent of one another, and non-reducible. To this extent they are reminiscent of first principles as Aristotle defines them in *Physics* I, but in Descartes’ case any effort to bring the notions together, even for comparison, will only confuse them.

As I understand the position Descartes took with Elisabeth, neither the mind by itself nor anything resulting from the mind-body union, such as the sensations produced by the body, are explicable according to the primitive notion of body. If the physicist is meant to use any of the primitive notions, it is the primitive notion of body -- that is clear -- and doing otherwise will only confuse the physicist. In fact, this seems to be explanations should be in strictly mathematical and mechanistic terms. Sense qualities and related notions cannot be translated into quantitative notions – they cannot be expressed, unambiguously, in mathematical terms … [As a result] there is no room … for a scientific … rational psychology accounting for the laws of our mental life as embodied, human persons … There is only a science of the human body on the one hand and a metaphysical knowledge of the rational mind or soul on the other. Important aspects of human nature … are … outside the scope of scientific explanations’ (L. Alanen, ‘Reconsidering Descartes’s Notion of the Mind-Body Union,’ *Synthese*, 106 [1996], 3-20, at 6). If Alanen were right in her conclusion, this would entail either that the mind has no place in physics or, if it does, that some aspects of physics are not scientific in Descartes’ sense. Later in this section I show that the mind is studied by Descartes while acting as a physicist. I do not pursue the question of whether or not this means physics is not a science, but I do not believe the scientific status of physics is threatened by the inclusion of the mind. If we were to follow Alanen’s suggestion to its logical conclusion, the presumed intelligibility of scientific explanation would be threatened by God’s role as a cause and sustainer of motion via the laws of nature. Neither of the latter is intelligible in wholly quantitative terms according to Descartes (AT V, 347).

\(^{27}\) AT III, 691-692; CSMK, 226-227.
precisely what Descartes thinks Elisabeth and Aristotelian physicists have done – they have mixed up our primitive notions by effectively putting little minds into every body. Keeping strictly to the correct primitive notions, the mind is not capable of being explained or accounted for by the physicist or natural scientist, and the same applies, for the same reason, to the union between mind and body. Thus, given the doctrine of the three primitive notions, there would seem to be no other conclusion to draw than this; if the natural world is the physical world as defined by the primitive notion of body, then the mind is un-natural.

However persuasive these texts are – and they are certainly persuasive -- the exclusion argument is not, and I think cannot be, Descartes’ considered view. It is certainly not the view born out by his practice. Leaving aside the fact that Descartes’ appeal to the three primitive notions is limited to the correspondence with Elisabeth and hardly seems to enter into his published work, it is because of what we actually find in the published work, in Le monde, Meditationes, Principia and Les passions de l’ame, that the exclusion argument should be resisted as the whole truth. Descartes’ natural scientific explanations actually accomplish more with respect to the union than independent primitive notions would allow. The textual support for the inclusion argument will be presented in a moment, but the point in the background that needs to be emphasized is that we should not be so quick to assume that the ontology Descartes introduces to support his physics sets the limits of his actual natural scientific practice, or to what counts as natural.28 In fact, while the mind is an immaterial substance and the ‘opposite’ of matter, and the union of mind and body, because of its inclusion of the mind, is similarly not material, the physicist nevertheless appeals to the union and the mind whenever discussing sensory perception.29

This may sound like a simple reassertion of the inclusion argument, but it is not. We are now considering the union and the consistent and identifiable, even lawful, interaction of mind and body. Whereas for Aristotle and his followers the rational soul’s independence from matter made the classification of the ‘scientia de anima’ difficult, in Descartes it is the mind’s union with matter that makes the classification difficult. I already mentioned that the full plan of Le monde came to include discussions of the mind

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28 On a number of occasions Descartes described his physics as just geometry or mechanics (e.g. AT VIII A, 78), but such descriptions are only part of the story. The other part of the story being advanced here has already been presented in a slightly different version by Hatfield, ‘Descartes’ Naturalism.’

29 AT VII, 13; CSM 2, 10.
and its union with the body. This early work was abandoned, so let us consider three of the later works: *Meditationes* from 1641, *Principia* from 1644, and *Les passions de l’âme* from 1649.

In the *Meditationes*, a particularly revealing passage occurs in Meditation Six. At this point in the text, Descartes is attempting to give a general account of internal and external sensory errors consistent with God’s goodness that also vindicates the general reliability of sensory experience. Among the cited examples of sensory error is the then recently documented phenomenon of the phantom limb. ‘When I feel a pain in my foot,’ writes Descartes, ‘physics tells me that this happens by means of nerves distributed throughout the foot, and that these nerves are like cords which go from the foot right up to the brain.’

The knowledge of the nerves and bodily conditions that produce or effect phantom limb sensations comes from ‘physics’. Descartes will go on to indicate that the ‘cords’ can be pulled at any point between the foot and the brain. Even if a leg is missing, the nerve-cord could be affected short of the brain but beyond the limb and still produce a sensation in the mind felt as though in the foot, where the other end of the nerve-cord formerly terminated.

This brief and schematic sentence from Meditation Six shows Descartes explaining the causal origin of a mental state; a feeling of pain is caused by a pulling of the nerve-cord. The full scope of physics takes into account not just the beginning of the story of phantom limb sensations, it follows the story to its conclusion in the mind. Or, to put it in a slightly different way, the fact that ‘I feel a pain in my foot’ is a fact that the physicist seeks to explain, even though it is a fact about the mind and not just the body. This is not to suggest that Descartes believed everything about the mind could be explained by a bodily process but, rather, that some facts about the mind, facts about sensory experience, could only be explained by a physicist. Specifically, the material and efficient causes of veridical sensory states are studied by the natural scientist, and it is this study of the causes of mind’s sensations that constitutes Descartes’ natural psychology. Yes, but it would be wise what exactly according to Descartes the physicist can explain: he can give hypotheses about the underlying mechanisms, but he cannot capture “what-if-feels-like-to-be-in-pain”. Already in *L’Homme* Descartes makes it clear that we humans are able to experience this kind of things because we have a soul united to the bodily machinery.

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30 AT VII, 87; CSM 2, 60 (slightly modified).
Two years later, in the *Principia*, Descartes similarly included the study of the mind within natural science, thereby endorsing natural psychology. The French letter preface to the *Principia* stipulates that the second part of the ‘true philosophy’ is ‘physics’, where we ‘examine the general composition of the entire universe’ as well as ‘the nature of plants, of animals and, above all, of man.” But here he’s talking about medicine, not about physics. In all likelihood, this characterization of physics was written by Descartes in 1647, the year it appeared as the preface to the French edition of the *Principia*. Nevertheless, it accurately presents the plan of the Latin *Principia* as Descartes tried to execute it in 1644. Just as with *Le monde*, however, the section on the union between mind and body is not available. Instead, in the *Principia* Descartes apologizes for ‘not being clear about all the matters’ required to complete his project. What would have been Part VI -- the part dedicated to man -- is instead plundered in Part IV for the sake of adding ‘a few observations concerning the objects of the senses … namely colours, smells, sounds and such-like.’ In effect, Descartes discusses the ways in which physics can explain our sensory experiences in Part IV even though he had originally hoped to do so more thoroughly in Part VI. The subsequent discussion in Part IV includes an account of phantom limb sensations, familiar from Meditation Six, and yet again indicates that the full scope of Descartes’ physics or natural science takes into account not just the details of the nerves but follows the nerves to the brain and then to the mind.

Descartes’ image of physics does not change in the *Passions*. In the letter attached to the beginning of the work, Descartes indicates that the novelty in the last book he saw to press stems from his efforts to write about the passions not as ‘a moral philosopher,’ but ‘as a physicist (*en physicien*).’ If we look to the actual content of the *Passions* we find, just in Part One, discussions of the relation between mind and body, including the mind’s place in the body. This is precisely the kind of discussion that the exclusion argument should rule out for Descartes, namely, a physicist’s treatment of the union between mind and body and the relations that follow from it. Yet, neither in *Le monde, Meditationes, Principia* nor the *Passions* does Descartes reject natural psychology. Like the body, the mind is studied by the natural scientist. Judging on the basis of his explicit reflections on

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31 AT IXB, 14; CSM 1, 186.
32 AT VIII A, 315; CSM 1, 279.
33 AT VIII A, 320; CSM 1, 283-284.
34 AT XI, 326.
the content of physics and his actual practice from the 1630s up through his last publication in 1649, the only conclusion to draw is that the study of the mind remains, in part, a natural science.

If the inclusion argument is favored by Descartes’ statements about the content of physics and his practice as a natural scientist, the exclusion argument cannot simply be ignored: the soul, when not in union with a body, cannot be studied by the physicist. This is hardly a surprising or controversial claim, however, even if it raises questions of its own. In fact, in the *De anima* commentary tradition the question of whether the mind exists or operates outside of its role as the form of the living body was pivotal to granting metaphysics – un-natural psychology – a part in studying the soul. Descartes of course thought the mind does exist and operate without matter when not united to the body, as did Aristotle in some passages, but this does not threaten the naturalness of the mental for either Descartes or Aristotle. In other words, both endorsed natural-psychology.

Descartes’ account of living phenomena might be thought to support a more robust defense of the un-naturalness of the mental and the exclusion argument. If we recall that one of the implications of Descartes’ real distinction between mind and body is his monistic account of life, an account that makes no appeal to the soul as the form of the living body and so a cause of life, as it had been defined in *De anima* II, then the whole spirit of the Aristotelian ‘scientia de anima’ seems to be undermined. As we saw earlier, the Aristotelians preceding Descartes did not allow the claims in *De anima* to exhaust what could be said about the study of the soul. Yet, for the Aristotelians the extent to which the study of the soul is a part of physics, as opposed to metaphysics or theology, hinges on the soul being the principle or cause of life. The final passage of *L’homme*, where Descartes lists the functions a machine can perform without a soul, makes it clear that for him the soul is not his principle of life:

I should like you to consider, after this, all the functions I have ascribed to this machine – such as the digestion of food, the beating of the heart and arteries, the nourishment and growth of the limbs, respiration, waking and sleeping, the reception by the external sense organs of light, sounds, smells, tastes, heat and other such qualities … I should like you to consider that these functions follow from the mere arrangement of the machine’s organs every bit as naturally as the movements of a clock or other automaton follow from the arrangement of its counter-weights and wheels. In

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35 Recall here the early sentences of the passage from *De partibus animalium* cited in the previous section.
order to explain these functions, then, it is not necessary to conceive of this machine as having any vegetative or sensitive soul or other principle of movement and life, apart from its blood and its spirits, which are agitated by the heat of the fire burning continuously in its heart—a fire which has the same nature as all the fires that occur in inanimate bodies.36

Because *L’homme* contains Descartes’ physiology, it must be read, at least partially, as an effort to answer Aristotle’s *De anima* by denying the soul a part to play in physiology and therefore natural science. But denying the soul a part in physiology does not entail denying physiology a part in the study of the soul. The natural scientist can still give the material and efficient causes of sensations and passions. As I have tried to show in this section, Descartes clearly preserves this connection whenever he ties mental states to states of nervous system and whenever he purports to show that mind and body interact in consistent and reliable ways.37 A natural psychology is secure in Descartes, at least along this route from physiology to the mind.

4. *De la Forge and the un-naturalness of the mental*

At best Descartes’ texts provide conflicting evidence about the naturalness of the mental and the viability of natural psychology. In light of this conclusion, it is worth asking what those Cartesians working immediately after Descartes’ death, who sought to offer popular and systematic presentations of his views, made of the conflicting evidence. What do they do with psychology? By and large the answer for them is the same as the one I have reconstructed for Descartes. Cartesians, such as Jacques Rohault, Pierre-Sylvain Regis and Antoine Le Grand, followed Descartes in keeping aspects of our mental lives within nature and open to natural scientific study.38 I will cite some evidence

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36 AT XI, 000: CSM 1, 108. See also Part One of the Passions, especially AT XI, 329-333.

37 In Meditation Six Descartes claims that ‘the best system that could be devised is that it (the body GM) should produce the one sensation which, of all possible sensations, is most especially and most frequently conducive to the preservation of the healthy man (humanis sand). And experience shows that the sensations which nature has given us are all of this kind’ (AT VII, 87; CSM 2, 60). The last sentence is significant because experience of our body affecting our mind vindicates the claim that the two interact in the most ‘conducive’ way for our ‘preservation’. For this, the interaction must be consistent and reliable, even law-like.

38 Although not a Cartesian, John Locke also accepts the inclusion argument. He held that physics or natural philosophy should be characterized as ‘the Knowledge of Things … whereby I mean not only
for this claim in a moment, focusing specifically on Le Grand, but I want to note that each of these authors wrote rather long synthetic accounts, sometimes dialogues, attempting to synthesize Cartesianism into a textbook philosophy. As a result, a good deal of their editorial work involved them in deciding what aspect of Descartes’ thought they wanted to present and in what order. This should not be forgotten because utilizing familiar disciplinary distinctions, such as the one that placed the study of the soul within physics, was surely one way to spread the word of the master. Even if this is not an adequate explanation for the repeated appearance of the inclusion argument in Descartes, it may be an adequate explanation for its appearance in these Cartesians.

Whether their editorial work played a part in their having endorsed the inclusion argument, however, these early Cartesians embrace that argument with little, if any, qualification. Take the case of Le Grand, who had a major hand in defending Cartesianism in England in the latter half of the seventeenth century. *An Entire Body of Philosophy, According to the Principles of the Famous Renate des Cartes*, the 1694 English translation of Le Grand’s earlier *Institutio philosophiae secundum Principia D. Renati Descartes: Novo metodo adornata & explicata, cumque indice locupletissimo aucta*, saves all discussion of the human mind for part nine, titled ‘of the mind and soul of man’.

Of the ten parts into which Le Grand’s work is divided, the first three contain logic and ‘metaphysics or natural theology’, and part ten contains the ‘moral philosophy or ethics’. As you would expect, parts four through nine are ‘physiology or natural philosophy’, which means for Le Grand that psychology, in part nine, is a branch of what Descartes called physics and what I have called natural psychology. In other words, the mind remained natural for Le Grand.

Unlike the other Cartesians I have mentioned, Louis de la Forge did not write a long synthetic treatment of Descartes’ philosophy. Born in La Fleche in 1632, De la Forge pursued a medical degree and was a practicing physician in his adopted home of Saumur.

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40 Arguably his commentary to *L’homme*, when combined with the long introduction by Clerselier and the translation of Florentius Schuyly’s preface from the Latin edition two years earlier counts as a synthetic presentation of Descartes’ philosophy. Nevertheless, De la Forge’s contribution was limited and insufficient on its own to could as an effort at synthesis.
by the age of twenty-one. During this time he made the acquaintance of Jacques Gousset, who would later write about De la Forge’s brilliance and novelty in introducing a systematic defense of occasionalism in keeping with Descartes’ philosophy. While De la Forge’s occasionalism has garnered him the most attention, he has also been recognized for the diagrams and commentary he provided to the French edition of Descartes’ *L’homme*, published in 1664. The following year, De la Forge’s *Traité de l’esprit de l’homme* appeared. This was the first extensive commentary on any aspect of Descartes’ philosophy to appear in France, even though it was not reflect on the full scope of Cartesian philosophy. I would now like to add to this list of De la Forge’s accomplishments the rejection of the inclusion argument and the first full Cartesian embrace of the exclusion argument.

In the course of preparing his commentary to Descartes’ *L’homme*, De la Forge realized that Descartes’ physics was meant to include a discussion of the human mind. So much could have been gleaned from the incomplete sections of the *Principia* in addition to the *Discours* passages describing the plan for *Le monde*. De la Forge also realized that none of Descartes’ existing texts made up for the incomplete parts of *Le monde* and *Principia*. As De la Forge puts it in chapter one of his *Traité*, readers will ‘have great regret that death prevented Descartes from giving us what he still needed to demonstrate in order to fully inform us about human nature.’

De la Forge’s *Traité* is self-consciously an attempt to fill this lacuna in Descartes’ corpus, but De la Forge is quick to say, still in chapter one, that he would have never undertaken the task ‘if I had not believed that I could find sufficient material to write this whole work from the books which Descartes himself had published and from the two volumes of letters provided by one of his friends.’ The plan De la Forge outlines looks to be an attempt to satisfy the

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41 I have consulted the Amsterdam 1670 (?) edition of De la Forge’s *Traité de l’esprit de l’homme, de ses facultez & fonctions, & de son union avec le corps, suivant les principes de René Descartes*, Amsterdam [1670?], URL: <http://gallica.bnf.fr/ark:/12148/bpt6k57384c.r=La+Forge%2C+Louis+de.langEN#>. The original edition appeared in 1665 and was published in France by Theodore Girard (with a title page date of 1666). The present reference is De la Forge, *Traité de l’esprit de l’homme*, 1: ‘… n’ayent beaucoup de regret que la Mort l’ait empêché de nous donner ce qui luy restoit à demonsttrer, pour nous faire entièrement connoistre la Nature de l’Homme.’

42 De la Forge, *Traité de l’esprit de l’homme*, 2: ‘… si je n’avois cru pouvoir tirer des Livres qu’il a luymesme fait imprimer, & des deux volumes de Lettres qu’un de ses Amis nous a donnez, des materiaux suffissans pour la construction de tout cet Ouvrage.’
unfulfilled promises of the inclusion argument by completing Descartes’ physics with a treatment of the mind. This is, however, not what the Traité turns out to be.

Before clarifying what discipline the Traité belongs to, it is worth noting what the Traité tells us about the state of Cartesianism in the decades after Descartes’ death. First, it is, as I already mentioned, a work of limited scope without any pretense to being a broadly synthetic account of Descartes’ philosophy. The human mind and human nature alone are its primary subjects. This tells us that not all first generation Cartesians were attempting to write synthetic treatments of Descartes’ philosophy. Second, De la Forge begins with a lengthy preface attempting to show Descartes’ religious orthodoxy. This had become a pressing need after the publication of Descartes’ correspondence and the threats perceived from Descartes having doubted the existence of a beneficent God in Meditation One. In his preface, De la Forge cites Augustine no less than 51 times. This practice is a continuation of a trend begun by Marin Mersenne when defending Descartes against Voetius during the troubles at Utrecht and taken up more systematically by Abraham Heidanus in 1645. Third, De la Forge offers important clarifications of Descartes that today still define Cartesianism. For example, De la Forge explicitly claims that ‘idée’ should refer only to incorporeal modes of the mind, that ‘consciousness’ is the mark of the mental, and that when we die and the union is extinguished we lose the power of sensing altogether. Even if De la Forge is not commonly remembered for these clarifications of Descartes’ position, they are a testament to his influence or, at least, his status as one of the earliest perceptive readers of Descartes.

Returning us to the topic of the mind and its study, De la Forge’s Traité is the first Cartesian work, perhaps even the very first in French focused entirely on the mind. It is therefore of special interest how De la Forge characterizes psychology. Is it natural or is it un-natural? Remarkably, he nowhere makes reference to physics as the discipline that studies the mind. The Traité contains ample material relevant to physics, and significant

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43 Heidanus’ role in the Dutch reception and defense of Descartes is briefly discussed in H. van Ruler, ‘Substituting Aristotle: Platonie Themes in Dutch Cartesianism,’ in: R.D. Hedley and S. Hutton (eds.), Platonism at the Origins of Modernity: Studies on Platonism and Early Modern Philosophy, Dordrecht 2008 (International archives of the history of ideas, 196), 159-177. Descartes’ Augustinism is obvious in a number of places, especially in the case of the ‘cogito’, as Arnauld pointed out in the Objections and Replies. Descartes claimed his similarity to Augustine was accidental and, at the least, it can be said that Descartes showed no interest in reading the most sophisticated Augustinianism of his time, the work of Cornelius Jansen and his Jansenist followers.
reference is made to Descartes’ physics, but the work itself does not contain a distinct section dedicated to physics or natural science, as had been the case with Le Grand’s *An Entire Body of Philosophy*. What kind of scientific work is the *Traité* then? The answer comes when De la Forge describes the *Traité* in a plea to readers. He writes:

I ask the same indulgence from those who want a complete purity in our language and I ask them to forgive me if, in a *metaphysical treatise* (*Traité Metaphysique*), I use some words which are specific to this science … which might offend the sensitivity of their ears.\(^4^4\)

The first strict study of the mind written by a Cartesian, the first Cartesian psychology, is a work of metaphysics. It is a work of un-natural psychology. Even though De la Forge describes himself as completing the unfinished portions of *Le monde*, which as we learned in the previous section was a work of physics, De la Forge saw himself as writing a treatise on metaphysics.

Now, perhaps De la Forge thought it obvious that Descartes’ treatment of psychology must be metaphysical, just as so many recent commentators now believe. As we have seen, however, this is by no means obvious. It is certainly not obvious to Descartes. Still, De la Forge appears unmoved by the inclusion argument. If this is right, then what might otherwise have seemed a dilemma about what to do with psychology disappears. Psychology belongs to the metaphysician. This is De la Forge’s view in 1665 and from all the evidence I have found De le Forge is the first Cartesian to unequivocally claim that the mind is not an object of natural scientific study. How influential his view proved to be -- who read him and adopted his brand of Cartesianism -- is a question I cannot pursue here. Nevertheless, the point remains that De la Forge is the first in a long line of subsequent readers who see in Descartes nothing but an un-natural psychology. But in the beginning you seem to make the claim that it is thanks to De La Forge that Cartesian psychology came to be considered a metaphysical rather than a physical discipline. Up till now, you do not seem to have brought up enough evidence for this claim; just a small remark by De La Forge, excusing himself for writing metaphysically. In order to substantiate your claim you would need to 1) give more evidence from De La

\(^{44}\) De la Forge, *Traité de l’esprit de l’homme*, Preface, 7: ‘Je demande la mesma grace à ceux qui veulent qu’on observe une pureté entiere dans nostre langue, & les prie de m’excuser, si dan un *Traité Metaphysique*, je me suis servy de certains mots consacrez à cette Science, comme de ceux de concept, d’identité, de quelques autres, qui pouront peut-estre blesser la delicatesss de leurs oreilles’ (emphasis added).
For 2) say a little bit more about the historical Rezeptionsgeschichte of De La Forge’s classification.

5. Conclusion

If De la Forge deserves credit for disambiguating Descartes’ un-natural psychology, it is worth asking what, if anything, De la Forge saw that Descartes and the other early Cartesians missed. Here I can only offer a speculation: De la Forge believed that bodies cannot be efficient causes, and it was his occasionalism that prevented him from accepting the inclusion argument. No uniform occasionalist, De la Forge insists the mind remains an active substance, an idea he took over from Descartes’ Notae in Programma quoddam. At the same time, like the later occasionalists, De la Forge did not believe that bodies can cause ideas in the mind:

While it can be said that the bodies that surround our own, and generally everything that can compel us to think of bodies … are in some manner the cause of the ideas that we then have … nonetheless, because these are material substances, whose action does not extend as far as the mind, in so far as it is simply a thing that thinks; but in so far as it (the mind GM) is united to a body … they can at most be only the … occasional cause of the (the ideas GM) that, by means of the union of the mind and the body, compels our faculty of thinking and determines it to produce those ideas of which it is the principle and efficient cause.


46 De la Forge, Traité de l’esprit de l’homme 133-4: ‘Or bien que l’on puisse dire que les Corps qui environnent le nostre, & généralement tout ce qui peut nous obliger à penser à des Corps, ou même à des Espirs, quand cela ne vient pas de nostre volonté, sont en quelque façon la cause des Idées que nous avons pour lors, parce que nous ne les aurions pas dans toutes les circonstances que nous les avons s’ils n’auraient agi sur nostre Corps ; Toutesfois parce que ce sont des substances materielles, dont l’action ne s’estend pas jusqu’à l’Ame, en tant qu’elle est simplement une chose qui pense : mais en tant qu’elle est unie à un Corps de la manière que nous décrirons cy aprés, ils n’en peuvent estre tout au plus que la cause éloignée & occasionelle, laquelle par le moyen de l’union de l’Esprit & du Corps oblige la faculté que nous avons de penser, & la determine à la production de ces idées dont elle est la cause principale & effective’. Here I am using Steven Nadler’s translation of De la Forge’s Traité in Nadler, ‘The Occasionalism,’ 65,
In this passage, De la Forge insists that in the production of ideas our souls are active.\footnote{It must be acknowledged that De la Forge appears to backpeddle 130 pages later in the \textit{Traité}, where he writes (\textit{Traité de l'esprit de l'homme}, 264): ‘Si le Corps n’avoit eu un tel movement, jamais l’Esprit n’auroit eu un telle pensée.’} In the more technical terminology of substances and their modes, each of our minds is the efficient cause of its own modes, whether those modes be ideas or volitions. Because of the mind’s self-contained activity, the physicist can no longer explain the production of ideas by appeal to material and efficient causes, not even in the case of sensory ideas like the experience of a pain in my foot. The occasionalist physicist can cite occasional causes, to be sure, and in this limited sense perhaps the physicist still has something to add to the study of the mind, but the physicist’s role is greatly diminished. To put this all a slightly different way, and to tie it back to the psychology, the main rationale behind the inclusion argument in Descartes was the link between physiology and psychology. This link is broken by De la Forge’s occasionalism. All that is left now is the exclusion argument, with a view of the mind as un-natural and psychology as an un-natural science.

\textit{except that I have changed ‘soul’ to ‘mind’ as a translation of ‘esprit’. The original sentiment in Descartes can be found at AT VIIIB, 360.}