

INTELLECTUAL MEMORY AND CONSCIOUSNESS IN DESCARTES'S PHILOSOPHY OF MIND

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Abstract. Although Descartes's ideas regarding consciousness and memory have been studied extensively, few attempts have been made to address their systemic relations. In order to redress this deficiency, I argue in favor of three interrelated theses. The first is that intellectual memory has a crucial role to play in Descartes's concept of consciousness, especially when it comes to explaining higher forms of consciousness. Second, the connection between memory and consciousness has been obscured by the fact that intellectual memory, taken as a subject in its own right, was relatively neglected in Descartes's philosophy: By and large, his views on the matter remained within the limits of late scholastic Scotism. Third, what makes the question of intellectual memory so fascinating in Descartes is not some ground-breaking insight into its nature; rather, it is his gradual recognition of the role that intellectual memory plays in the constitution of higher forms of consciousness.

With these arguments, and relying on Descartes's 1648 correspondence with Antoine Arnauld, where he progressed beyond the substance-based approach to the self, I try to show that he deserves to be credited with a more prominent status in the history of the self and personhood than has previously been the case.

Keywords: Descartes, intellectual memory, consciousness, late scholastics, Duns Scotus, self, Arnauld

1. Introduction

As a long series of studies has demonstrated in recent decades, Descartes proposed a somewhat fragmented – but generally coherent and multi-layered – concept of consciousness,¹ the two basic strata of which represent two different approaches to consciousness. One of the approaches regards consciousness as the defining feature of each mental state, while the other links consciousness to the thinking subject as a whole, allowing the individual to regard herself as a person with a

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coherent past. In addition to these spontaneous forms of consciousness, there exists a deliberate act of reflection which enables the subject to examine her own mental states, thereby becoming conscious of the content of these states. Taken together, Descartes's scattered remarks on the subject reveal a three-level hierarchy of increasingly complex forms of consciousness that correspond roughly to the cognitive development of the individual.²

The goal of the present paper is to show that, in Descartes's view, the last two levels of this hierarchy are intimately related to memory. Although consciousness and memory have been studied separately, few attempts have been made to address their systemic relations.³ In a bid to redress this deficiency, I will argue in favor of three interrelated theses. The first thesis is that intellectual memory has a crucial role to play in Descartes's concept of consciousness, especially when it comes to explaining the higher forms of the latter. Secondly, the connection between memory and consciousness has been obscured by the fact that intellectual memory, considered as a subject in its own right, was relatively neglected in Descartes's philosophy: As I hope to show in this paper, Descartes's views on the matter did not go beyond the mainstream scholastic – or more precisely Scotist – views of his times. Thirdly, what continues to fascinate about the question of intellectual memory in Descartes' work is not some ground-breaking new insight into its essence; rather, it is Descartes's gradual recognition of the constitutive role that intellectual memory plays in the nature of consciousness. This helped him to transcend, at least to a certain degree, the traditional metaphysical approach according to which the unity of mind is based on substantiality. With this argument I wish to show that, given his later thoughts on the subject, Descartes deserves a more prominent status in the history of the self and personal identity. I agree with John Barresi and Raymond Martin, who in their 2000 book on the early modern self go so far as to say that “Descartes initiated exploration of the psychological mechanisms of self-constitution”.⁴ Interestingly, Barresi and Martin do not refer to Descartes's view on memory in the arguments that ultimately lead them to this conclusion. They seem to believe that, prior to Locke, the notions of memory, consciousness and the self do not converge to give birth to the idea of self-constitution. Perhaps this is why the bold idea quoted above fails to make an appearance in their next book. Here, despite generally recognizing the contribution Descartes made to the scientific vision of the world, they characterize his place in the history of the self in negative terms:

Descartes's main contributions to theorizing about the self and personal identity were, first, to lend the tremendous weight of his authority to a Platonic view of the self, which would eventually be recognized as scientifically useless, and, second, to introduce the idea of the reflexive nature of consciousness, which seems to have inhibited the emergence of developmental accounts of the acquisition of self-concepts.⁵

I believe the opposite is true. By positing the three theses mentioned above, I aim to demonstrate that Descartes transcended the limits of the substance-based

account of the self thanks to the connection he established between memory and consciousness.⁶

Given that memory is so intricately connected with the Cartesian *ego*, the reader may wonder why the analysis of this subject is so marginal in Descartes's concept of mind. Even a cursory look at the enormous body of literature on his philosophy can warrant the conclusion that the issues about memory appear somewhat sporadically, both in Descartes's own works and in the scholarly literature devoted to these works. Although a careful reading of the relevant texts can reveal a number of theses held by Descartes, the general impression is still that he simply did not feel the need to elaborate an original theory about this matter. In the first section of this paper, I will try to account for the relative neglect of this subject in his work. Here, I propose that the fragmentary character of Descartes's theory of memory is explained by the fact that his thoughts on the topic remained, by and large, within the framework of the medical tradition and the commentaries on Aristotle's *De memoria et reminiscentia*. In arguing this point, I also suggest that as far as the connection between memory and consciousness is concerned, the correct reference point for Descartes's views is in the Peripatetic tradition, and above all in Scotism, rather than in early modern Platonism, which, admittedly, is not without historical importance for other aspects of Descartes's philosophy.⁷ After outlining the scholastic background, I will summarize Descartes's view on memory (sections 2 and 3) before moving on to the central part of my argument (sections 4 and 5) to demonstrate that it is not possible to make sense of what Descartes had to say about higher forms of consciousness in his later writing without addressing the question of memory.

2. Scholastic background

According to Aristotle, memory is the work of the imagination (*φαντασία*) accompanied by the 'sense of time'. In *De memoria et reminiscentia*, he writes: "Memory (...) is neither sensation nor conception, but a state of having one of these (*ἔξις*), or an affection (*πάθος*) resulting from one of these, when some time elapses."⁸ This definition can be broken down into two parts. According to the first part of the definition, memory is purely the state of having a "sensation" or "conception" in the form of a *pathos* or a *habitus*: This part of the definition stresses the retentive function of memory. The second part of the definition – i.e. the closing words of the sentence: "when some time elapses" – explains why Aristotle only attributed the faculty of memory to animals with perception of time. But the reference to the time elapsed (*ὅταν γένηται χρόνος*) is open to more than just one interpretation. On an initial reading, the definition as a whole stipulates that the experience retained in the memory must be connected with perception of time, which means that the object of recollection is something from the past. Based on an alternative reading, the essential point of this definition is not perception of time as such; rather, it is the causal relations that connect the current act of remembering to an earlier event in the subject's past. Whereas the former reading emphasizes what we could term the *temporal condition* of remembering, the latter stipulates that *causal conditions* must also be satisfied in order for a *pathos* to qualify as memory.

The scholastics widely agreed that the Aristotelian definition applied not only

to the faculty of remembering, which was in the sensitive part of the soul, but also to what they referred to as intellectual memory, a faculty that pertained to the intellective part of the soul. In affirming the existence of an intellectual memory, scholastics drew on Neoplatonic sources that they inherited from St. Augustine, whose statements from the 15th book of *De Trinitate* were used as stock arguments in favor of this doctrine. In terms of intellectual memory, the soul is described as “the place of forms” (τόπος εἰδῶν) in another standard reference taken from Aristotle’s *De anima* 2.5. In its standard interpretation, this expression demonstrates that *the intelligible species* remain in the intellect – that is, the immaterial part of the soul – even after the act of understanding has taken place. Based on this interpretation, the intellect can be considered a retentive power, a *facultas retinendi*, as it would be termed according to the lexicon of Goclenius.⁹

The notion of intellectual memory became more complicated in later scholasticism for theological reasons. The overwhelming majority of authors agreed that acquired knowledge would survive death, since intellectual memory belonged to the immortal part of the soul. However, the concern was that all species entrusted to the intellectual memory were regarded as universal according to the Thomist view. This being the case, the moral responsibility at the final judgement seemed to be jeopardized because the soul, standing before the tribunal of God, was accountable for *particular* deeds performed on Earth.¹⁰

Medieval authors discussed this issue at length. Although a wide range of solutions were proposed in the seventeenth century, only the two most important accounts need to be mentioned for our present purposes. According to one of the standard views, held by the Thomists, it is true that intellectual memory relates first and foremost to universals, but by its nature, the intellect is also capable of cognizing particulars. According to the Thomists, the reason for this is that the problem is not with particularity as such, but with the fact that the intellect cannot gain access to particular objects during the soul’s embodied life by any other means than the *phantasmata* produced in the body. Given the temporal criterion of the memory, this position implies that remembering cannot be attributed to the intellectual faculty in the strictest sense. As Aquinas explains in his *Summa contra gentiles* 2.74: “There is memory only of what is past. Therefore, since memory does not abstract from singular conditions, it does not belong to the intellective part of the soul.”¹¹ This problem does not pose much difficulty insofar as the phantasms are available to the embodied soul, but it becomes a major issue as soon as the bodily self is left behind in death and the soul continues its life as a “separate intellect” (*intellectus separatus*). Aquinas believed that the intelligible species remained in the intellect after the death, since once they have been generated, they no longer depend on the *phantasmata* for their conservation. As the Coimbra commentators noted at the end of the sixteenth century:¹² “[Species] are not so weak as to collapse as soon as the phantasms are absent.”¹³ Now, so long as the soul was joined to the body, universal representations could be determined to particular beings through the phantasm, allowing the soul-body composite, i.e. the human being considered as a whole, to remember particular events. The worry is that the *conversio ad phantasmata* can no longer take place in the absence of the body.¹⁴

One way out of this trouble was to assert that, after death, the role of the phantasma is taken over by some additional *species* bestowed on the soul directly by God.

[Thus] the separate soul knows and remembers [...] singular beings, in virtue of some species with which it has been endowed at the moment of leaving the body. This kind of species represents to the soul [...] singulars together with their conditions, if not all, with those at least, to which the soul is particularly related on account of its previous knowledge of them [...].¹⁵

This Thomist approach was not very popular in the early modern age. One of its drawbacks was that it failed to meet the *causality criterion*. Even if the soul is endowed with a new set of *species* from above, the outcome being that these *species infusae* direct the cognition towards particular events in the past, the intellectual soul still cannot be credited with memory in the proper sense of the word, because *post-mortem* knowledge of the past that has been gained in this manner has no *direct* connection with the original event or with the original act of cognition that is to be remembered. A number of commentators (especially those with a Thomist leaning) reacted to this objection with a rejection of the causal criterion. They suggest that remembering is based on the likeness of the content, which does not necessarily have to issue *directly* from the original experience.

Duns Scotus¹⁶ proposed an alternative approach, arguing that the soul is able to acquire some knowledge of the singular through 'intuitive cognition' (*notitia intuitiva*), even in its embodied state (*in statu informationis*).¹⁷ If the *species* received in the intellective part of the soul during bodily life on the Earth are not confined to universals, no difficulties emerge with regard to memory in the afterlife. This Scotist position had become the *opinio vulgata* by Descartes's time. It was endorsed by the Coimbra commentators in their discussion of the first book of Aristotle's *Physics*, and it was defended by esteemed authorities such as Francisco Suárez, who believed that "the intellect cognizes a singular being by producing a proper and distinct concept of it. [...] Our intellect comes to know the singular material beings directly, without any reflective act".¹⁸

Descartes's final position on the issue, his account, I will argue, is compatible with the Scotist approach, which in the words of another Jesuit, Franciscus Alonso, "*est communis inter recentiores*".¹⁹ In the next two sections, I will trace the outlines of the development of Descartes's concept of intellectual memory in order to argue that, when read against the scholastic *opinio vulgata*, it does not seem to be particularly new. The supposition, however, that Descartes's concept of memory has close affinities or is aligned with the scholastic mainstream, is not just a negative conclusion; it may serve as one of the main reasons why issues concerning memory and remembering remained in the background of his general theory of cognition.

3. Descartes's concept of memory

In accordance with scholastic views, Descartes envisaged two systems of

memory. The first of these systems is a corporeal faculty which is grounded partly in the mechanical modifications that shape and reshape the brain substance throughout the creature's life, and partly in the muscles and other parts of the living body.²⁰ The other type of memory is a spiritual system known as 'intellectual memory'. There are hints that Descartes accepted the doctrine of intellectual memory from the earliest stage of his career. This can be inferred from several passages of the *Regulae in directionem ingenii*; For instance, in the twelfth chapter, Descartes claims that "memory is no different from imagination", but then he hastens to add "at least the memory which is corporeal and similar to the one which animals possess".²¹ This addition, which comes almost as an afterthought, strongly suggests that Descartes endorsed the doctrine of intellectual memory from an early stage. Although there are good reasons to believe that this same idea is also implied in many other passages of the *Rules*, the nature of the intellectual memory is never clearly explained here. In fact, the *Rules* and other documents of the same epoch equally suggest that intellectual memory was treated with relative neglect in the early decades of Descartes's career. He goes into some detail on the subject in one of the first texts, a consolatory letter written to Constantijn Huygens in 1642, when his brother passed away. Here, Descartes offers some thoughts about the fate of the individual soul in the afterlife.

Those who die pass to a sweeter and more tranquil life than ours; I cannot imagine otherwise. We shall go to find them some day, and we shall still remember the past; for we have, in my view, an intellectual memory which is certainly independent of the body.²²

Although this passage is explicit about the existence of the intellectual memory, it is not very informative in other respects. In this consolatory context, it is not even clear what degree of theoretical commitments are to be read into this passage. Is Descartes speaking in the register of a commonly accepted cultural framework here,²³ or rather, is he expressing his theoretical commitments on the subject?²⁴ In any case, there is no reason to doubt that he took into consideration an intellectual faculty which, being independent of the body, allowed the separate soul to remember the 'past as past'. This echoes a claim which, as we have seen, was commonly held by virtually all theologians at the time, notwithstanding their disagreement as to the *modus operandi* of the separate intellect.²⁵

This same letter to Huygens is also valuable because it sheds some light on Descartes's use of the term 'intellectual'. The 'intellectual' appears to be a synonym of the 'mental' here, regardless of the material or immaterial origin of the items preserved in the intellectual memory. The term *intellectual memory* is used in a narrower sense in other texts, not extending to the whole retentive power of the immaterial mind, but instead referring only to the objects of the 'pure understanding'. In this case, intellectual memory is contrasted with its corporeal counterpart within the *res cogitans*. The results of these considerations are summarized in the table below:

<i>Res cogitans</i>	Intellectual memory (in the broader sense)	
	Corporeal memory – memory produced or occasioned in the immaterial soul whenever the traces in the brain are reactivated by the flow of the animal spirits ²⁶	Intellectual memory (in the narrower sense) – memory of those intellectual objects whose perception is independent of the body ²⁷
<i>Res extensa</i>	Corporeal memory – enduring physical traces or modifications (“folds”) in the brain (common with the animals) ²⁸	/

Another group of documents relating to the question of memory antedate the Huygens letter. Although these documents do not directly address *intellectual* memory, they do raise important issues about the essence of the mind. If the mind is a thinking substance, how can it be that none of us are aware of our thoughts when we in a dreamless sleep or a state of lethargy, or during embryonic life? As is well known, this was Gassendi’s main objection to the Cartesian definition of mind in the fifth set of *Objections*. Descartes’s first solution to the problem invoked the lack of appropriate memory traces in the brain, which he considered a necessary condition for remembering. If the mind is to be aware of its past cogitations, it is not enough for these cogitations to have presented themselves in the past; they must also leave of the sort of traces in the brain which, remaining there permanently, are poised to reproduce the same thoughts at a later point in time. Physical impressions in the cerebral substance, Descartes suggests, are conditions *sine qua non* for the recollection of the past.²⁹ Descartes’s reply to Gassendi drew on the fact that, in critical situations, the substance of the brain is unable to receive the impressions needed for remembering:

But why should it not always think, since it is a thinking substance? It is no surprise that we do not remember the thoughts that the soul had when in the womb or in a deep sleep, since there are many other thoughts that we equally do not remember, although we know we had them when grown up, healthy and wide-awake. So long as the mind is joined to the body, then in order for it to remember thoughts which it had in the past, it is necessary for some traces of them to be imprinted on the brain; it is by turning to these, or applying itself to them, that the mind remembers. So is it really surprising if the brain

of an infant, or a man in a deep sleep, is unsuited to receive these traces?³⁰

What Descartes is doing here is transferring Gassendi's original objection from the level of consciousness to that of the corporeal memory in the *res extensa*. In doing so, he seems to follow a genuinely Aristotelian path. The Aristotelian text of the *De memoria et reminiscencia* already provides some schematic but highly influential speculations about the physical conditions of remembering:

[T]hose who are in much movement because of an affection or because of age do not come to have memory, as though the movement produced by sensation and the seal were impinged on running water, while others do not receive the impression because of damage in that which is receiving the affection – similar to the damage of old walls in buildings – and because of the hardness in it.³¹

In Aristotle's view, the inadequate consistency of matter is to blame for the malfunctioning of the memory because the non-ideal conditions of matter prevent the reception of the impressions for the appropriate memory traces. In the same vein, Descartes points out that “the brain of an infant, or a man in a deep sleep, is unsuited to receive these traces” because of its inadequate physiological conditions.³² Although for Descartes the underlying model is mechanical, the phenomena alluded to are still the same, namely the good old material conditions of remembering, the appropriate organization and consistency of the brain, which are traditionally posited as the chief physical causes that influence trace-reception. Descartes's first answer consequently boils down to a simple message: As long as the soul exists, it does indeed think; however, it cannot recall its former thoughts unless they have imprinted valuable traces on the brain, the physical consistency of which (expressed in the traditional terms of ‘softness’ or ‘hardness’, ‘humidity’ or ‘dryness’) is appropriate to preserve them.

Descartes's first solution suffered a major shortcoming. It did not explain why people cannot recall their *purely intellectual* thoughts, the acts of pure understanding, which, being independent of the body, are not supposed to leave traces on the brain. If corporeal traces are left just because the brain is involved in the genesis of the corporeal thoughts, then ideas whose generation is completely free from bodily intervention cannot depend on the brain for their conservation. If these thoughts and ideas are to be remembered, they must be stored in an immaterial memory. This objection once again raises the question of intellectual memory, which Descartes seemed to be unconcerned with in his first solution.

Faced with this challenge, Descartes – in a second phase of analysis – denied that infants or people in a deep sleep, a state of lethargy or other critical conditions had pure intellectual thoughts of any kind. From 1641, he rejected the idea “that the mind of an infant meditates on metaphysics in its mother's womb”.³³ He explains this point as follows in a letter to Hypersapistes:

We know by experience that our minds are so closely joined to our bodies as to be almost always acted upon by them; and although when thriving in an adult and healthy body, the mind enjoys some liberty to think of other things than those presented by the senses, we know there is not the same liberty in those who are sick or asleep or very young [...]. So if one may conjecture on such an unexplored topic, it seems most reasonable to think that a mind newly united to an infant's body is wholly occupied in perceiving in a confused way or feeling the ideas of pain, pleasure, heat, cold and other similar ideas which arise from its union and, as it were, intermingling with the body.³⁴

As this statement is almost contemporary with the account explored in the preceding, I do not think that it represents any major shift in Descartes's opinions; it is better viewed as an addition, explaining why pure intellect cannot fill the gaps in the corporeal memory. Read together with the previous solution, Descartes's overall answer seems to be that the absence of memory can be reduced to two different factors, the common root of which is the inappropriate physical condition of the body. The first cause is that the humidity of the brain prevents the reception of enduring traces of memory. The second cause is that the soul, joining *such* a body, is disturbed during its operations, to the effect that in being "wholly occupied in a confused way of feeling", its pure intellectual powers are troubled and fail to operate.³⁵ These two parts of the answer may be regarded as complementary: the critical condition of the body explains why no permanent traces are left in the brain, and why the soul, united with such a body, becomes disturbed in its own operations. The core idea, which is well-known in the Neo-Platonic tradition and scholasticism, can be traced back at least as far as Plato's *Timaeus*.³⁶

Unfortunately for Descartes, this second solution is still open to objections. The most obvious objection concerns the question of why the mind, endowed with intellectual memory, requires bodily traces *at all* in order to work.³⁷ Even if the soul is shocked by the union with the body, it should be able to take advantage of resources of its own which do not depend on the brain in any way for their operations. This question surfaces in Descartes's 1648 conversation with Frans Burman. Here, after affirming the existence of the intellectual memory in no ambiguous terms, Descartes goes on to suggest that the intellectual faculty has hardly anything to do with the *particular* sensations of the soul: "This intellectual memory has universals rather than particulars as its objects, and so it cannot enable us to recall every single thing we have done".³⁸ This answer from Descartes is perplexing because the claim here is not only that the soul is unable to make use of its intellectual powers under critical conditions; instead, it is that the intellectual powers, by their very nature, are ill-suited to grasping singular objects. The idea that intellectual memory is about universals seems to run counter to Descartes's earlier solution and the position adopted in the Huygens-letter.

This point should be treated with care, as this is one of the few passages that appear to have a characteristic Thomist flavor in Descartes's line of thought. Remember that, in Aquinas, intellectual memory related to the universals which,

abstracted from the *phantasmata*, could not represent individualizing conditions – that is, a particular space and time. Descartes's answer to Burman comes close to this position, which is puzzling because it flies in the face of many of his other statements, both before and after his conversation with Burman. This is one of the reasons why some modern commentators claim that Descartes's account of memory is "particularly incoherent".³⁹ I will return to this problem in due course, but first, let us take a glimpse at the last phase of Descartes's encounter with the nature of memory.

4. Memory in the Descartes-Arnauld Correspondence

Descartes's views on intellectual memory shifted somewhat in his correspondence with Antoine Arnauld. By this time, the summer of 1648, Descartes appears to turn his back on his initial thesis regarding the lack of memory traces in the infants. He admits that the physical processes leading to confused sensations in the embryo's mind may produce modifications in the brain which tend to remain there throughout life. What he seems to be denying now is that these physical impressions are sufficient for the purpose of remembering:

Although these confused sensations leave some traces in the brain, which remain there for life, that does not suffice to enable us to remember them. For that we would have to observe that the sensations which come to us as adults, are like those which we had in our mother's womb; and that in turn would require a certain reflective act of the intellect, or intellectual memory, which was not in use in the womb.⁴⁰

This passage touches upon a crucial point in Descartes's views on the topic in the final years of his career. Whilst he initially appeared to blame the lack of memory on the deficient physical conditions of the brain, it now appears that the real cause lies with the intellect, which, under certain adverse physical circumstances, fails to act in the required way, i.e., to perform *intellectual reflection*, which is one of the necessary conditions for remembering according to the passage quoted above. This way of framing the question might give us the impression – an impression endorsed by the scholarly literature⁴¹ – that Descartes had abandoned his earlier approach to the problem by this point in the interests of making a completely new start. I think that this is an overstatement, because the assessment of this move depends on which perspective the commentator chooses to take. When viewing the issue in terms of the role of intellectual memory, a new element is indeed introduced to the story. In his attempts to account for the matter of the gap in consciousness, Descartes first highlighted the deficiencies of the brain before ultimately blaming the intellect. This clearly suggests that he was forced to finally change his mind on the subject due to the arguments put forward by Arnauld. However, another perspective is also open to the reader: When considering the matter from the perspective of the brain traces, there is a kind of continuity between the first and the final solution to the original problem. From this point of view, the shift is much more a matter of spelling out the consequences of the earlier approach or expanding upon the original idea rather than

being indicative of a radical new start. Even if the lack of memory now comes to be ascribed to the lapses in intellectual reflection, the latter still refers to certain physical deficiencies of the brain. This reading is reinforced by the fact that there is no real debate or clash of views between Descartes and Arnauld on this point: Everything suggests that what happens is that Descartes, compelled by Arnauld's objection, comes to realize the way in which the defective physical conditions in the brain cause gaps in the process of thinking. This is not because the brain lacks the information needed for remembering; it is because the mind does not have its own resources for processing the brain traces in the required way.

Although from this angle Descartes's claim may be regarded as an elaboration of his former thoughts rather than a new start, his letter to Arnauld still represents a considerable departure from his earlier statements, albeit for a different reason. He now seems to pay due attention to what we have called, in reference to Aristotle, the *temporal condition* of memory. According to this principle, the content of memory must be perceived as something which is *repeated* in the mind after it first appeared in the past. Descartes makes it clear in his correspondence with Arnauld that the mere repeatedness of mental content (without the perception of the fact that the content *is* repeated) does not suffice for true memory:

If we are to remember something, it is not sufficient that the thing should previously have been before our mind and have left some traces in the brain which give occasion for it to occur in our thought again; it is necessary in addition that we should recognize, when it occurs the second time, that this is happening because it has already been perceived by us earlier.⁴²

As we have seen, this criterion was both paramount to the scholastic discussions and crucial to Aristotelian theory. One of the central ideas behind Descartes's claim is that the requirement defined by this criterion cannot be met by material beings. No material property, pattern or physical impression in the brain can correspond to 'novelty' or 'repeatedness'. Admittedly, all cerebral modifications may bring about changes in the flow of the animal spirits, moving them exactly in the way they moved in the first instance of their passing through the cerebral substance,⁴³ but the relation between the two motions (the present motion and the earlier modification of the brain) cannot be coded by any material means in the physical memory. For this reason, no material system can qualify as a true memory in the full sense of the term. Hence it follows that the memory of the *past as past* must be based on something different to the perception that is triggered by previously stored patterns. This additional element is an awareness of the fact that *the present state of mind is a copy of something experienced previously*. Descartes's point is that this awareness belongs to the way in which the intellect comes to *interpret* the sensations arising from the mind-body union, in much the same way as perceptual judgements interpret the ambiguous sensations in the process of sense-perception.⁴⁴

This insight shows that the acts of the corporeal memory in the *res cogitans* are compositional. One part of the corporeal memory involves the perception of an

ordinary image when the pineal gland is moved by certain brain patterns that were produced in the past, while the other part is an intellectual judgement attached to this image, interpreting it as being similar to, and causally dependent on, certain earlier perceptions in the soul. (Evidently, reproducing the earlier thoughts cannot mean anything beyond bringing forth type-identical copies of them, which is why further judgments are needed to determine their relation to the past.) Descartes's final claim is that the mind cannot do the interpretation work unless it keeps track of its history. The mind cannot register its own experiences without being aware of what is happening inside itself, and without registering these experiences it cannot recognize that a given sensation has, or has not, occurred before.

Descartes's answer to Arnauld has a remarkable argumentative structure. He takes the experience of remembering the 'past as past' as an explanandum and, using this as a starting point, he tracks the preconditions that were required in order for the phenomenon to occur. The conclusion is that memory, even in its corporeal form, presupposes the appropriate working of the pure intellect by means of which the history of the self is registered and preserved. The answer as a whole is thus based on the order of conditions for remembering. Descartes's basic insight is that the working of memory proper (i.e. the memory of something from the past) is not just a matter of certain physical traces in the brain. It also requires an inward awareness of the self, with one's own history, which in turn presupposes the undisturbed working of an intellectual *reflection*. Finally, intellectual reflection cannot take place while the intellect is disturbed by the body.

Evidently, the intellect's reflection on its own working processes has *particular* events as its objects. This conclusion lends support to the view expressed in the consolatory letter to Huygens but seems to be at odds with the Burman passage referred to above, where Descartes states that *intellectual memory* is reserved for the universals. Now we are in a position to propose a solution to this problem. When Descartes associated the use of the intellectual memory with universals in his reply to Burman, he had not yet realized the role of the intellect in the operation of the corporeal memory. His opinion was that even if the intellectual memory is admitted, one cannot make much use of it in explaining the gaps in consciousness, because intellectual memory concerns the universal rather than particular experiences. Notice, however, that even in this reply, Descartes does not deny that intellectual memory can grasp particular events. What he says is that "this intellectual memory has universals rather than particulars as its objects" or, to translate it more precisely, "intellectual memory is more about universals than particulars"⁴⁵ which, strictly speaking, does not exclude particular events from the scope of that faculty. Neither does the end phrase ("and so it cannot enable us to recall every single thing we have done"),⁴⁶ because all that it underscores is that the intellectual operation is insufficient to recall *all* single events in the history of the soul. There are no cogent reasons, then, to maintain that Descartes would have sided with Aquinas against Scotus in the matter of intellectual memory. Even in the *Conversation with Burman*, there is a place for an intellectual activity that consists of registering the particular event of one's own history. If this space is left vacant, this is because Descartes had not yet understood the fundamental role of the intellect in the memory processes in general at the time of this

conversation. When he finally came to appreciate that role some months later, what emerged from this insight was not a new concept of memory, but a new understanding of the higher forms of consciousness. This is the matter I will address in the next section.

5. Memory and consciousness

The reconstruction of Descartes's ideas about memory demonstrated how fundamental the intellectual memory proved to be with regard to the memory of one's autobiographical past. This insight has far-reaching consequences for Descartes's concept of cognition and consciousness in general. We are now in a position to return to our initial question and examine the structural connections between memory and consciousness.

As we have seen, Descartes's final solution to the problem of *lacunae* focused on the relation between two sensations, one experienced in the past (say, in the womb), and the other at a later point in time (for instance, in adulthood). If the latter sensation is to qualify as a memory, the relation between the two occurrences ought to be recognized. In other words, one cannot talk about recollection unless two different conditions are satisfied: First, the new sensation must be occasioned by certain physical traces created in the past, *and* second, the subject must be aware of this relation: She has to recognize that her actual perception is a copy of an earlier experience. Since only the second of the two criteria grants the new sensation's temporal reference to the past, when the first criterion is met without the second, the result is what we nowadays call *source monitoring error*.⁴⁷ This occurs when the subject fails to attribute one or more of her emerging thoughts to its correct origin. Descartes describes the phenomenon as follows: "Thus verses often occur to poets which they do not remember ever having read in other authors, but which would not have occurred to them unless they had read them elsewhere."⁴⁸ What we find in this description is not the absolute absence of the memory of the past, but the absence of the *past as past*, to repeat the Aristotelian formula. If we set aside a poet's false attribution of the emerging verses to herself, it is clear that the impressions left in her brain by her former encounters with the text affect her present thoughts without yielding the knowledge of the past. The result is memory in a stricter sense. *This* kind of memory is implicit in perceptual learning and learning processes in general, as well as in the genesis of prejudices. The case of prejudices is especially interesting because it indicates that the content of one's adult consciousness at a given time may mirror the forgotten past unconsciously, i.e. in such a way that is all the more harmful in an epistemic sense because it is hidden from the subject.⁴⁹

As far as the problem of unconscious hiatus is concerned, initially Arnauld was not fully satisfied with Descartes's new explanation in terms of intellectual reflection. In his letter from July 1648, he pointed out that the lack of reflection could not be the explanation they were seeking, since reflection was inherent in *all* thoughts. Reflection simply belongs to the essence of the *cogitatio*:

As far as reflection is concerned, the intellect – or the intellectual memory – seems to be reflective of its own. Thus, it still stands in

need of explanation, what kind of reflection it is which in your view constitutes the nature of the intellectual memory, and how it differs from such simple reflection which is inherent in all thoughts [...].⁵⁰

By asking this question, Arnauld was expressing his early ideas about the two kinds of reflection, a doctrine he would explain in more detail some thirty years later, when he entered into debate with Malebranche. In his 1683 treatise *On True and False Ideas*, Arnauld made a fundamental distinction between ‘virtual reflection’ and ‘express reflection’.⁵¹ Virtual reflection is an intrinsic feature of every mode of the *res cogitans*; it accompanies each thought-act implicitly, without requiring any special attention from the thinker. Express reflection, by contrast, is an explicit and voluntary act of observation that is directed at one’s own thoughts in order to spell out the contents of these thoughts. In accordance with these later developments, what Arnauld already seems to insist on in 1648 is that intellectual reflection as such is implicit in every particular thought. Intellectual reflection is what makes any thought *conscious*, or – to rephrase this in line with early modern usage – it is this structural element in each thought-act that allows the subject to be aware of the act. Nevertheless, Arnauld submits that *this sort of* intellectual operation is indispensable for all forms of cognition, so its absence would destroy all thinking processes. This is why disturbances in the working processes of intellectual reflection cannot account for the lack of memory.

In response to this concern, Descartes did not object to Arnauld’s proposal that intellectual reflection of a kind belongs *internally* to each particular thought, but he keeps reserving the term *reflection* to those intellectual acts, which accompany the first order thoughts *externally*:

Finally, we make a distinction between direct and reflective thoughts corresponding to the distinction we make between direct and reflective vision, one depending on the first impact of the rays and the other on the second. I call the first and simple thoughts of infants *direct* and not reflective – for instance, the pain they feel when some wind distends their intestines, or the pleasure they feel when nourished by sweet blood. But when an adult feels something, and simultaneously perceives that he has not felt it before, I call this second perception *reflection*, and attribute it to the intellect alone, in spite of its being so linked to sensation that the two occur together and appear to be indistinguishable from each other.⁵²

Comparing this passage with Arnauld’s later views, it appears that Descartes’s *direct thought* ties in nicely with Arnauld’s *virtual reflection*. By contrast, Descartes’s concept of virtual *reflection* is not a complete match for any of the terms used by Arnauld. That said, the structure of the two accounts seems to be quite similar, giving rise to a complex, coherent theory about the various levels of consciousness. This is the point where the three different forms or layers of consciousness mentioned at the outset are most discernible. The most fundamental level is constituted by a simple or basic consciousness which is inherent in each thought-act, because no thought can be

entertained without the subject “being conscious of them at the moment they occur”.⁵³ These primary thought-acts harbor *simple* or *virtual reflection* in Arnauld’s terminology, while Descartes refers to them as *direct thoughts*. These acts occur as isolated episodes in the subject’s mental life. Intellectual reflection comes into play at the second level of this hierarchy. Thanks to this, *I* can then recognize some of her sensations as being familiar. Once the mind is free from the body to such an extent that the soul begins to notice what is happening in itself, it also becomes aware of its history. That is why I call this level ‘autobiographical’. Not because the subject is necessarily able to create an autobiography, but because she must be aware of some biographical details of her past. At this level, to reference Anne Davenport, the mind starts to keep track of its own experiences.⁵⁴ This is a spontaneous process. It may coincide with the first order act so that the two “occur together and appear to be indistinguishable from each other”.⁵⁵ As a third and final step, the intellect may reflect on its ideas *deliberately*. The mind may observe its ideas and spell out what they contain by way of a voluntary self-inspection. This higher order activity is what Arnauld would term ‘express reflection’.

The second and third stages of consciousness are directly linked to the memory, albeit in different ways. I intend only to hint at the problems involved with regard to the highest form of consciousness. The findings of the voluntary self-inspection cannot escape the concerns stemming from the temporal setting of the Cartesian doubt. Descartes often declares that the only possible way to call evidence into question is to turn one’s attention away from it, because “my nature is such that so long as I perceive something very clearly and distinctly I cannot but believe it to be true”.⁵⁶ Thus, the doubt always appears retrospectively, at a time when the object under consideration is no longer present to the intellect. Thus, the only way that hyperbolic doubt can attain clear and distinct ideas is to address them as ideas *in the memory*.⁵⁷ Another context in which memory plays an eminent role concerns the didactic features of the *Meditations*. Time and again, Descartes emphasizes that it is not enough for the reader to understand the arguments set out in the *Meditations*; rather, they also must be memorized: “It is not enough merely to have noticed this; I must make an effort to remember it.”⁵⁸ These questions relate to the highest forms of the consciousness based on voluntary self-reflection.⁵⁹

The way in which the second form of consciousness becomes associated with memory is more to pertinent to our purposes. As we have seen, this is a spontaneous and involuntary process which is a vital prerequisite in order for recollection of the *past as past* to take place. To begin, let us consider the fact that the subject necessarily loses track of certain episodes of the soul’s conscious life or these episodes remain in the shadow due to the deficiency of the intellectual memory. Conversely, the elements that are brought into light constitute a special unity of consciousness, relative to the availability of content. An adult or a child – at least after a certain age – is aware not only of her present state but also of her biographical past. Many episodes from this past must be available to the child or the adult, who then has the possibility of accessing these memories in order to construe a coherent and unified personality. This unity is achieved through the operation of the memory. Obviously, this kind of unity is not based on the metaphysical identity of the *ego*; it is much more a question of the

temporal coherence of experiential life. Certainly, there is no denying that any experience is always a mode of the thinking substance (in Descartes's philosophy there are no 'floating' experiences without an underlying substrate). However, single thoughts considered as modes of the *res cogitans* give the mind nothing more than a *minimal consciousness* which is realized in its different acts. This is why the mind – even though it is a *res cogitans* whose essence consists in thinking – is not necessarily aware of its past thoughts, because – as Descartes's example about the embryonal sensation shows – minimal consciousness does not necessarily survive the moment of its occurrence. It is bound to fade away with the thought-act itself unless it is preserved by memory, that is, unless it becomes the object of another, spontaneous act of reflection that allows the subject to retain the original thought-act in the intellect. Only this higher form of consciousness – based on memory – endows human beings with a coherent past without which there is no true subjectivity or intellectual life.⁶⁰

6. Conclusion

At the beginning of this article, I proposed three interdependent theses about Descartes's theory of memory and consciousness. In the conclusion, I would like to repeat these theses and see what we have accomplished with the foregoing analysis.

My first claim was that, despite appearances, intellectual memory is not a marginal, secondary subject in Descartes's philosophy. The texts discussed above – the Arnauld correspondence, the conclusion of the *Meditations*, and the passage on the passion of wonder – provide ample evidence that intellectual memory played an important role in Descartes's concept of consciousness.

That said, the relationship between memory and consciousness is not an explicit concern for Descartes or his commentators. The reason for this, I have argued, is that Descartes did not have much to say about memory as such, and his views on the subject did not offer anything considerably new compared to the alternatives of late scholasticism. The reasoning set out above allow us to assess Descartes's relation to the scholastic views on memory. Even though some passages suggested that Descartes denied that the faculty of remembering is about past particulars, the final analysis of his scattered remarks led us to adopt the opposite view. Far from endorsing Aquinas's position, Descartes seems to believe that memory of the *past as past* is grounded in the powers of the pure intellect. Therefore, instead of approving the Thomist division of labor, in which intellectual memory relates to universals while corporeal memory deals with particulars, Descartes regarded intellectual memory as the only faculty that allows human beings to remember the particular events from their lives. All things considered, Descartes's problem seems to be the inverse of the Thomist concern. For Aquinas, the trouble stemmed from the fact that the content of an act of understanding did not represent particulars, so consequently, the intellect could not be considered a memory in the full sense of the term. In Descartes, by contrast, it is the corporeal memory which, divorced from its intellectual resources, risks losing its cognitive hold on the particular events and – by implication – its status of memory. For Descartes, the human mind has a genuine power to remember past particulars, and in this respect – as highlighted in a recent publication⁶¹ – he agrees with the mainstream Scotist view of the *recentiores*, as

succinctly expressed by Suárez: “Intellect is memory in the most appropriate sense of the word, a memory much more perfect than that existing in the sensitive part.”⁶² As far as intellectual memory is concerned, it seems as if Descartes did not have anything to add to the generally accepted view.

Descartes's originality is in the way in which he succeeded in associating the higher forms of consciousness with intellectual memory. Intellect and memory “which connects present experiences with preceding ones”⁶³ are responsible for the specific character of adult consciousness. Corporeal memory cannot exist as a true memory of the past without this link, because this memory alone cannot give the subject a sense of time. Physical memory as a mechanical system can explain animal behavior in terms of conditioning,⁶⁴ but it falls short of qualifying as a full-fledged faculty of remembering. The reason for this is that even if the actual layout of the brain has been produced by a long-term temporal process, the brain's present state – the actual configuration of its particles – is by no means indicative of its history. In addition to the physical impacts that have shaped the brain over a long period of time, there must be a subject who is capable of recording this process (or, more precisely, the mental experience related to this process) and each of the successive traces must be provided with a temporal index in order to give each memory trace its place in the order of thoughts. The thing that makes a physical modification a memory trace is something *extrinsic*, namely its relation to other items recorded by the pure understanding of the soul. The external relations of a thought, *viz.* its relationship with other thoughts, do not coincide with what may be considered an internal relationship between any thought-act and its substrate, the *res cogitans*, i.e. the substance modified by that thought.

If the above claims hold true, we can conclude this paper by differentiating between two different approaches to consciousness in Descartes. The first one is the well-known metaphysical story, based on the unity of the *res cogitans*, by virtue of which all instances of consciousness – as nothing other than various modes of the *cogitatio* – participate in the unity of the substance. The lowest level, ‘simple’ or ‘basic’ consciousness, which is the defining feature of the mental, belongs to this perspective. Certain acts of cognition hang together as various modes (*modi*) of the same *res cogitans*, therefore the quality that makes them conscious (the fact that a subject is aware of them) is identical to the quality that makes them related to each other (they inhere in the same substance). Seen in this light, unity is a matter of sharing the same substrate. The other approach paves the way for another (perhaps more fascinating) kind of unity. Based on the memory's integrative power, the idea proposed in the Arnauld correspondence adumbrates a unity with a constitution that is more temporal than metaphysical in character. If one is prepared to admit that people do not know that they think continually (as Descartes was so ready to admit to Gassendi), the question that inevitably arises concerns what kind of unity the subject is able to access. Endowing the self with *this* kind of unity proves to be a task of integration rather than a question of metaphysical dependence on a substance. I deliberately speak of *endowment* instead of *constitution* here. This is because I do not think that Descartes's fragmentary ideas on the matter should be stretched so far as to claim that he elaborated the idea of the *constitution of the self* in a way that is comparable to Locke's

theory in the *Essay* 2.27. Nevertheless, this late development of Descartes's reflections on the subject – generally less appreciated than his metaphysics – seems to constitute a step towards the new notions of the self, based on binding processes rather than on the metaphysical givenness of the ego.⁶⁵

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References

¹ See Alanen, L., *Descartes's Concept of Mind* (Cambridge, MA and London: Harvard University Press, 2003); Alanen, L., "Thought", in *The Cambridge Descartes Lexicon*, ed. L. Nolan (Cambridge: Cambridge University Press, 2016), 712–717; Lähteenmäki, V., "Orders of Consciousness and Forms of Reflexivity in Descartes", in *Consciousness: From Perception to Reflection in the History of Philosophy*, eds. S. Heinamaa, V. Lähteenmäki, and P. Remes (Dordrecht: Springer, 2007); Hennig, B., "Cartesian Conscientia", *British Journal for the History of Philosophy* 15/3 (2007): 455–484; Jorgensen, L. M., "Seventeenth-Century Theories of Consciousness", in *The Stanford Encyclopedia of Philosophy* (Winter 2014 Edition), ed. E. N. Zalta (Metaphysics Research Lab, Stanford University, 2014), URL = <<https://plato.stanford.edu/archives/win2014/entries/consciousness-17th/>>, accessed on 29. 11. 2018.

Scholars working on early modern philosophy widely agree that consciousness did not come to prominence as a philosophical problem in its own right before the early eighteenth century: cf. Thiel, U., "Cudworth and Seventeenth-Century Theories of Consciousness", in *The Uses of Antiquity*, ed. S. Gaukroger (Dordrecht: Kluwer, 1991), 79–99 (80); Thiel, U., *The Early Modern Subject: Self-Consciousness and Personal Identity from Descartes to Hume* (Oxford: Oxford University Press 2011), 6. Though the relevant distinctions commonly used today can be sporadically identified during earlier periods, they typically appear in the context of other philosophical and theological preoccupations. The theme of consciousness in Descartes must therefore be handled with care. Rather than elaborated systems, his work contains traces of complex theoretical commitments.

² I am especially indebted to Lähteenmäki, V. (2007) with respect to this tripartite conception of Descartes's views on consciousness.

³ The most informative of these attempts is Tuomo Aho's pioneering work on Descartes's intellectual memory: Aho, T., "Descartes's Intellectual Memory", *Rivista di storia della filosofia* 71/2 (2016): 195–219.

⁴ Barresi, J., and Martin, R., *Naturalization of the Soul: Self and Personal Identity in the Eighteenth Century* (London and New York: Routledge, 2000), 7–8.

⁵ Barresi, J. and Martin, R., *A Rise and Fall of Soul and Self: An Intellectual History of Personal Identity* (New York: Columbia University Press, 2006), 131.

⁶ The most important commentaries are still: Sutton, J., *Philosophy and Memory Traces: Descartes to Connectionism* (Cambridge: Cambridge University Press, 1998); Fóti, V. M., "Descartes' Intellectual and Corporeal Memories", in *Descartes's Natural Philosophy*, ed. S. Gaukroger, J.

Schuster, and J. Sutton (New York and London: Routledge, 2000), 591–603; Clarke, D., *Descartes's Theory of Mind* (Oxford: Oxford University Press, 2003), Chapter 3: “Imagination and Memory”; Davenport, A. A., “What the Soul Remembers: Intellectual Memory in Descartes”, *The New Arcadia Review* 3 (2005): 1–5.

⁷ More than hundred years after the publication of Étienne Gilson's Index Scholastico-Cartésien, I take it for granted that despite his departure from the scholastic outlook in general, the scholastic approach to particular problems is not alien to Descartes's work. This fact that does not contradict his Platonic leanings, since late scholastic authors had absorbed and integrated many of the Neoplatonic tenets. Among the many publications on the subject, I will just mention the following as a comprehensive guide with extensive bibliography on the topic: see Ariew, R., *Descartes among the Scholastics* (Leiden: Brill, 2011). Tuomo Aho's paper adopts the same perspective in the secondary literature on Descartes's concept of memory, providing a detailed analysis of the relevant scholastic connections; see Aho, T. (2016), 208–210.

⁸ Aristotle, *De memoria et reminiscencia*, 449b24–25, ed. D. Bloch, in *Aristotle on Memory and Recollection. Text, Translation, Interpretation, and Reception in Western Scholasticism* (Leiden: Brill, 2007), 27 (hereafter Bloch, D. (2007)).

⁹ Goclenius, R., *Lexicon Philosophicum* (Frankfurt: Mathias Bekker, 1613), 680b.

¹⁰ This consequence seems to follow from the Aristotelian view that faculties of memory and reminiscence are based on the body. Cf. Thomas Aquinas, *Summa Theologiae* Ia, q. 79, a. 6 in *Sancti Thomae Aquinatis Doctoris Angelici Opera omnia iussu impensaue Leonis XIII P. M. edita* (Rome: Ex Typographia Polyglotta S. C. de Propaganda Fide, 1889), v. V, 270–271; Conimbricenses, *Commentarii Collegii Conimbrecensis Societatis Iesu in tres libros De anima Aristotelis Stagiritae* (Cologne: Lazar Zetner, 1603), 619ab (hereafter Conimbricenses (1603)).

¹¹ Thomas Aquinas, *Summa contra Gentiles, Book Two: Creation*, trans. J. F. Anderson (Notre Dame, IN: Notre Dame University Press, 1975).

¹² On Descartes's relation to this important collection of commentaries (one of the most ambitious intellectual projects of the late sixteenth century) see Des Chene, D., “Descartes and the natural philosophy of the Coimbra Commentaries”, in S. Gaukroger, J. Schuster., and J. Sutton (2000), 29–45.

¹³ Conimbricenses (1603), 621.

¹⁴ It is true that in Aquinas's opinion, the intellect – either by being aware of its act of turning to the *phantasmata*, or by reasoning, as Caietanus had it – may have some awareness of the particular origin of its universal knowledge; however, during embodied life, this awareness falls short of constituting a true memory.

¹⁵ Conimbricenses, *Commentarii Collegii Conimbrecensis Societatis Iesu in libros Aristotelis qui Parva naturalia appellantur* (Lisbon: S. Lopez, 1593), 5.

¹⁶ Aho, T. (2016), 209

¹⁷ See, for example, John Duns Scotus, *In Sent. IV.*, d. 45, q. 3, in *Opera Omnia*, ed. L. Wadding. (Lyon: L. Durand, 1639; repr. Hildesheim: Georg Olms, 1968), v. X, 207.

¹⁸ See Francisco Suárez, *Tractatus de anima* 4.3.7, in *Opera omnia* (Paris: L. Vivès, 1856), v. III, 461–816 (724); Francisco Suárez, *Commentaria una cum quaestionibus “de anima”*, d. 9, q. 3, n. 7, ed. S. Castellote (Madrid: Sociedad de Estudios y Publicaciones, 1978), 114.

¹⁹ Franciscus Alfonsus, *Disputationes in tres libros Aristotelis De anima* (Alcalá: Antonius, 1640), 305a.

²⁰ Sutton, J., *Philosophy and Memory Traces: Descartes to Connectionism* (Cambridge: Cambridge University Press, 1998).

²¹ Works of Descartes will be cited by volume and page from the edition of Adam and Tannery (abbreviated as AT) and from the Cambridge translation (abbreviated as CSM/CSMK):

Descartes, R., *Oeuvres de Descartes*, eds. C. Adam and P. Tannery (Paris: Cerf, 1897); Descartes,

R., *The Philosophical Writings of Descartes*, eds. and trans. J. Cottingham, R. Stoothoof, D. Murdoch, and A. Kenny (Cambridge: Cambridge University Press, 1985–1991). Descartes, *Regulae in directionem ingenii*, Reg xii. AT X:416/CSM I:43.

²² AT III:798/CSMK:190.

²³ Desmond M. Clarke seems to lean towards this view: “the reality of an ‘intellectual memory’ is a tentative conclusion from a theological doctrine about the afterlife, and about the kind of human happiness that was traditionally promised to those who benefit from the Christian doctrine of salvation, rather than a conclusion derived from the Cartesian theory of mind.” See Clarke, D., (2003), 101.

²⁴ This view, as defended by Davenport, A. A. (2005), is reinforced by a passage from Descartes’s letter to Princess Elisabeth (1 September 1645): “even without the teachings of faith, natural philosophy by itself makes us hope that our soul will be in a happier state after death than now.” (AT IV:282/CSMK:263.) In light of this letter and certain other passages, I side with Davenport’s interpretation against Clarke’s verdict as quoted in the previous note. Davenport opens her inquiry with this statement: “We cannot dismiss the content of Descartes’s letter to Huygens as a purely conventional expression of religious faith dictated by circumstance. On the contrary, Descartes makes a point of telling his friend (and fellow scientist) that his belief in the soul’s afterlife and memory is based on ‘very evident natural reasons,’ not on religious doctrine. Descartes admits that, ‘like most men,’ he is typically ‘more powerfully affected by rational arguments than by religious teaching.’ According to Descartes, then, one of the things that the soul is able rationally to ascertain in this life is that it will remember the past in the next life.” See Davenport, A. A. (2005): 1.

²⁵ For a more detailed analysis of this letter see Aho, T. (2016): 207; 212–213.

²⁶ An important text concerning this category is Descartes’s letter to Denis Mesland (2 May 1644, AT IV:114).

²⁷ See, for instance, Descartes’s letters to Mersenne (1 April 1640, AT III:48) and Denis Mesland (2 May 1644, AT IV:114). See also the *Conversation with Burman* (AT V:149–150).

²⁸ The most important text relating to this category is the description of the brain traces in the *Traité de l’homme* and the *Passions de l’âme*. See esp. AT XI:173–178. and 360 (*Passions* I.42). Cf. with Descartes’s letter to Meyssonnier (29. June 1640, AT III:19–21.) and Mersenne (1 April 1640, AT III:47–48; 11 June 1640, AT III:84–85)

²⁹ AT VII:356–357/CSM 2:247

³⁰ AT VII:357/CSM 2:247

³¹ 450b1–5, Bloch, D. (2007), 31.

³² AT VII:357/CSM 2:247.

³³ AT III:423/CSMK:189.

³⁴ AT III:424/CSMK:189–190.

³⁵ Another possible reading may emphasize the role of the recognition of one’s thought. Based on this reading of the letter, the failure of the recollection does not stem from the insufficient nature of the brain traces left after the past experience, but from the lack of recognition of one’s own thought processes.

³⁶ Cf. Plato, *Timaeus* 43a–44b.

³⁷ AT VII:365/CSM 2:246.

³⁸ CSM 2:246; CSMK:337

³⁹ Richards, G., *Mental Machinery. The Origins and Consequences of Psychological Ideas. Part I. 1600–1850* (London: The Athlone Press, 1992), 41; Landormy, P., “La mémoire corporelle et la mémoire intellectuelle dans la philosophie de Descartes”, in *Ier Congrès International de Philosophie* (Paris: Armand Colin, 1902, v. 4; repr. Nendeln, Liechtenstein: Kraus, 1968), 259–298 (261) (henceforth cited as Landormy, P. (1968/1902)). Cf. with the remark of Véronique M. Fóti:

“Descartes failed to put forward a coherent theory”, in Fóti, V. M. (2000), 597. See also Clarke, D. (2003), 105.

⁴⁰ AT V:193/CSMK:354–355.

⁴¹ For instance, the statement “Descartes’s correspondence with Arnauld in the summer of 1648 provides a new point of departure” in Davenport, A. A. (2005), 3.

⁴² AT V:193/CSMK:354–355.

⁴³ On this phase of the process see Paul Landormy’s excellent paper: Landormy, P. (1968/1902), 274–275. A more up-to-date, seminal study is Sutton, J., *Philosophy and Memory Traces: Descartes to Connectionism* (Cambridge: Cambridge University Press, 1998).

⁴⁴ Landormy, P. (1968/1902), 283–286 and especially 290.

⁴⁵ “[...] magis est universalium quam singularium [...]” AT V:150/CSMK:337.

⁴⁶ “[...] per eam [sc. memoriam intellectualem] omnium singularium factorum nostrorum recordari non possumus [...]” (AT V:150/CSMK:337).

⁴⁷ An anonymous referee expressed disagreement with this point, saying that “if the second condition is not met the mind does not misattribute her thoughts to a wrong origin. It just does not attribute it at all to any origin. No source monitoring error is involved”. My understanding is that the error may occur even in such a case, because the lack of reference to the past is likely to lead the subject to the erroneous opinion that she is the origin of the idea. The situation Descartes describes is parallel to the unintentional plagiarism that psychologists Christopher Chabris and Daniel Simons mention to illustrate the notion of source monitoring error. See: Chabris, C. and Simons, D., *The Invisible Gorilla: And Other Ways Our Intuitions Deceive Us* (New York: Crown, 2010), 63.

⁴⁸ AT V:22/CSMK:356.

⁴⁹ Landormy, P. (1968/1902), 275.

⁵⁰ AT V:213.

⁵¹ Arnauld, A., *Des vraies et des fausses idées*, ed. D. Moreau (Paris: Vrin, 2011), 73. “Our thought or perception is essentially reflective upon itself: or, as it is said rather better in Latin, *est sui conscia*. For I do not think without knowing that I think; I do not know a square without knowing that I know it... The second point is that, as well as this implicit reflection [qu’on peut appeler virtuelle] which accompanies all our perceptions, there is also something explicit [une autre plus expresse], which occurs when we examine our perception by means of another perception.” Arnauld, A., *On True and False Ideas*, ed. and trans. S. Gaukroger (Manchester and New York: Manchester University Press, 1990), 71.

⁵² AT V:220–221/CSMK:357.

⁵³ AT V:221/CSMK:357.

⁵⁴ Davenport, A.A. (2005), 4.

⁵⁵ AT V:220–221/CSMK:357.

⁵⁶ AT VII:69/CSM II:48.

⁵⁷ See Descartes’s letter to Regius (24. May 1640, AT III:64–65.)

⁵⁸ AT VII:22/CSM II:15. Further passages in which Descartes touches on the question are AT VII:34, and 61–62 from the third meditation. Cf. Descartes’s letter of 15 September 1645 to Princess Elisabeth (AT IV:290).

⁵⁹ Evidently, the same sense of the memory is in the foreground of the *Rules*, where Descartes states, “deduction in a sense gets its certainty from the memory” (*Rule iii.*, AT X:370/CSM 1:15). In this early work not metaphysical reasonings, but methodical exercises have to make up for the accidental deficiencies of the memory: “that is why we say that a continuous movement of thought is needed to make good any weakness of memory.” (*Rule vii.*, AT X:387/CSM 1:25.)

⁶⁰ The idea of the link between memory and consciousness is not limited to the Arnauld

correspondence. At the end of the *Meditations*, wakeful experience is described as a conscious state marked by an order that makes new phenomena correspond to the previous states of affairs as preserved in memory (AT VII:89–90/CSM 2:61–62). There is good reason to believe that the memory mentioned in this passage is a faculty which, in some way, monitors what is happening in the mind at a given moment, because only a faculty of this kind can guarantee the unity of the subject's experience. (I am indebted here to Olivér István Tóth and the participants of the text-reading seminar held in Szeged, June 2018.) Likewise, the passage on the passion of wonder in the *Passions de l'âme* is concerned with the same type of memory (AT XI:384/CSM 1:354); cf. Clarke, D. (2003), 105.

⁶¹ Aho, T. (2016).

⁶² “Intellectus est proprissime memoria et multo perfectior quam in parte sensitiva [...]” *Commentaria una cum quaestionibus “de anima”*, disp. IX, q. 10, n. 5, ed. S. Castellote (Madrid: Sociedad de Estudios y Publicaciones, 1978).

⁶³ “[...] praesentia cum praecedentibus connectit [...]” AT VII:89/CSM 2:61.

⁶⁴ Cf. Clarke, D. (2003), 98: “This is Pavlovian conditioning, long before Pavlov did the research associated with his name.”

⁶⁵ As I mentioned at the outset, John Barresi and Raymond Martin have reached a similar conclusion. Interestingly, they allude to another group of documents in making their case for the claim that “Descartes initiated exploration of the psychological mechanisms of self-constitution”, and their arguments (fleshed out briefly in the introduction to their book) do not rely on the relationship between memory and consciousness: see Barresi, J. and Martin, R. (2000), 7–8.