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Editors

Descartes' *Treatise on Man* and its Reception

 Springer

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Chapter 9

La Forge on Memory: From the *Treatise on Man* to the *Treatise on the Human Mind*

Emanuela Scribano

Abstract In his remarks on *L'Homme*, La Forge aims at a rigid separation of the functions of the body from the activity of the soul. This project looks authentically Cartesian, but some critical issues reveal how difficult it is taking away any activity of the soul in sensitive experience. In the *Traité de l'esprit de l'homme*, La Forge explicitly limits the cognitive capability of the memory without the active presence of the mind.

La Forge's notes on the posthumous *Treatise on Man* consciously emphasize the Cartesian project in order to account for body's abilities independently of the mind. It is the only part of Cartesian project concerning the study of the man we have. Indeed, the plan was to issue two more parts, one devoted to studying the mind independently of the body and the other to studying the union of mind and body.¹ In his commentary, La Forge tells that he has devoted another treatise, the *Treatise on the Human Mind*, to the missing parts of the Cartesian project—those relative to the mind independently of the body and to the union of mind and body.

First, in relating to Cartesian physiology and, later, in completing the Cartesian program, La Forge takes two things into account: (i) Descartes' writings that, though written later than the *Treatise on Man*, were published before his physiology text; and (ii) texts by other authors published when the *Treatise on Man* had not yet appeared. Both elements are pertinent in evaluating the relevancy, limits, and role of the physiological analysis developed in the *Treatise on Man*. Here, we shall verify the analysis concerning memory and reminiscence.

¹La Forge (1999), 59.

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9.1 Descartes: Material Memory

Memory, as discussed in the *Treatise on Man*, is the disposition of the brain's internal parts to reopen spaces that had been opened by previous stimulations, affecting the pineal gland (and hence the mind) in the same way as the first stimulations. Descartes compares the brain to a textile through which small metal wedges have passed. The gaps the wedges produce in the textile close after their passage, but the textile is more easily reopened where the wedges crossed than at other points.

Memory plays a major role in cognitive phenomena, especially concerning the association of ideas. Thanks to the association of traces in the brain, memory fills what is missing in sense perception:

It must be noted that if one were to re-open just some of (the holes) ..., this in itself would cause others ... to reopen at the same time, especially if they had all been opened together several times and had not usually been opened separately. This shows how the recollection of one thing can be excited by that of another which had been imprinted in the memory at the same time. For example, if I see two eyes with a nose, I immediately imagine a forehead and a mouth, and all the other parts of a face, because I am unaccustomed to seeing the former without the latter. And seeing fire, I am reminded of heat, because I have felt this in the past when seeing fire.²

In this respect, material memory overlaps imagination: “if I see two eyes with a nose, I immediately *imagine* ... and seeing fire, I am *reminded* ...”³

The living machine reacts differently to environmental stimuli depending on past experience, and since past experience is never the same, living machines react differently to the same stimulus. Memory connects brain traces and inserts any new stimulus into a brain network already marked by previous experiences. In this way, a dog who has been beaten while a violin was playing will be scared any time a violin plays.⁴ Thanks to material memory, the body-machine can “recognize” places and things belonging to its past experience and react to the reoccurrence of circumstances in ways as different as its reactions to previous occurrences of those circumstances. Traces can work as a true material memory, inducing behavior by their very presence.

These features of material memory were examined by Descartes again in a letter to Meyssonier on January 29, 1640.⁵ Descartes also resumes the issue, the same year, discussing it with Mersenne.⁶ The disposition of the brain's tissue to more easily reopen traces that have already been opened, i.e. material memory, is a

² Descartes, AT XI, 179; (2004), 151–52.

³ Material memory had already been assimilated to imagination in the *Regulae*. AT X, 416, CMS I, 42.

⁴ Descartes to Mersenne, 18 March 1630, AT I, 134. On the importance of material memory in Descartes the seminal essay is Sutton (2007). See also Morris (1969).

⁵ Descartes to Meyssonier, January 29, 1640, AT III, 18–21; p. 20, CSMK, 144: “I think also that some of the impressions which serve the memory can be in various other parts of the body: for instance, the skill of a lute player is not only in his head, but also partly in the muscles of his hands, and so on.”

⁶ Descartes to Mersenne, April 1, 1640, AT III, 47–8, CSMK, 145–6.

phenomenon concerning the internal part of the brain and does not involve the pineal gland—except in the case of human beings with a slow and dull mind.⁷ Indeed, a more mobile gland, and for this reason a less retentive one, corresponds to the smartest minds.⁸ Moreover, memory affects other parts of the body too—the whole body has marks, such as the marks that we see impressed on the fetus at birth.⁹

The quote above, according to which a brain trace produces the memory corresponding to an associated brain trace, leads us to think that in the *Treatise on Man* the conscious memory occurs in the mind upon the reopening of a brain trace. If this were the case, memory would behave like sensation, which produces a conscious perception in the mind via the brain modification connected with it.

9.2 Intellectual Memory

During spring 1640, in his letters to Mersenne, Descartes mentions a notion not yet introduced: intellectual memory. On April 1, 1640, Descartes writes to Mersenne that, besides the memory depending on body traces, “I believe there is also another one, entirely intellectual, which depends on the soul alone.”¹⁰ The existence of an intellectual memory is reiterated, again to Mersenne, on June 11, 1640: “the intellectual memory has its own separate impressions (*especies*), which do not depend in any way on these folds”.¹¹ Descartes appropriates a notion he finds in the *Conimbricenses* commentary on Aristotle’s *De memoria et reminiscencia*, but, by doing so, he introduces a new requirement, which brings him to search within a tradition he is well acquainted with for a different form of memory to that with which he is concerned in the *Treatise on Man*.¹² On August 6, 1640, again in a letter

⁷Descartes to Meyssonier, January 29, 1640, AT III, 20, CSMK, 144.

⁸Aristotle had already argued that intellectual smartness and memory were inversely proportional. Cf. *Of Memory and Reminiscence*, 1, 449b: “indeed, as a rule, slow people have a good memory, whereas those who are quick-witted and clever are better at recollecting.”

⁹AT XI, p. 177, (2004), 150. Repeated in the *Dioptrique*, AT VI, 129. As it is well known, the topic will be resumed by Malebranche, *Recherche de la Vérité*, II,I,VII, OC, I, 232 ss.

¹⁰Descartes to Mersenne, April 1, 1640, AT III, 48, CSMK, 146

¹¹Descartes to Mersenne, June 11, 1640, AT III, 84–5, CSMK, 148.

¹²On the view of intellectual memory in the *Conimbricenses* commentary to *De memoria et reminiscencia*, see Gilson (1979), s.v. *Mémoire*. The passage quoted by Gilson clearly shows that most of Descartes’ remarks about memory before 1640 derive from this tradition. The *Conimbricenses* ascribe to intellectual memory the remembrance of universal and immaterial things and deny any difference between intellectual memory and intellect. Descartes repeats a traditional claim even in placing material memory in the back of the brain. Ivi, 78. Conversing with Burman, Descartes says that the remembrance of universals pertains to intellectual memory, AT V, 150: “Verum haec memoria intellectualis magis est universalium quam singularium...”

It is important to stress, besides this, that the *Conimbricenses* add the notion of intellectual memory to the Aristotelian text. The intellectual memory they speak of, as a matter of fact, does not correspond to the Aristotelian theory of reminiscence, which was not, in any way, devoted to preserving the memory of immaterial and universal concepts.

to Mersenne, intellectual memory becomes a further aspect distinguishing human beings from animals. Indeed, it is to intellectual memory that Descartes ascribes the most meaningful part of the human activity of remembrance: “Moreover, in addition to the corporeal memory, whose impressions can be explained by these folds in the brain, I believe that there is also in our intellect another sort of memory, which is altogether spiritual, and is not found in animals. *It is this that we mainly use.*”¹³ This remark is entirely Descartes’ own, with no comparison in the *Conimbricenses* commentary to the *De memoria et reminiscentia*. If there were cues to intellectual memory before 1640, they was never the object of any systematic reflection.¹⁴

A theory of “intellectual” memory not only surfaced in the year 1640,¹⁵ but, and above all, it was given a central role in human memory—even if that role was not specified.¹⁶ In any case, in 1644 memory still seems to be “intellectual” because it concerns thoughts not produced via brain traces, thoughts representing immaterial things. Indeed, Descartes speaks of peculiar “traces” of “intellectual things”, enduring traces that account for the memory of those things, but impossible to exemplify because of their immateriality. This is the reason why, until 1640, intellectual memory stands alongside but does not substitute the material memory presented in the *Treatise on Man*: the former appropriated for thoughts originating from the intellect, the latter for thoughts originating from experience. The few hints at a double memory found in letters between 1640 and 1644 do not stray much from what one can read in the *Conimbricenses* commentary to the Aristotelian *De memoria et reminiscentia*, except for the mysterious statement that we help ourselves *mainly* with intellectual memory. What is new, rather, is the evocation of that second kind of memory. Some years later, due to Arnauld’s insistence, Descartes considerably modified the theory of intellectual memory occasionally touched upon between 1640 and 1644, and fully justified the mysterious hint of the August 6, 1640 letter to Mersenne. In fact, the claim becomes more extreme: the human mind mostly uses intellectual memory and only intellectual memory produces human recollection. For this reason, a brand new theory of intellectual memory is required.

¹³Descartes to Mersenne, August 6, 1640, AT III, 143, CSMK, 151. Emphasis mine.

¹⁴On the *Regulae* see Angelini (2000). The existence of an intellectual memory does not tell yet us whether this notion points to a specifically Cartesian theory, as Joyce (1997) seems to think, or whether it overlaps that proper to scholastic commentaries to the *De memoria et reminiscentia*. On the presence and the sense of this notion in Aquinas see Bazán (1990). The hint in the *Studium bonae mentis* that Baillet cites seems dependent on the theory of an intellectual memory extractable from the *Conimbricenses* commentary to *De memoria et reminiscentia*, which identifies intellectual memory and intellect. Cf. Baillet (1987), II, 66: “It seemed to doubt that memory were distinct from intellect and imagination. It did not think that memory could extend or grow, but rather be more or less filled.” AT X, 200–01 and Descartes (2013), 134–5.

¹⁵Once and only once, in a letter to Mersenne, on August 6, 1640, Descartes will call it “spiritual”. AT III, 143.

¹⁶Morris (1969) and Machamer, Mc Guire (2009), 188–193 take this as a reference to innate ideas. The conjecture, however, conflicts with what Descartes tells Mersenne and repeats in a letter to Mesland on May 2, 1644, i.e. that intellectual memory should have its species. AT IV, 114–15, CSMK, 233.

9.3 Recollection and Traces

The discussion with Arnauld that concerns us links back to Gassendi's objections to Descartes and to his replies about thought as the essence of the mind. If this were the case, Gassendi objected, thought would always be actual and the mind would always be thinking. Descartes, fully accepting this consequence, had to reply to the problems originating from it. Gassendi neatly points out one such problem: if it is true that the mind is always thinking, why do we not have any recollection of our prenatal and early childhood thoughts?¹⁷ In the context of the replies to Gassendi, the analysis of memory is then instrumental in clearing the obstacle to thought being continuously actual.

To account for the actuality of thought being compatible with the absence of memory, replying to Gassendi, Descartes ascribes the absence of recollections of prenatal experience to the inability of the fetus' brain (and of lethargic people's brains too) to retain traces:

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?¹⁸

In July 1641, the reply to Gassendi matched an insistent series of remarks by an anonymous person who introduced himself as Hyperaspistes.¹⁹ In his response to these remarks, Descartes held that the unborn baby's mind, closely tied to the body, cannot have purely intellectual thoughts, but only unclear perceptions, such as pleasure and pain, which derive precisely from its close union with the body.²⁰ Moreover, even if the fetus had purely intellectual thoughts, these would not produce memory because "where purely intellectual things are concerned, memory in the strict sense is not involved; they are thought of just as readily irrespective of whether it is the first or second time that they come to mind".²¹ The absence of memory of intellectual things was a new claim, which strengthens what Descartes had said to Gassendi, i.e. that the fetus does not have, and cannot have, any memory of any kind whatsoever.

Some years later, Arnauld's objections again bring up themes from the discussion among Descartes, Gassendi, and the Hyperaspistes. The problem was the same: how is it possible to maintain that thought is the essence of the mind, since, if it were so, one would then have to argue that the mind is always thinking? It is not possible that the inability to remember prenatal thoughts is due to brain traces being

¹⁷ *Objectiones Quintae*, AT VII, 264.

¹⁸ *Quintae Responsiones*, AT VII, 356–7, CSMK, II, 247.

¹⁹ Landucci convincingly argue for identifying the Hyperaspistes with Mersenne. Cf. Landucci (2001).

²⁰ Descartes to X*** [Endegeest, August 1641], AT III, 423–24, CSMK, 189–90.

²¹ AT III, 425, CSMK, 190.

surface-based or to their vagueness, as Descartes asserted in reply to Gassendi. If it were so, one would have to maintain that the only memory with which the human mind is endowed is a material memory. Whereas, according to Arnauld, “it seems necessary to accept that our mind has two memory faculties (*vis*), one purely spiritual and one requiring a body organ.”²² The necessity of accepting two memory faculties, Arnauld insists, originates from Descartes’ own theses. Descartes theorized a double power of thinking—*duplex cogitandi vis*—, one that is exercised without resorting to any body faculty, and one that applies to images impressed on the brain. If the mind can understand without the brain’s help, why can it not remember without that help?” Besides, that there has to be a true memory of pure intellectual understanding is proved by the fact that in an argument the next step depends on memory of the previous ones.²³ Hence, Arnauld concludes, it has to be possible to have memories of pure intellectual understandings and these memories have to be possible independently of brain traces. The absence of memories from the prenatal stage are then presented again by Arnauld as a best objection to the Cartesian thesis according to which the mind is always thinking.

In answering Arnauld, Descartes definitely concedes the existence of two memories: “I agree with you that there are two different powers of memory”.²⁴ But in the fetus there are neither pure intellections, because of the close link between mind and body, nor a purely intellectual memory, if by this we mean the recollection of thoughts independent of brain traces. This remark does not introduce the possibility that adults remember concepts of purely intellectual origin, possibility denied to Hyperaspistes and allowed to Mersenne, but it opens up a different understanding of the intellectual memory that is not active in the fetus. For the first time, Descartes individuates mental activity as the feature that makes memory intellectual—mental activity applies to material traces and is capable of *recognizing* new traces impressed on the brain as similar to those impressed before, or of detecting them as fully new ones. Only thanks to mental activity do brain traces become recollections and it is thanks to this ability that the relevant mental activity comes to be called “memory”. In contrast to bodily memory, this mental activity does not retain anything—it is just that: what allows us to turn the brain trace into a recollection. This mental activity, because of the close link between mind and body, does not operate in the fetus:

I agree with you that there are two different powers of memory; but I am convinced that in the mind of an infant there have never been any pure acts of understanding, but only confused sensations. 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.*²⁵

²²Arnauld to Descartes, June 3, 1648, AT V, 186.

²³Ivi, 187.

²⁴Descartes to (Arnauld), June 4, 1648, AT V, 192, CSMK, 354.

²⁵AT V, 192–93, CSMK, 354–55, emphasis mine. This aspect of the Cartesian theory is well explicated by Elisa Angelini (2000), 197 and 206. See also Minerbi Belgrado (2006), 850.

This shift—to saying that only a non-bodily activity can produce remembering—radically overturns the problem. If, with Gassendi and Mersenne, missing prenatal memory experiences are justified because brain traces were wanting, Descartes now directly claims that purely intellectual activities are missing. Brain traces—which in *L'Homme* constituted material memory—do not properly allow the mind to remember. Not even a new flow of animal spirits reopening old brain traces suffices to produce a recollection in the mind. Only the intellect's "reading" the brain traces produces recollection and this reading is impossible in the prenatal stage.

But if Descartes' reply signals progress and defines the theory of intellectual memory, it makes, if this is possible, Arnauld's objection even stronger and, at the same time, gives Gassendi's objection new vigor. Having attributed the capacity to turn brain traces into memories only to intellectual memory, Descartes thinks he can acknowledge that brain traces formed in the fetus "remain there for life" without producing a memory. If, as Descartes recognizes, brain traces to which intellectual memory can be applied are there, why is intellectual memory then "not in use in the womb?"

Arnauld immediately grasps Descartes' reply's feebleness and stresses that it differs from the reply to Gassendi's objection. If only intellectual memory is capable of recognizing brain traces and of turning them into memory, why can't we use it during our prenatal life, since Descartes now concedes that brain traces get impressed on the brain, even the brain of the fetus? Let purely intellectual thoughts go, but conceding an intellectual memory distinct from material memory, together with the thesis that thought is always actual and the assumption that traces impressed on the fetus' brain last, by logical consequence would mean that the recollection of pre-natal experience is possible:

[e]ven if the not yet born baby has no pure intellections, but only vague sensations, why can he not remember them later, since their traces anyway remain impressed in the brain (a thing you seemed, however, to deny in the *Metaphysics* at page 507). You will rely that this is due to the fact that recollection depends on intellect's reflection, which had not at all been exercised in the womb. Yet, concerning reflection, the intellect, that is intellectual memory, looks reflexive by its own nature. There is still to explain what is the reflection out of which you make up intellectual memory, and how it differs from the simple reflection intrinsic in any thought and why one cannot use it at all in the womb.²⁶

Descartes seems to have realized that his first reply to Arnauld was counterproductive, and with elegance adjusts it in the next letter, basically giving up the rash step made in the first reply to Arnauld and again focusing on the brain traces. Intellectual memory, in its role as a reader of brain traces, is there in the prenatal phase—hence, it is true that thought is always actual. There are also brain traces, but

Understanding intellectual memory as acknowledgement quietly echoes Fernel's account of the recollection of universals known in the past: "When (concepts of kinds) come to the mind, if we are considering the past, the mind anyway recognizes to have already entertained and known them and this certainly is intelligence memory (*intelligentiae memoria*)."²⁶ Fernel (2003) VI, 14, 500, on which see Céard (2002), 129.

²⁶Arnauld to Descartes, July 1648, AT V, 213. Emphasis mine. Arnauld quotes the *Quintae responsiones* from Soly 1641 edition.

intellectual memory cannot act on them because the traces are too messy to be deciphered. What is missing in prenatal development is neither intellectual memory, as Descartes states in the first reply to Arnauld, nor material memory, as he asserts in answer to Hyperaspistes and Gassendi. What is missing is a *decipherable* material memory. When it comes to early childhood brain traces, one can repeat the saying that in well-trodden sand we claim not to detect the trace of any human, because no footprint can be told apart.²⁷

The outcome of Descartes' mature reflections on memory is that brain traces, which he searched for by dissecting animal heads, deserve only metaphorically to be called memory, because they do not allow recollection even in the presence of a mind if the mind is restricted to perceiving brain traces without any further interpretative work.²⁸

If the reply to Arnauld is a clarification of the mysterious hint in Descartes' letter to Mersenne, in August 1640, that intellectual memory is what human beings *mainly* use, then this hint has to be understood in the following sense: human beings, like any other animal, have mechanical behaviors that transduce past brain traces into actions, as when we pull back our hand from a cactus because seeing it reactivates the traces a previous sting impressed on the brain. In such a case, memory is a mechanical reflex on the part of the body. What is truly and characteristically human is conscious recollection, which happens *only* when a mind is capable of handling and deciphering brain traces. When a mind is connected with the machine, it will not *record* brain traces as conscious recollections, but will *interpret* the traces. Only on this interpretation will it transform them into conscious recollections.

Descartes only once speaks of the intellectual memory of past experience working beyond death, i.e. without applying the mind to brain traces, in a letter aimed at consoling Huygens on the occasion of his brother's death: "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,

²⁷Descartes to Arnauld, July 29, 1648, AT V, 220, CSMK, 356–7: "it is not sufficient for memory that there should be traces left in the brain by preceding thoughts. The traces have to be of such a kind that the mind recognizes that they have not always been present in us, but were at some time newly impressed. Now for the mind to recognize this, I think that when these traces were first made it must have made use of pure intellect to notice that the thing which was then presented to it was new and had not been presented before; for there cannot be any corporeal trace of this novelty. Consequently, if ever I wrote that the thoughts of children leave no traces in their brain, *I meant traces sufficient for memory, that is, traces which at the time of their impression are observed by pure intellect to be new.* In a similar way we say that there are no human tracks in the sand if we cannot find any impressions shaped like a human foot, though perhaps there may be many unevennesses made by human feet, which can therefore in another sense be called human tracks." (Emphasis mine)

Clarke (2003), 203, misses this true reverse of the argument. Clarke himself, coherent with his own empiricist reading of Descartes, deems intellectual memory a theological relic with no role in Descartes' cognitive system. Ivi, 99–105, but see the relevant remarks by Des Chene (2006).

²⁸To Mersenne November, or December 1632, AT I, 263, CSMK, 40: "I am now dissecting the heads of various animals, so that I can explain what imagination, memory, etc. consist in."

an intellectual memory which is certainly independent of the body.”²⁹ Descartes writes to Huygens about a memory that preserves memories of the past without brain traces as well as memories of particular events. It should then be different from any other kind of intellectual memory that Descartes wrote about before or later. It looks like Descartes was driven to a conjecture that his own reflection deemed impossible, with the only aim being to console his friend.

9.4 La Forge: Memory After the *Treatise on Man*

La Forge deals with memory at length in his notes to the *Treatise on Man*, substituting Descartes’ preferred metaphors, of textile and paper, for forest or a green where vegetation becomes bowed when someone crosses it.³⁰ Faithful to Descartes, La Forge thinks that memory traces are not stored in the small gland and, developing Descartes’ hints, he forcefully argues that it is restrictive to place memory traces only in the brain. The whole body is a network of traces in the same way and for the same reason that the brain is.³¹

The fact that the whole organism bears material traces, i.e. memory, adds further value, according to La Forge, to material memory, as the mechanism responsible both for surprising animal behaviors and unconsciously performed human actions.³² The iteration of bodily movements when the same brain traces are reopened, a reopening that directs bodily learning, is ascribed to memory in the *Treatise on Human Mind*, where animals best instantiate it.³³ The association of ideas is also ascribed to memory, and it is meaningful that, in the *Treatise on Human Mind*, this is exemplified in animals, as it was in the notes to the *Treatise on Man*.³⁴ The insistence on animals as a privileged exemplification of the mechanism of memory traces that Descartes studied in the *Treatise on Man* is an effect of La Forge’s being familiar with Descartes’ correspondence, an aspect that now has to be taken into account. A second effect of this knowledge on La Forge is the drastic de-escalation of the relevance of material memory to the human being in the *Treatise on Human Mind*.

²⁹Descartes to Huygens, October 10, 1642, AT III, 578, CSMK, 216.

³⁰La Forge (1999), 332.

³¹Cf. also La Forge (1999), 332.

³²La Forge (1997), 178.

³³Ivi, 181: “...after the memory traces have thus retraced the original species on the gland, when the spirits pass again in the same way through the same pores they flow into the same muscles and thus dispose our body to begin the same actions which it performed on the occasion of the object which stimulated it the first time. That never fails to happen in animals, and even in human beings when the power of their soul does not inhibit it.” Following Descartes, *L’Homme*, AT XI, 185. Cf. also La Forge (1999), 364.

³⁴La Forge (1999), 283–4. Cf. also La Forge (1999), 385–6. Cf. Bordoli (1994), 71–79.

Opening the chapter on memory in the *Treatise on Human Mind*, La Forge seems to entrust recollection to material memory:

By the term ‘corporeal memory’ here I understand only a certain lasting ease to re-open those pores of the brain’s ventricles which have already been opened by the spirits and in the fibers through which the spirits passed, whatever the cause which had made the opening; for by means of this ease, the pores re-open sometimes of their own accord in the same way as they had been opened the first time and do not resist the flow of spirits towards them as much as other pores, and this can cause the same species to be retraced on the gland *and the same idea to return to the mind*.³⁵

Immediately La Forge specifies that, in the human mind, material memory “do[es] not seem capable of much.” Material memory does not produce a human recollection, and in the animal and human unconscious actions it only plays a behavioral role:

Although on this understanding memory is not something which is very active, and although this facility and these traces which the spirits leave in the fibres through which they have passed do not seem capable of much, I want you to realize however that it is the principal cause of all the surprising things which are observed in animals and which cause most people to attribute some thought to them, and even of most of the actions which we perform unintentionally.³⁶

Recollection requires active participation on the part of the mind. In the *Treatise on Human Mind*, La Forge appropriates the Cartesian theory of intellectual memory.

Because of the complex narrative of the Cartesian theory of intellectual memory, La Forge is obliged to subdivide the Cartesian theory into four kinds of memory, three of which make up the Cartesian theory of memory: bodily memory, reminiscence—into which merges the Cartesian theory of intellectual memory from the exchange with Arnauld—, spiritual memory—the memory of thoughts we had when living when the mind is no longer joined to the body, i.e. the memory Descartes had written to Huygens about—, and, finally, the only memory which La Forge calls intellectual—the memory Descartes spoke about in the exchange with Arnauld, and to which is entrusted the recollection of purely intellectual thoughts, a memory which has to exist if, as Arnauld stressed, reasoning is based on linking thoughts that follow one another in time. So Chapter XIX, entitled (in a very Aristotelian way) “Memory and Recollection”, absorbs the development of the Cartesian theory of intellectual memory, from when it appears in 1640 to the 1648 version in the exchange with Arnauld.

One point, however, is clear to La Forge. In order to account for human memory, he cannot simply refer to the presence of a mind that transduces bodily events in psychical terms, as happens with sensations. The mind is required to actively interpret brain traces. For this reason, La Forge privileges, as a common denominator all kinds of memory, that from the exchange with Arnauld:

³⁵ La Forge (1997), 178. Emphasis mine.

³⁶ Ibid.

When some species re-appears on the gland it is always an effect of memory, unless the re-appearance depends completely on the object. But it is not always an effect of remembering. For in order to remember it is not enough simply to perceive a species which comes back again, *if one does not also know that this is a re-appearance* and that it is not the first time one has had this thought. Thus remembering or the power we have of recalling something consists in our faculty of recalling the original species on the gland and being aware that this is not the first occasion on which it gave us the thought which is present to the mind at the time.³⁷

Now, this is possible only using “reflection and a completely pure conception without any contribution from the imagination,”³⁸ i.e. thanks to the intellectual memory of which Descartes writes. Because of this, La Forge thinks he can easily solve, in a Cartesian spirit, the problem Descartes left open, namely of how it is possible to speak of a memory of purely intellectual thoughts: “That is why when we use this faculty merely to recall the thoughts of purely intellectual things, it seems not to differ from understanding in the way we perceive them apart from the fact that, besides the perception of the idea, it also provides a perception of its re-appearance.”³⁹

Yet, it is not just the knowledge of Descartes’ reflections on intellectual memory that backs the marginalization of material memory. There was, besides this, a noteworthy event: the publication of a text largely devoted to memory, the *Traité de l’esprit de l’Homme et de ses fonctions* by Pierre Chanet, in 1649—when the text of the *Treatise on Man* and Descartes’ correspondence had not yet been published. It is this work that accounts for the use of the word “reminiscence” instead of “intellectual memory”, which is Descartes’ term.

The whole second volume of Chanet’s text is devoted to memory and the third to reminiscence. The reference Chanet privileges in these volumes is Fracastoro’s *Turrius*. Without mentioning him explicitly, Chanet hints at Gassendi, as a “cultivated man” who in a “fourth letter” compares “the organ of memory to a sheet of paper differently folded according to the differences of what it is meant to represent.”⁴⁰ A reference to Descartes is detectable in the gesture of consent to the theory of representation without likeness, as is the case with words and things, which are linked by convention.—a theory Chanet ascribes to “another modern” author.⁴¹

³⁷Ivi, 182. Emphasis mine.

³⁸Ibid.

³⁹Ibid.

⁴⁰Cf. Gassendi (1642), *Epistola IV*, 194. The consonance between the comparisons of memory and a sheet of paper first made by Gassendi in the fourth Letter on *De apparente magnitudine solis* and later by Descartes in the letter to Meyssonier, January 29, 1640, is striking. AT III, 20, CSMK, 144. Descartes re-proposes the comparison in the letter to Mesland, May 2, 1644. AT IV, 114–15, CSMK, 233: “It is rather as the folds in a piece of paper or cloth make it easier to fold again in that way than it would be if it had never been so folded before.”

I am grateful for Theo Verbeek and Jan-Erick Boss’ kindness and competence in pointing to Gassendi as the author hinted at by Chanet in this text.

⁴¹Chanet (1649), 150. To Chanet the *en passant* hint made by Descartes in the fourth *Discours* of the *Dioptrique* was enough, AT VI, 112. In relation to this, La Forge maliciously remarks that

Chanet says he is disappointed by the Aristotelian subdivision of the memory process into memory and reminiscence. The first would be a spontaneous emergence of a recollection, the second a search guided by the intellect for what one wants to recall. According to Chanet, instead, memory is only for the retention of images of things, a “room in which our phantasy let our ideas sleep, and where they stay resting until that same phantasy retrieves them.”⁴² This memory is not yet a conscious recollection. To yield a recollection a mental activity is required, an activity which, in the lack of a more adequate terminology, Chanet calls “reminiscence”, thus indicating “any action for which memory images are worked up and represented anew to imagination.”⁴³

Fracastoro had maintained the Aristotelian dichotomy between memory and reminiscence: “Data at hand and immediately available, as if they had already been compared with what is under our eyes, stimulate, we think, memory. Instead data in need of being searched at some length by means of a specific logical process, stimulate, we think, reminiscence”.⁴⁴ According to Fracastoro, as for Aristotle, reminiscence is an intellectual phenomenon, like reasoning.⁴⁵ Chanet, on the contrary, criticizes the way in which Fracastoro uses “reminiscence”, as well as his imagining it as a kind of reasoning.⁴⁶ According to Chanet, to surface, conscious memory always requires “an action of our mind”.

This activity extends “to any action for which memory images are worked up and presented anew to imagination.”⁴⁷ The search is guided by cues until memories surface, i.e. the reminiscence that Aristotle and Fracastoro discuss is only one possible modality of conscious recollection, the only one accidentally requiring reasoning.⁴⁸ In “his” reminiscence, then, Chanet includes all the cases already analyzed by Fracastoro under the category of conscious memory, and he places them in four categories. In the first, the view of something lets us remember that we have had already view at some other time; in the second, the view of something associated with a particular object lets one remember the object itself; in the third, a recollection casually surfaces when one is not searching for it anymore; in the fourth, recollection is the outcome of an intellectual search evaluating similarities and dissimilarities with some images of what we are looking for. Only the last involves

Chanet had carefully read Descartes because he repeats his thesis without quoting him, as if those theses were his own. Cf. La Forge (1974), 169.

⁴²Ivi, 191.

⁴³Ivi, 195.

⁴⁴Fracastoro (2006), 76: “Quae ergo promptissima sunt, et statim sese offerunt, ut aliàs collata cum illo quod occasionem praebet, memoriam facere dicuntur; quae vero indigent perscrutatione et discursu quodam, reminiscentiam.”

⁴⁵Ibid.: “We then call reminiscence the act which let us know again, via an inquiry, what we once already knew, but which has failed memory.” (“Reminisci enim dicimur id, quod de novo per inquisitionem addiscimus, aliàs quidem notum, sed iam è memoria delapsum.”)

⁴⁶Chanet (1649), 239, 246.

⁴⁷Ivi, 195.

⁴⁸Ivi, 247 ff.

reasoning.⁴⁹ Chanet introduces, then, a new meaning of the word “reminiscence,” identifying it with conscious recollection.

Chanet follows Descartes on a relevant point: memory traces, by themselves, are not recollection. Conscious recollection always is a product of the mind, even if the mental activity producing the recollection is not reasoning. Chanet’s text seems appropriate to supply a taxonomical framework to La Forge’s contribution and, above all, to show that Descartes, with the theory of intellectual memory, is not vulnerable to Chanet’s analysis of the phenomenon of memory, since he is able to account for all the cases of memory Chanet individuates. This has had to be the reason why La Forge uses the Aristotelian—and misleading—term “reminiscence” to individuate the intellectual dynamics of memory sketched by Descartes in his letters, dynamics for which Descartes himself never used the term.

Drawing on Descartes’ intellectual memory, “it is not difficult to explain the operation of the four kinds of remembering which Mr. Chanet speaks about in his treatise on the operations of the mind.”⁵⁰ The first kind of reminiscence—remembering we have seen someone when we see him again—occurs because the same brain traces are opened more easily a second time than on the first, and “it is this ease that provides an occasion for the mind to reflect on its thoughts and to realize that it had ahead seen this person previously.”⁵¹ The second kind of reminiscence can be explained via the simple connection between brain traces. The third kind can be accounted for in various ways—either the traces are superficial or they are alike and it is then easy to take the one for the other; the fourth kind, finally, requires a thorough intellectual screening of traces and also envisages a case in which the intellect, which possesses a general notion of what it aims to recollect, pushes the imagination to survey the traces to find the particular instance of the general idea it is looking for: “This type of remembering is completely mental and depends only on the power which the mind has over the body.”⁵² Notice that this way La Forge succeeds in inserting the recollection of universals discussed by the *Conimbricenses* and later by Descartes (in discussion with Burman) into intellectual memory.⁵³ In agreement with Chanet and Descartes, La Forge claims that reminiscence is always and only a mental activity. Indeed, even the kinds of memory that most value the presence, relation, and quality of brain traces fall under the general premise according to which there is no recollection without the mind interpreting brain traces.

Already in the notes to *L’Homme* there is a distinction between memory and reminiscence, with a brief hint about the role of the mind, to which is ascribed reminiscence but not memory. In this text, La Forge, aware of Descartes’ translation into physiological terms, in the *Passions of the Soul*, of the Aristotelian reminiscence, suggests that evoked reminiscence are precisely the search for memories described

⁴⁹Ivi, 194.

⁵⁰La Forge (1997), 183.

⁵¹Ibid.

⁵²Ivi, 184.

⁵³Infra, fn 12.

by Aristotle.⁵⁴ In the *Treatise on Human Mind*, instead, reminiscence is unequivocally Descartes' intellectual memory. Now, La Forge even denies the name 'reminiscence' to the voluntary search for memory traces that decidedly relates to imagination.⁵⁵

La Forge urgently needed to tackle a problem opened and put aside when, in chapter six, he proved that the mind's essence consists in thought and, as a consequence, that the mind is always thinking. It is, indeed, on the theme of memory and on wanting memories of past experiences—especially in the prenatal phase—that, against Gassendi, Hyperaspistes, and Arnauld, Descartes had to defend the thesis that mind's essence is thinking and, consequentially, that the mind is always thinking. La Forge deals with the implicit objection by trying to bring Descartes' replies together in a coherent way. The fetus' brain is of course capable of receiving traces, but these are so mixed up that it is impossible for the mind to read them. At the same time, though mixed up, the traces are very vivid, blocking the pure exercise of the mind. La Forge collects and organizes Descartes' scattered replies as follows: the fetus' mind does not exercise intellectual memory because it is too strictly linked with the body and hindered by the vividness of brain traces; the fetus' body takes and retains traces, even deep ones, but intellectual memory (if it can exercise at all) cannot decipher them because they are too mixed up.⁵⁶ This allows La Forge, moreover, to cleverly keep two Cartesian theses together that cannot be trivially overlapped: the thesis that brain traces in the fetus are not decipherable because they are too confused and the thesis that in early childhood the mind is linked to the body so as not to be able to become autonomous from neurocerebral events. Unsurprisingly, lethargic, apoplectic, frenetic, and sleeping people are associated with infants.⁵⁷

Finally, La Forge decides to neatly separate reminiscence from the role of intellectual memory that Descartes hints at only once, in consoling Huygens about the loss of his brother.⁵⁸ This kind of memory is called "spiritual" by La Forge. This proves that this memory, even to careful and sympathetic readers such as La Forge, looks rather dissimilar to the intellectual activity of remembering, which La Forge calls reminiscence. Reminiscence still acts on brain traces, whereas the only memory to which La Forge allots the adjective "spiritual" is the memory of pure minds, which remember ideas from the past, ideas no longer matched by a brain trace. For this kind of memory La Forge goes back to the Cartesian theory from before the exchange with Arnauld, a theory that still had intellectual memory as a recollection of thoughts not matched by brain traces: "we have an intellectual memory because our mind can recall some of its thoughts without any traces of them remaining in the brain."⁵⁹ La Forge is silent about the fact that the kind of memory mentioned by

⁵⁴ Descartes, *Passions of the Soul*, § XLII; La Forge, (1999), 322.

⁵⁵ La Forge (1997), 183–4.

⁵⁶ Ivi, 185.

⁵⁷ Ivi, 186.

⁵⁸ Infra, fn 29.

⁵⁹ La Forge (1997), p. 187. On the tensions internal to La Forge's theory of memory see Favaretti Camposampiero's analysis (2009), 390–94.

Descartes to Huygens, contrary to the recollection of purely intellectual thoughts mentioned to Arnauld, would imply remembering thoughts that, during life, were matched by brain traces.

In light of the Cartesian writings published before the *Treatise on Man* and the contributions of authors such as Chanut, who knew neither Cartesian correspondence nor the *Treatise on Man*, but offered a sophisticated theory of memory, it is understandable why La Forge so neatly claims that Descartes' writings on memory in the *Treatise on Man* are not particularly interesting when it comes to understanding human memory. In human beings, bodily memory "does not seem capable of much." At least concerning memory, the *Treatise on Man* is confined to the limits Descartes himself seemed inclined to attribute it when, writing to Elisabeth in 1645, he described it as a treatise "on the nature of animals".⁶⁰ Indeed, these are the beings that best exemplify what a mindless body can or cannot do.

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⁶⁰Descartes à Elisabeth, Egmond, October 6, 1645, AT IV, 310.

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