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To cite this article: Andrea Strazzoni (2022) Some unpublished fragments on Descartes's life and works, *The Seventeenth Century*, 37:5, 801-839, DOI: [10.1080/0268117X.2021.2021976](https://doi.org/10.1080/0268117X.2021.2021976)

To link to this article: <https://doi.org/10.1080/0268117X.2021.2021976>



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Published online: 18 Mar 2022.

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## Some unpublished fragments on Descartes's life and works

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### ABSTRACT

In this article I present some unpublished fragments concerning the life and works of René Descartes (1596–1650), gathered from the academic commentaries of Johannes de Raey (1620/1622–1702) on his treatises. The fragments, of different degrees of reliability, are important as (1) they reveal how the image of Descartes was shaped among his first followers and biographers; (2) they offer insights on his now lost manuscripts, to which De Raey had access after his death. They concern, amongst others, Descartes's days at La Flèche, the original title of his *Principia philosophiae*, his *inventum mirabile*, a fragment of a conversation with him, and passages from an irretrievable French version of his *Principia*.

### ARTICLE HISTORY

Received 23 May 2021

Accepted 20 December 2021

### KEYWORDS

René Descartes; Johannes de Raey; *Cartesiana*; academic *dictata*

*Raë [. . .] habe sich obligiret, einem vor jeden errorem, den er ihm in Cartesii Schriften weisen würde, 5 Ducaten zugeben.*<sup>1</sup>

## 1. Introduction

Johannes de Raey (1620/1622–1702) can be labelled as the first who taught the ideas of René Descartes (1596–1650) in a systematic manner. He was first a student of Henricus Regius (1598–1679) at Utrecht in 1641–1643, and later of Adriaan Heereboord (1613–1661) at Leiden, where De Raey enrolled in 1643 and graduated in arts and medicine in July 1647, becoming in the same year a private *lector philosophiae*.<sup>2</sup> As exemplified by the opening epigraph, he accepted Cartesianism without reservations, whereas Regius came to an open clash with Descartes in 1645, and Heereboord assumed a more syncretic approach, purportedly teaching some of Descartes's ideas along with Scholastic ones.<sup>3</sup> Still a private teacher, indeed, De Raey was so famous as a Cartesian that, at the suggestion of Tobias Andreae (1604–1676), in 1648–1649 Johannes Clauberg (1622–1665) came to Leiden in order to perfect his understanding of Descartes's ideas under him.<sup>4</sup> Moreover, De Raey was praised by Descartes himself as being an excellent teacher of his philosophy, and was present, in March 1650, at the opening of the trunk of papers left by the latter at Leiden before moving to Sweden.<sup>5</sup> One year later, he was authorized by the University Curators to give public lectures and preside over disputations on pseudo-Aristotle's *Problemata* (in fact, a way to allow him to teach Descartes's physics), before becoming extra-ordinary (1653) and ordinary (1661) professor of philosophy,

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and leaving for the Amsterdam Athenaeum Illustre in late 1668, where he taught until his death.<sup>6</sup> De Raey is certainly an interesting figure for the exploration of Descartes's legacy, from the perspectives both of the reception of his scientific and philosophical ideas, and of the circulation of information and materials on his life and works. In this paper, I will offer new evidence on such issues by presenting and discussing some previously unpublished *Cartesiana* which are extant in De Raey's dictated lectures (*dictata*), namely in his commentaries on Descartes's treatises. After having presented in more detail the ways he could have access to information on Descartes's life and works (Section 2), I will provide an overview of his academic *dictata* (Section 3), and I will present the evidence gathered from these, concerning Descartes's life (Section 4.1) and texts (Section 4.2), discussing their reliability as genuine sources on Descartes, and advancing some hypotheses on their uses and significance.

## 2. De Raey's access to *Cartesiana*

As far as De Raey's contacts with Descartes are concerned, Descartes came to know about him first as a *respondens* in Regius's disputations at Utrecht in 1641,<sup>7</sup> before acknowledging his qualities as a teacher of his philosophy – as testified to by Clauberg,<sup>8</sup> an acknowledgment which Clauberg could have heard during the only ascertained personal meeting between Descartes and De Raey, which took place at The Hague, together with Clauberg himself, probably in summer 1649.<sup>9</sup> Nonetheless, it is likely that De Raey and Descartes met more than once, as in the same year De Raey was asked by Roderich Dotzen (1618–1670) to give Descartes his regards if they should meet at Leiden.<sup>10</sup> Moreover, De Raey was in contact with all the foremost Dutch Cartesians, and possessors of Cartesian manuscripts, such as the above-mentioned (1) Regius, who met Descartes more than once since 1639,<sup>11</sup> and was in possession of *Cartesiana* such as a copy a manuscript copy of Descartes's *Traité de l'homme* (like De Raey himself).<sup>12</sup> (2) Heereboord, labelled by De Raey as *amicus* (friend), who met Descartes in October 1642 and who was later in possession of a manuscript copy of his *Traité de l'homme*.<sup>13</sup> (3) Andreae, correspondent of Descartes (whom he met at least once),<sup>14</sup> whose father-in-law Louis de Geer was host of Descartes at Amsterdam.<sup>15</sup> In particular, Andreae was to provide Claude Clerselier (1614–1684) with letters belonging to Descartes's correspondence during or after 1654, and maybe with a copy of his *L'homme*.<sup>16</sup> (4) Cornelis van Hogelande (ca. 1590–1662), probably the closest associate of Descartes at Leiden and holder of his trunk of papers.<sup>17</sup> (5) Frans van Schooten jr. (1615–1660), colleague of De Raey at Leiden, who took care of the preparation of the figures and woodcuts of Descartes's *Essais* and *Principia*, and was in possession of other Cartesian manuscripts.<sup>18</sup> To sum up, besides having met Descartes in person, De Raey was so well inserted in the circle of Dutch Cartesians that he could easily have access to information on Descartes's life and works.

Moreover, as mentioned above, on 4 March 1650 De Raey was present at the opening of a trunk that Descartes left to Van Hogelande at Leiden, as reported by Adrien Baillet (1649–1706) in his *Vie de Monsieur Descartes* (1691). The trunk contained, according to Baillet, “a packet of papers and letters”, with which De Raey was acquainted, or “among various books and papers, some writings, and some letters from Mr. Descartes collected in a packet”.<sup>19</sup> Its inventory is now missing,<sup>20</sup> and it was certainly unknown to Baillet, who around March 1690 asked De Raey (through Philipp van Limborch, 1633–1712, and Jean Le Clerc, 1657–1736) for information about such a packet. De Raey replied to him that the papers found in the

trunk were “very few and of little importance, and that Mr. Descartes had taken the main ones to Sweden”.<sup>21</sup> As to the letters, according to Baillet these included at least a letter of Descartes to Van Hogelande, letters of Gysbertus Voetius (1589–1676) to Marin Mersenne (1588–1648), and other unspecified letters, which Descartes suggested (but not ordered) that Van Hogelande should burn.<sup>22</sup> In fact, in his *Vie* Baillet clearly shows that he does not believe De Raey’s words. According to him, indeed, Van Hogelande might have shown such letters to De Raey, so that “if they have not been burned, maybe it could have been nothing but the fear of making them useful to the public which has made him [De Raey] make a mystery of them to Mr. Van Limborch”.<sup>23</sup> Moreover, Baillet remarks, referring to the packet in possession of the Dutch Cartesians – i.e., of De Raey, in 1691 – that

we would have wished the disinterestedness of Mr. Chanut, or the zeal of M. Clerselier, to those who have made themselves the masters of these writings. And it is to be hoped that the justice they owe to the friendship of Mr. Descartes will make them give back to the public a good which [the public] is entitled to ask for them to return.<sup>24</sup>

So Baillet believed not only that the letters were not burned, but also that Descartes’s *écrits* contained in the trunk were still in De Raey’s possession. Also, Baillet had to face De Raey’s refusal to provide him with the least information concerning Descartes’s life. As Van Limborch reported to Baillet, indeed,

Mr. De Raey has said in particular [...] “the life of Descartes is the most simple thing, and the French would spoil it”. This is what he has then repeated again to Mr. Le Clerc, fearing that Mr. Van Limborch had not understood well the wicked opinion which he had of the good faith of the French. I wish [...] that God bless Mr. De Raey, and I dare to hope, for all the Nation which he has outraged, that he will not find [any] person who will deign to avenge himself on him.<sup>25</sup>

In fact, De Raey eventually admitted being in possession only of a letter of Antoine Le Conte to Descartes already published by Clerselier.<sup>26</sup> Leaving aside this recalcitrant admission by De Raey, Baillet’s suspicions about the letters were well-grounded, for the reason that on 21 July 1650 Van Hogelande returned to Constantijn Huygens (1596–1687) the letters he sent to Descartes, which he most probably found in the trunk.<sup>27</sup> Moreover, De Raey (as detailed by Baillet, who had been informed by Van Limborch) had already been a key source for the first biography of Descartes, provided by Daniel Lipstorp (1631–1684) in his *Specimina philosophiae Cartesianae* (1653) – followed in 1656 by the *Vitae Renati Cartesii, summi philosophi, Compendium* of Pierre Borel (ca. 1620–1671).<sup>28</sup> Lipstorp, who enrolled at Leiden in July 1652,<sup>29</sup> relied on the information he could get in Holland both from Van Schooten and De Raey,<sup>30</sup> however “it is to M. de Raey that he was especially indebted for all the best he has said”. Such information, which Lipstorp used without the knowledge or consent of De Raey himself, was in fact retrieved also through a young student of De Raey, namely Petrus van Berkel (1634–after 1654), who provided Lipstorp with some “curious little memories” he got from De Raey.<sup>31</sup> The fact that Lipstorp could get his information as a student, and from a student suggests that De Raey shared accounts of Descartes’s life and unpublished works during his lectures.

### 3. The academic *dictata* on Descartes's works

Not surprisingly, indeed, we do find such kinds of information in De Raey's academic *dictata*, namely in those commentaries on Descartes's works that De Raey (like Clauberg, Christoph Wittich, Arnold Geulincx, Burchard de Volder, and others) dictated to students during his private lectures.<sup>32</sup> De Raey's *dictata* of interest to us are the following:

- (1) *Dictata in Meditationes nobilissimi Domini des Cartes, a Clarissimo Domino De Raij instar collegii*. Copenhagen, The Royal Danish Library, ms. Thott 578b 4<sup>o</sup>, ca. 1657–1658.<sup>33</sup> Henceforth *Dictata in Meditationes*.
- (2) *Annotata ad Principia philosophica Renati Des-Cartes, excepta in collegio habito sub Johanne de Raei, inchoato die 1 Maii 1658, finito die 20 Decembris*. Including: *Ad Dissertationem de methodo* and *Annotata ad Principia*. Copenhagen, The Royal Danish Library, ms. Don. var. Nr. 145 4<sup>to</sup>, 1658. Henceforth *Annotata*.
- (3) *Dictata [...] in Dissertationem de methodo Renati des Cartes. [...] Dictata [...] in Principia philosophiae [...]*. Hamburg, Staats- und Universitätsbibliothek Carl von Ossietzky, Cod. phil. 323 W. 28, ca. 1659–1668.<sup>34</sup> Henceforth *Dictata in Dissertationem de methodo, in Principia philosophiae*.
- (4) *Analysis sive argumenta eorum quae continentur in Dissertatione de methodo recte utendi ratione. [...] Analysis Principiorum philosophiae*. Leiden, University Library, ms. BPL 907, ca. 1664–1668.<sup>35</sup> Henceforth *Analysis*.
- (5) *De methodo. [...] Principiorum philosophiae pars prima[-quarta]*. Amsterdam, University Library, ms. X B 7, ca. 1669–1702.<sup>36</sup> Henceforth *De methodo-Principia*.

In particular, most of the *Cartesiana* can be found in additions to the main commentary on Descartes's texts, namely in marginal notes and parts of text which are in a clearly smaller size, or constitute paragraphs other than those of the commentary itself (which is structured as a series of commented lemmas). So it might be that De Raey did not include them in his main *dictatum*, but nevertheless communicated them to students: indeed, the additions to each commentary are by the same hand as the commentary itself. This is consistent with his recalcitrant approach in providing information on Descartes.

### 4. De Raey's *Cartesiana*

The *Cartesiana* extant in De Raey's *dictata* can be distinguished into three kinds: (1) information on Descartes's life, (2) information and extracts from Descartes's unpublished texts, (3) reports from conversations or oral statements by Descartes. Of course, the problem is that while (1) the fragments from Descartes's texts can be deemed as probably authentic (to the extent that De Raey had likely access to Descartes's manuscripts), the (2) information on Descartes's life at De Raey's disposal have more relevance for the study of what De Raey thought was Descartes's life, as they were most probably all at second hand, and (as I show below) mostly hagiographical. In turn, (3) the reports from conversations with Descartes have some sort of a status of reliability between these two kinds of evidence. The issue of the reliability of the biographical information conveyed by De Raey's lectures is in fact the same concerning the two early biographies

of Descartes: by Lipstorp – relying on De Raey’s himself – and Borel, who, even if correcting some of the details provided by Lipstorp, and publishing some extracts from Descartes’s correspondence and the so-called Stockholm inventory, also included a number of inaccuracies: for instance, he reported Descartes to be a noble, to have participated in many sieges during his military service, and to have met Galileo.<sup>37</sup> He relied on the memories of Descartes’s friend Étienne de Villebressieu (ca. 1607–1674),<sup>38</sup> but much information he provided is, at best, not confirmed by further evidence. In fact, only Baillet, who could rely on Descartes’s correspondence, eventually provided a more reliable biography.<sup>39</sup> In this picture, De Raey’s biographical information is more akin to Lipstorp’s and Borel’s than to Baillet’s. Still, it has to be considered case by case.

#### 4.1. Information on Descartes’s life

The information on Descartes’s life provided in De Raey’s *dictata* can be summarized as follows.

(1) First of all, in the commentary on Descartes’s *Discours* in his *Annotata* (1658) De Raey provides some anecdotes on Descartes’s early life. Given the fact that these are unpublished fragments, it is worth giving them first in the original Latin:

*Meditationibus*: [...] materia autem meditandi ex omni genere desumi potest, vel ex litterarum studio, vel ex mundi volumine, vel ex meditatione. Ita ut meditatio una alteram pariat: atque ac triplici materia instructus erat author noster. Qui anno aetatis 15 praecipua ex iis, quae in Dioptrica habentur invenit, anno aetatis 20 cogitare coepit de Terrae corticibus, quam meditationem Galileo per epistolam communicavit, ut referunt, qui noverunt. Algebram etiam 15 anno aetatis ex proprio cerebro invenit, quaestiones nam mathematicas a magistro sibi propositas, hoc compendio resolvebat. Libros ut novellas tantum inspexit.<sup>40</sup>

[*Meditations*: [...] the subject of meditating, however, can be assumed from any kind [of things], either from the study of literature, or from the book of the world, or from meditation [*sic*]. So that one mediation produces another one: and our author was trained [in this] triple subject. Who at the fifteenth year of age he found the main [part] of those [things], which are in the *Dioptrique*, at the twentieth year of age [he] started to think about the shells of the Earth, which meditation [he] communicated, by letter, to Galileo, as [those] who knew [this] refer. At the fifteenth year of age [he] found out of his own brain also algebra, [and] thus he solved, with this key, mathematical problems proposed to him by [his] teacher.]

Of these pieces of information, the first two (concerning optics and the theory of the Earth) are not mentioned by any source. The earliest known evidence on Descartes’s optics trace to a fragment on refraction dating to ca. 1620 (when Descartes was 24 years old) and extant in Descartes’s *Cogitationes privatae*.<sup>41</sup> According to John Schuster, the fragment “shows that Descartes was studying Kepler’s optical masterpiece, the *Ad Vitellionem paralipomena* (1604) and that Descartes’ text is a physico-mathematical ‘reading’ of a set of texts and figures in Kepler’s work”. In turn, Abdelhamid I. Sabra has argued that such a fragment contains the premises for the deduction of the sine law of refraction, presented in Descartes’s *Dioptrique* (1637). A claim discarded by Schuster, who as convincingly argued that Descartes discovered the law of refraction only in 1626/1627.<sup>42</sup> Accordingly, De Raey’s statement seems to be hagiographical, and can be useful –

like many other biographical details conveyed by De Raey – for a study of the biographical literary tradition in the early modern age.<sup>43</sup> In any case, it can well date Descartes's earliest interests in optics back to 1611, nine years before the optical fragment, when Kepler's book had in fact already been published.

As for the letter to Galileo on the Earth's shells, there are no traces of it in the Favaro edition. It should have dated from 1616 at the earliest. Notably, at that time Galileo had published his *Istoria e dimostrazioni intorno alle macchie solari e loro accidenti* (1613): in turn, Descartes was to develop a theory of the formation of planets conceiving them as "dead stars", namely as stars completely enveloped by solar spots, which constitute the layers of the Earth itself. Such a theory was presented by Descartes in the fourth part of his *Principia philosophiae*, while in his *Le monde* (written in 1629–1633 – a text labelled by De Raey as an unpublishable sketch of his later *Principia*),<sup>44</sup> he does not offer a geological account of Earth, and does not touch upon the topic of sunspots (nonetheless discussed by him with Isaac Beeckman, 1588–1637, in 1629).<sup>45</sup> Accordingly, by proposing this (dubious) information De Raey aimed at stressing (like Borel) that Descartes can be considered as a peer of Galileo: a move whose purpose was to propose and use Descartes's *Principia* as an academic textbook.

With regard to the other information, Lipstorp reports the anecdote of Descartes's devising a method based on algebra, by which he could solve problems posed by a teacher of his at La Flèche. Moreover, he details that this teacher suggested that Descartes should read the writings of François Viète (1540–1603, whose manuscripts had been published by Van Schooten in 1646), but does not mention that Descartes was 15 years old at that time.<sup>46</sup> Accordingly, Lipstorp might have relied both on De Raey's and Van Schooten's accounts (as De Raey does not provide all the information given by Lipstorp, and at the same time he adds something not mentioned by him). In any case, as shown by David Rabouin, as late as in 1628 Descartes still showed robust "mathematical weaknesses" in proposing to Beeckman an algebraic method of solving problems in geometry,<sup>47</sup> so that, once again, such a story seems to be anecdotal, and designed for the attempt to propose Cartesianism as a philosophical alternative, probably shared also by Van Schooten. Lastly, the mention that Descartes read books just as stories echoes the judgment of school-books given in his *Discours de la méthode*.<sup>48</sup>

(2) In his *Analysis* (ca. 1664–1668), concerning Descartes's *Discours*, we do find a similar anecdote, regarding Descartes's renowned first meeting with Beeckman:

*Eram tunc: 23 annos natus, nam lucem primo vidit Haggae Turonicae 1596. 1617 Bredae fuit, ubi nomen militiae coepit, more nobilium, comitum, et Platonis, qui ter militiam sequutus est, et Socratis, qui etiam aliquoties totum { . . . } mundi theatrum author noster inspicere volebat. Tunc problema geometricum erit quod qui solveret, programme Bredae affixo, ei premium statuebatur. Author noster nondum Belgiae callens, ex Beeckmanno, Dordraci Rectore, ibi praetereunte, auditum quid esset, statim solvit. Ex quo fama spergebatur Gallum militem quaestiones geometricas posse solvere, quod ne doctissimis quidem viris possibile erat. Ita hic clavem omnium solutionum invenit, ut vel famulus eius in eo peritissimus fuit.*<sup>49</sup>

[At that time I was: 23 years old, indeed [he] was born at La Haye-en-Touraine in 1596. In 1617 he was in Breda, where he enrolled in the army, [following] the costume of the counts, the noblemen, and of Plato, who had been in the army three times, and of Socrates, who [had served in the army] several times too[,]. . .] our author wanted to inspect the theatre of the

world. At that time [there] was a geometrical problem [for] which, [according to] a call published at Breda, a prize was established for whoever would solve it. Our author, not yet skilled in Dutch, having learnt about it from Beeckman, Rector at Dordrecht, while passing through there, immediately solved [it]. From which fame spread that a French knight could solve geometrical problems, which even the most learned men had failed to do. So he found this key for all solutions, to such an extent that even a servant of his was very skilled in this.]

Also in this case, we do find something not mentioned by Lipstorp, namely Descartes's increasing fame, and the fact that thanks to his method even a servant of his became skilled in mathematics. Again, Lipstorp relates Descartes to Viète, i.e., he compares this episode to Viète's solving, in three hours, a problem publicly posed by Adriaan van Roomen. Accordingly, Van Schooten was probably also a source of the story provided by Lipstorp (who reports also a further, similar anecdote, involving the Ulm mathematician Johann Faulhaber, not mentioned by De Raey).<sup>50</sup> Also in this case the anecdote has a remarked philosophical significance, as it echoes Plato's *Meno*, where a slave is brought by Socrates to solve a geometrical problem – both figures being indeed compared in this passage to Descartes, who is moreover treated as a nobleman (as Borel did).<sup>51</sup> Still, the anecdote is absolutely reliable, as the *famulus* was none other than Jean Gillot (1613/1614–1657), who had been in Descartes's service until 1632–1633, and himself became a private instructor in mathematics from the same year, being praised by Descartes in 1638 as “almost the only one in the world who knows the most about my method”.<sup>52</sup> He was known to Van Schooten but he was also a personal acquaintance of De Raey, who acted as intermediary between him and Dotzen in 1649.<sup>53</sup>

(3) Also, in recalling a later episode in Descartes's life in his *Annotata*, commenting on *Principia* IV.72, De Raey mentions that Descartes instructed Johann Elichmann (1600–1639), teaching him how to conduct, in accordance with his philosophy, those experiments he had already made in several places at his own expense:

*Nonnulla etiam metalla: [...]* sine hac philosophia nihil chymicus scire potest. Cavendum autem nobis erit ne confundamus scientiam empiricam et experimentalem, cum philosophica. Ex hac philosophia author noster docuit celeberrimum illum chymicorum Elichtmannum, experimenta illa, quae ubique terrarum variis sumptibus inquisiverat.<sup>54</sup>

[Also a few metals: [...]] without this philosophy the chemist cannot know anything. However we must beware that we do not mistake the empirical and experimental science with the philosophical one. From this philosophy our author taught that most famous of chemists, Elichmann, [how to do] those experiments, [into] which he inquired in all lands at [his] great expense.]

Elichmann, an orientalist and physician practising at Amsterdam, met Descartes around 1629 and introduced him to Vopiscus Plempius. He died in 1639, being in that year recalled by Descartes among other acquaintances of his.<sup>55</sup> Actually, the earliest source on Descartes's experimental activities in chemistry is a letter of his to Mersenne of 15 April 1630, according to which he was conducting researches both in anatomy and chemistry, finding out new discoveries, and aiming such activities to the study of diseases and medicaments.<sup>56</sup> Accordingly, we can suppose that Descartes had started his activities in chemistry – viz. those reported by De Raey – around the late 1620s, and that from 1629 he could impart some teaching to Elichmann. In fact, little

information is available on their relations. As detailed by Robin Buning, in 1631 Henricus Reneri (1593–1639) planned to be instructed in chemistry by Elichmann, hoping that this teaching “could complete or at least greatly elucidate that general philosophy of Mr. Descartes”.<sup>57</sup> This confirms De Raey’s statement that Elichmann’s experimental activities were inspired by Descartes, or at least consistent with his ideas. The source of De Raey was likely Van Hogelande, with whom Descartes (apparently) performed chemical experiments in the 1640s.<sup>58</sup>

(4) Finally, in his *Analysis*, on Descartes’s *Discours*, information about his later life is provided (still with hagiographical overtones):

*Ante octo annos: 33 aetatis, 1629. Nam liber hic editus est, 1637. Et primo quidem Amstelodami vixit, ubi ad Balsac summum Galliae oratorem epistolam scripsit, quae extat, in qua multis rationibus Hollandiam Italiae praeferre lepide contendit. Sed lucem hanc eminentem cum inimici eius non ferrent, quod notatu dignum est, exemplo Christi (absit indignitas), huc illuc diu vagatus est, et tandem quietis studio in ultimos Hollandiae fines, Egmondam secessit. Iniuriae auctori nostro tantae fuere (ut vel videre est, in Epistola ad Voetium) ut Rex Galliae de iis per litteras apud Ordines harum Provinciarum querelas egerit, et Princeps Henricus Fredericus his furoribus auctoritate sua intercesserit.*<sup>59</sup>

[*Eight years ago: at [his] thirty-third [year] of age, in 1629. For this book was published in 1637. And in fact he first lived in Amsterdam, where he wrote a letter to Balzac, the greatest orator of France, which has survived, [and] in which he wittily asserted, with many reasons, that he preferred Holland over Italy. However, his enemies not tolerating this prominent light, which is worth noting, [following] the example of Christ (no impiety intended), he wandered hither and thither for a long time, and eventually, desiring quiet, he withdrew to Egmond, in the remotest depths of Holland. The insults to our author have been so many (as it is to be seen in the *Epistola ad Voetium*) that the King of France complained about these, by letter, to the Orders of these Provinces, and Prince Frederick Henry interceded, with his authority, in these struggles.*]

In fact, between March 1629 and April 1635 Descartes lived for long periods at Amsterdam, where he wrote the above-mentioned letter to Jean-Louis Guez de Balzac (5 May 1631).<sup>60</sup> After other moves, he resided at Egmond aan den Hoef and Egmond-Binnen from May 1643 to September 1649 (with some visits abroad in the meantime).<sup>61</sup> De Raey’s account is incompatible with Lipstorp’s,<sup>62</sup> even if for De Raey it was just trivial, given his acquaintance with Descartes and his associates. The last episode recalls that of the mediation of the Stadtholder Frederick Henry with the magistrates of Utrecht during the *querelle* of 1643, when Descartes, accused of libelling against Voetius, was summoned by the Utrecht city council. The Stadtholder had been asked to intervene by the French Ambassador at The Hague (Gaspar de Coignet de La Thuillierie), and thanks to him the trial was suspended. In 1644, again, the Ambassador, upon Descartes’s request, wrote to the States of Groningen complaining against Martin Schoock (the other protagonist, on Voetius’s side, of the *querelle*).<sup>63</sup> However, no evidence of the intervention of the King of France to what appears to be the States of Holland and Westfriesland, if not the States General, is extant: whilst somehow correct – as the Ambassador was in fact representing the King of France – this was certainly an exaggeration by De Raey.

## 4.2. Extracts from Descartes's texts and conversations

Other information provided by De Raey concerns his texts and conversations, and can be considered as generally more reliable than De Raey's accounts of episodes of Descartes's life, as De Raey had most probably direct access to Cartesian manuscripts (as seen in Section 2). As follows:

### 4.2.1. A title for the *Principia philosophiae*

An interesting piece of information, reported by De Raey both in his *Annotata* and *Analysis* in commenting the title of the first part of Descartes's *Principia philosophiae*, is a previous title of such a treatise: namely *Elementa philosophiae*, which according to De Raey was reported on manuscripts of such a treatise, and was inspired by Euclid's treatise:

Vocat vero author librum hunc Principia, vel ut prius (in exemplaribus nempe quibusdam manuscriptis) Elementa philosophiae, ad imitationem Euclidis.<sup>64</sup>

*Principiorum*: [...] author vero primum vocabat hunc librum suum Elementa philosophiae, ad imitationem Euclidis, quod eodem redit.<sup>65</sup>

[In fact the author titles this book *Principia*, or, as previously (namely in some manuscripts [of this treatise]) *Elementa philosophiae*, imitating Euclid.

*Principiorum*: [...] the author, in fact, at first titled this book of his *Elementa philosophiae*, imitating Euclid, which comes to the same [thing].]

This information can be integrated with the commentary on the same title by De Raey and Clauberg's associate Christoph Wittich (1625–1687), given in his commentary on *Principiorum philosophiae pars prima, de principiis cognitionis humanae* (up to article 20; henceforth *Observationes in Principia*), which is the continuation of his *In alma Gelriorum (quae est Noviomagi) Universitate [...] Observationes in [...] Renati Descartes [...] Meditationes de prima philosophia* (henceforth *Observationes in Meditationes*), extant in ms. 3415 (London, Wellcome Library) both dating to ca. 1659–1664.<sup>66</sup> We can suppose that De Raey and Clauberg were the sources of Wittich, as – according to the extant evidence – they had more direct access to Descartes and his circle than Wittich himself, who nonetheless studied at Groningen and Leiden in the same years (1644–1650) as their first activities as scholars.<sup>67</sup> This is Wittich's text:

*Principiorum*: [...] voluit author aliquando Elementa appellare, quoniam haec sunt fundamenta et initia eorum, quae exinde possunt deduci, sed hac appellatione Principiorum accommodavit se Peripatetici, qui hoc nomine solent uti.<sup>68</sup>

[*Principiorum*: [...] the author sometimes wanted to name [it] *Elementa*, since these are the fundamentals and the beginnings of those [things], which can be deduced therefrom, but with this naming of *Principia* he accustomed [himself] to the Peripatetics, who use to adopt this name.]

In fact, we do find a textual trace corroborating Descartes's consideration of such a title in *Principia* II.64, in which Descartes compares his own *principia* to the *elementa* of geometry.<sup>69</sup> Moreover, such information allows us to shed some light on a long debated

question, namely the supposed characterization, by Descartes, of his *Principia* as following a synthetic order of exposition, in contrast to his *Meditationes*, in which he purportedly followed an analytic order.

In his *Responsiones secundae*, Descartes differentiated between an analytical and synthetic way of demonstrating (*ratio demonstrandi*) in these terms: “analysis shows the true way by means of which the thing in question was discovered methodically”, while synthesis “employs a directly opposite method [. . .]. It demonstrates the conclusion clearly and employs a long series of definitions, postulates, axioms”.<sup>70</sup> As recently put by Lex Newman, “the analysis/synthesis distinction turns on the handling of first principles. Analysis incorporates efforts to discover them; synthesis simply clarifies them. Successful analysis produces knowledge from its very foundations; successful synthesis merely helps to explain what we already know”.<sup>71</sup> According to Descartes, moreover, “analysis [. . .] is the best and truest method of instruction, and it was this method alone which I employed in my *Meditations*. As for synthesis, which is undoubtedly what you are asking me to use here, it is a method which it may be very suitable to deploy in geometry as a follow-up to analysis”.<sup>72</sup> In fact, Descartes was to use such a method of synthesis in his geometrical rendering of his *Meditationes*, at the end of his *Responsiones secundae* – exactly as Spinoza was to do in his *Renati Des Cartes Principiorum philosophiae pars I et II more geometrico demonstratae* (1663).

In turn, according to the so-called *Entretien avec Burman* (which took place between Descartes and Frans Burman (1628–1679) at Egmond on 16 April 1648 and which is extant to us thanks to the report (or transcription of a report) that Clauberg made of it four days later at Amsterdam), in discussing his presentation of the proofs of the existence of God Descartes characterized his *Principia* as following a synthetic method, namely the order of exposition only. On the other hand, in his *Meditationes* he presented them by following the very order in which he discovered them:

At this point the author is speaking of the sort of argument that can take some effect of God as a premiss from which the existence of a supreme cause, namely God, can subsequently be inferred. [. . .] By contrast, the other argument in the *Fifth Meditation* proceeds a priori and does not start from some effect. [. . .] In the *Meditations* that argument comes later than the one here; the fact that it comes later, while the proof in this *Meditation* comes first, is the result of the order in which the author discovered the two proofs. In the *Principles*, however, he reverses the order; for the method and order of discovery is one thing, and that of exposition another. In the *Principles* his purpose is exposition [*docet*], and his procedure is synthetic.<sup>73</sup>

Historians have struggled in make sense of such an affirmation.<sup>74</sup> Edwin Curley, assuming the geometrical rendering of the *Meditationes* given in the *Responsiones secundae* as benchmark of what it means to be “synthetic”, suggests that this indicates (1) the use of “formal definitions of important concepts”, and the (2) “prompt and explicit recognition of eternal truths”.<sup>75</sup> This in fact fits the differentiation between the two texts, as “in the *Meditations* [. . .] we find whole chains of reasoning, including false starts, heuristic arguments meant to motivate particular premises”, while “in the *Principles* and in the *Geometrical Appendix* [. . .] there are no false starts or dead ends, and little heuristic argument. The proof and its premises are presented unadorned and bare”.<sup>76</sup> As put by Garber, “following Curley’s line of thought, one might point out that the *Meditations* are written in the first person, while the *Principles* and the *Geometrical Appendix* are both written impersonally”, and this is exactly what Wittich remarked in his commentary on Descartes’s *Principia*.<sup>77</sup> However, for him

while Curley shows us how the concepts of analysis and synthesis can be made to fit the *Meditations* and the *Principles*, neither [...] has established with sufficient evidence [...] the claim that Descartes really saw the distinction between analysis and synthesis as being relevant to the differences between the *Meditations* and the *Principles*. [...] The direct evidence that Descartes wrote the metaphysical part of the *Principles* synthetically is very weak. The only textual evidence for this claim comes from the *Conversation with Burman*. But, it must be remembered, these words are not from Descartes' own hand. They are filtered through Burman and almost certainly through Clauberg.<sup>78</sup>

Obviously, also the pieces of information provided by De Raey and Wittich were filtered. But such pieces corroborate the claim, given in the *Entretien*, that the *Principia* follow a synthetic order in the meaning clarified by Curley. Indeed, they reveal that the first model of exposition about which Descartes thought in conceiving his *Principia* was that of the geometrical exposition of Euclid.

But when did Descartes adopt such a title? After having used for the first time the phrase "principles of my Philosophy" (*principes de ma Philosophie*) in a letter to Mersenne of April 1634,<sup>79</sup> the first mentions of his publication project trace to 1640. On 12 May 1640, indeed, Jean Chapelain wrote to Balzac that, thanks to Kenelm Digby, Descartes was going to move to England to print his *Physique*.<sup>80</sup> At least Chapelain's claim about the publication project had some foundation, as on 30 September Descartes asked Mersenne to provide him with some bibliographical information on Scholastic treatises: in particular, to recommend to him an *abregé* of them, by which he could refresh his memory on Scholastic theories.<sup>81</sup> Later (11 November), he communicated to Mersenne his appreciation of the *Summa philosophica quadripartita* (1609) by Eustache de Saint-Paul (1573–1640), and his intention to put on paper the "principles of my Philosophy" (*principes de ma Philosophie*) within one year. In particular, Descartes aimed to

write, orderly, a whole Course of my Philosophy [*Cours de ma Philosophie*] in form of theses, where, without any superfluity of discourse, I will just put all my conclusions, with the true reasons from which I drew them: this [is] what I believe [that I] can accomplish in very few words. And, in the same book, to have [it] printed a Course of traditional Philosophy, such as it could be that of Brother Eustache, with my notes at the end of each question, and [...] maybe at the end I will make a comparison of these two philosophies.<sup>82</sup>

Eventually, on 31 December Descartes pointed out that

[...] this year, which I have resolved to employ in writing my Philosophy [*Philosophie*] in such order that it can easily be taught. And the first part, which I am doing now, contains almost the same things as the *Meditations* that you have, except that it is entirely in another style, and that what is put in one at length, is more abbreviated to the other, and vice versa.<sup>83</sup>

Thus far, Descartes clearly presented his *Philosophie* as following an order aimed at teaching and different from that of his *Meditationes*. As he mentioned the use of drawing theses as conclusions in his previous letters, it is clear that he had in mind the synthetic order as characterized in his *Meditationes*.

Later, during 1641 Descartes labelled his treatise as *Physique, Summa philosophiae, Sommaire de toute la Philosophie*,<sup>84</sup> while in January 1642 he declared he had chosen the Latin title of *Summa philosophiae* – as he had to make his book read by the Scholastics.<sup>85</sup> Such a title was in any case soon abandoned, as from March 1642 up to February 1644 Descartes refers to his treatise just as his *Philosophia*,

*Philosophie, Physique*,<sup>86</sup> and – as reported by Baillet in his paraphrase of a letter of Descartes to Claude Picot of 2 February 1643 – *Principes de Physique*. At that point, the use of *Principia* seems to have been chosen by Descartes, although Baillet might just have used the final title in order to clarify what was the treatise dealt with in the letter, in which it is also referred to as *Physique*.<sup>87</sup> Some months later, according to a letter of Samuel Sorbière to Thomas Martel of 15 June 1643, a part of Descartes's *Meditationes physicae (sic)* was to appear soon, as the treatise itself was in course of printing at Amsterdam.<sup>88</sup> If this information is true – but we can doubt it, as I show in a moment –, such a part was certainly the first one (which included the very title of the treatise, *Principia*), as the second one contains figures which were not started to be prepared by Van Schooten until September 1643.<sup>89</sup> The printing of the treatise, in fact, most probably began at the end of the same year, while he nonetheless was still working on part 4, as reported by Descartes on 1 January 1644, at which point the title of *Principia philosophiae* was certainly definitive.<sup>90</sup>

To sum up, the use of such an expression – “*principia*” – is recurrent in Descartes's correspondence, but was definitive, as a title, only since the second half of 1643. Before that (1641–1642), the concurring title was that of *Summa*, of an evident Scholastic inspiration, which Descartes kept at least until January 1642. Given the fact that De Raey reports that *Elementa philosophiae* could be read on certain manuscripts, such a title could not date to a time when Descartes was still conceiving his publication project: namely in November 1640, when, as seen above, Descartes was planning to write his treatise in form of duly argued conclusions, i.e., was planning to follow a synthetic order of exposition. Rather, *Elementa* was probably an intermediate title between the *Summa* and the *Principia*, and used by Descartes in 1642–1643.

As to De Raey's knowledge of such a title, we can presume that he had access to one or more manuscripts including parts 1–2 (which were certainly finished before he adopted the title of *Principia* in 1643), and maybe part 3 of Descartes's treatise. Indeed, between December 1640 and July 1641 Descartes had just started his treatise.<sup>91</sup> In April 1643 – after having been delayed by the polemics with Voetius and Pierre Bourdin – he was working on part 3 (on the heavens, which is the overall topic of the part, and, in particular, on planets (III.6–37 and 139–157)),<sup>92</sup> and one month later (May) was about to write on magnetism, after having explained the origin of the two kinds of subtle matter (III.48–52).<sup>93</sup> In turn, in January 1644 – when the printing of the treatise had begun – he was finishing the part on magnetism (IV.133–186), after having completed the whole part 3 of his treatise (a section of which was under press at that time).<sup>94</sup> To sum up, in May 1643 Descartes certainly had written a substantial part of the third part of his treatise, before assuming the final title of *Principia* when the book started to be printed. In any case, how De Raey could see a manuscript of Descartes's treatise – if he had direct access to it – is only a matter of guesswork. Indeed, there is no extant evidence that Descartes circulated a draft of his book, and De Raey might just have found it among the manuscripts contained in the Leiden trunk. Alternatively, he could have had this information from the Cartesian circle in the Netherlands: in fact, Descartes kept Regius himself updated about his *Philosophia* in early 1642, and also Heereboord knew about his publication plans.<sup>95</sup>

#### 4.2.2. *The inventum mirabile*

Moreover, in his *Annotata De Raey* overtly refers to a manuscript found after Descartes's death. He does so in commenting on Descartes's narration, given in his *Discours*, of his staying in a stove-heated room, in Germany, during the Winter 1619–1620, which is worth quoting in full:

I stayed all day shut up alone in a stove-heated room, where I was completely free to converse with myself about my own thoughts. Among the first that occurred to me was the thought that there is not usually so much perfection in works composed of several parts and produced by various different craftsmen as in the works of one man.<sup>96</sup>

In commenting such a *pensée* by Descartes, De Raey remarks as follows:

*Et inter caetera*: o felicissimum inventum! De quo author merito gratulari sibi visus est, in chartis quibusdam post eius mortem inventis, dum inventi alicuius longe felicissimi mentionem facit, prae omnibus quae in tota vita invenerat.<sup>97</sup>

[Among the first: oh, what a most fortunate discovery! About which the author appeared to deservedly congratulate himself, in certain papers found after his death, as he makes mention of some discovery, largely the most fortunate, compared to all [the things] which he had discovered in [his] whole life.]

This is indubitably a reference to one of the greatest episodes of Descartes's intellectual venture, namely his *inventum mirabile*, mentioned in his *Olympica*, which has since long attracted the attention of historians. Amongst others, both Geneviève Rodis-Lewis and Stephen Gaukroger have related the *inventum* to the development of a science by one man only as expounded in Descartes's *Discours*, as De Raey himself does, with the evident aim of stressing the foundational approach of Descartes, which became a trademark of Dutch Cartesianism.<sup>98</sup>

At first sight, De Raey's reference seems to trace to Borel's 1656 *Vitae Renati Cartesii Compendium*,<sup>99</sup> which contains an abridged, Latin version of the so-called "Stockholm inventory", reporting the following item: "C. *Olympica* and, on the margin, '11 of November, I started to understand the foundation of the admirable discovery'".<sup>100</sup> Namely, De Raey could have read Borel's version of the inventory and interpreted it on the basis of what he read in Descartes's *Discours*. However, De Raey's commentary contains more than what he could have read in Borel's text. Indeed, De Raey traces the episode of the *inventum* back to a precise time in Descartes's life, namely to the 1619–1620 Winter: in turn, Borel does not report the year of the *inventum*. De Raey could have nevertheless inferred such a year from the previous item described by Borel, a "book of the year 1619, calends of January, under the title of *Parnassus* [or] *De considerationibus mathematicis*", which however is placed under the heading *B* by Borel, while in fact such a book was a "petit registre en parchemin" (small parchment notebook) including both Descartes's *Parnassus* and *Olympica*, and placed under heading *C* in the Stockholm inventory.<sup>101</sup> Moreover, De Raey provides more information on the *inventum* than Borel. De Raey specifies that Descartes rejoiced while mentioning a certain discovery ("author [...] gratulari sibi visus est [...] dum inventi alicuius [...] mentionem facit", or "the author appeared to deservedly congratulate himself [...] as he makes mentions of some discovery"): a discovery which in turn was by far the best with respect to those which he had previously found ("inventi [...] longe felicissimi [...] prae omnibus quae in tota vita invenerat", or "of some discovery,

largely the most fortunate, compared to all [the things] which he had discovered in [his whole life]) – a detail making it a turning point in Descartes’s intellectual biography. Notably, such a detail is not mentioned by Baillet, who provides more insights on Descartes’s *registre en parchemin*. This contained, according to him,

[...] a treatise [...] in form of a discourse, titled *Olympica*, which was only 12 pages long, and which contained in the margin, in a more recent ink, but still by the same hand of the author, a remark which even today gives [occasion] of exercise to the curious. The words in which this remark was conceived stated “11 of November, I started to understand the foundation of the admirable discovery”, of which [neither] Mr. Clerselier nor the other Cartesians could give us an explanation yet. This remark is found opposite a text which seems to persuade us that this writing is posterior to the others which are in the notebook, and that it was not started until the month of November of the year 1619. This text bears these words [in] Latin: “10 of November 1619, being full of enthusiasm, and finding the foundations of the admirable science, etc.”<sup>102</sup>

While providing a second quotation from the *Olympica*, Baillet informs us about the exact date of the *inventum*, enabling it to be traced to the Winter of 1619–1620. Moreover, such a second quotation has two notable features: (i) it has a decidedly more vivid and “enthusiastic” overtone than the first quotation, and fitting more the overtones of De Raey’s commentary; (ii) it is reported in an abbreviated form by Baillet (“etc.”), while De Raey provides the detail that Descartes mentioned a discovery which surpassed, by far, any previous discovery by him. Given the fact that in 1653–1654 such a *registre en parchemin* was brought by Pierre Hector Chanut (1601–1662) to The Hague together with his other Cartesian manuscripts, and that he allowed Christiaan Huygens (1629–1695) to inspect them (as reported by his father Constantijn to Elisabeth of Bohemia, 1618–1680), it could be that the *registre* was read by De Raey as well, or that its contents circulated in the Netherlands.<sup>103</sup> After all, the young Huygens was privately mentored by Van Schooten during his studies at Leiden University in 1645–1647 and afterwards he kept close contact with him, while his father Constantijn was a foremost sympathizer of Cartesianism.<sup>104</sup>

#### 4.2.3. Another victoria

A similar piece of information, provided in his *Annotata*, concerns another occasion in which Descartes rejoiced for a discovery of his, namely, as he devised the theory (exposed in *Principia* I.66) that one can have a clear knowledge also of sensations, passions and appetites, provided that one formulates judgments on their contents only:

*Ne quid amplius*: [...] haec est una et praecipua ea victoriis, quas author se reportasse gloriabatur: atque haec doctrina continet unum ex maximis arcanis philosophiae nostrae.<sup>105</sup>

[*Not beyond what*: [...] this is one and the main one of the victories, which the author gloried he reported: and this doctrine contains one of the biggest secretes of our philosophy.]

Such an anecdote appears to be functional to De Raey’s strategy of differentiating between philosophical and practical knowledge, based respectively on understanding and sense perception. A radical differentiation quite at odds with Descartes’s philosophical project of grounding on philosophy practical disciplines like medicine and morals,<sup>106</sup> and which De Raey started to develop with his *Dissertatio de cognitione vulgari et philosophica* (1651), and that had its ultimate outcome in his *Cogitata de interpretatione* (1692). In his *Cogitata*, De Raey provided a detailed analysis of linguistic

expressions by distinguishing, above all, between their signifying passions, sensations and appetites in a philosophical sense, i.e., as modifications of the soul of which we can have a clear knowledge, and in a “vulgar” sense, i.e., as modifications of our or external bodies, to which we improperly or confusedly refer when we employ names of sensations out of philosophical contexts, as in theology or medicine.<sup>107</sup> This approach to the study of language by De Raey was in fact made possible by Descartes’s *victoria* mentioned in the *dictata*. It remains unclear, however, if De Raey found this information in a manuscript by Descartes, if it was revealed during a meeting with him, or if it is just an anecdote.

#### 4.2.4. Conversations with Descartes

In any case, De Raey certainly gained insights from a famous conversation or interview involving Descartes, the above-mentioned *Entretien avec Burman*. Some extracts of it are provided by Clauberg, who provided the report of it, in his *Defensio Cartesiana* (1652),<sup>108</sup> in his *Notae* (ca. 1654–1655) on Descartes’s *Meditatio prima* published as chapters 7–9 of his *Initiatio philosophi sive Dubitatio Cartesiana* (1655),<sup>109</sup> and in his *De cognitione Dei et nostri exercitationes centum* (1656).<sup>110</sup> In turn, in his *Dictata in Meditationes* (ca. 1657–1658) De Raey reports a passage whose contents can be found both in the *Entretien* and in Clauberg’s *Notae* (as evident from the textual comparison given in [Appendix 1](#), case of lemma “a sensibus vel per sensus”). However, De Raey did not just rely on Clauberg’s *Notae*, and most probably obtained a copy of the *Entretien* itself. Indeed, it is De Raey who makes explicit that the commentary comes from a direct question to Descartes (while Clauberg’s text is more vague).<sup>111</sup> Moreover, in his *Annotata*, in commenting Descartes’s famous passage, from the *Discours*,

Those long chains composed of very simple and easy reasonings, which geometers customarily use to arrive at their most difficult demonstrations, had given me occasion to suppose that all the things which can fall under human knowledge are interconnected in the same way.<sup>112</sup>

De Raey reports a second extract, which cannot be found in Clauberg’s printed texts:

*Existimandi*: [...] rogatus aliquando author noster, an res theologicae eadem methodo inveniri possint, affirmavit, excepto quod illae in nonnullis fugiant humani ingenii vim.<sup>113</sup>

[To suppose: [...] [having been] asked sometimes our author, whether theological truths might be found with the same method, he affirmed [it], except that those [truths], in some aspects, escape the strength of human wit.]

The same contents (consistent with De Raey’s differentiation between practical and theoretical knowledge) can be found in the *Entretien*, in a question relating to the same passage commented by De Raey:

[Burman:] But is it not the case that in theology too all the items are mutually related in the same sort of sequence and chain of reasoning?

[Descartes:] Undoubtedly they are. But these are truths which depend on revelation, and so we cannot follow or understand their mutual connection in the same way. And certainly theology must not be subjected to our human reasoning, which we use for mathematics and for other truths, since it is something we cannot fully grasp.<sup>114</sup>

Perhaps more interestingly, De Raey had access to the contents of a previously unknown conversation involving Descartes, as testified to by his commentary on Descartes's *Principia* III.71, concerning the centrifugal movement of subtle matter within a vortex, given in his *Annotata*:

*Nonnihil evagentur*: [...] authori nostri in discursu quodam cum amico excidit: vortices similes esse spumae maris, quemadmodum enim hic flatus bullam extendit, sic vorticem materia subtilis.<sup>115</sup>

[*Some of them to advance*: [...] during a conversation with a certain friend our author slipped out that vortices are similar to the foam of the sea, just as, indeed, this breath inflates a bubble, so the subtle matter [inflates] the vortex.]<sup>116</sup>

De Raey refers to a colloquium (other than the *Entretien*)<sup>117</sup> between Descartes and a friend: so he seems not to have been present at it. It reveals how Descartes conceived the spatial disposition of vortices, as a space filled by bubbles (cf. [Figures 1 and 2](#)).<sup>118</sup> Such a way of theorizing the spatial disposition of vortices has already been noticed by historians,<sup>119</sup> but De Raey's *dictata* shed new light on it, as his words confirm that the use of analogy and imagination had a foremost role in the development and exposition of Descartes's physics, allegedly based on purely intellectual ideas and chain of reasoning only. As Christoph Lüthy put it, Descartes's "*figurae* constitute one of the facets of Descartes's 'clear and distinct ideas', [and] serve as a bridge between logical deduction and rhetorical persuasion", as "the further he moves away from his first principles and the more he approaches the level of specific physical phenomena, the more he must invoke sensory experience, argue hypothetically, base his suppositions on analogies".<sup>120</sup> To put it otherwise, beyond the abstract image of the vortices ([Figure 1](#)) there is nothing but the imagination of bubbles of sea-foam ([Figure 2](#)) – and Descartes himself at some point admitted this.

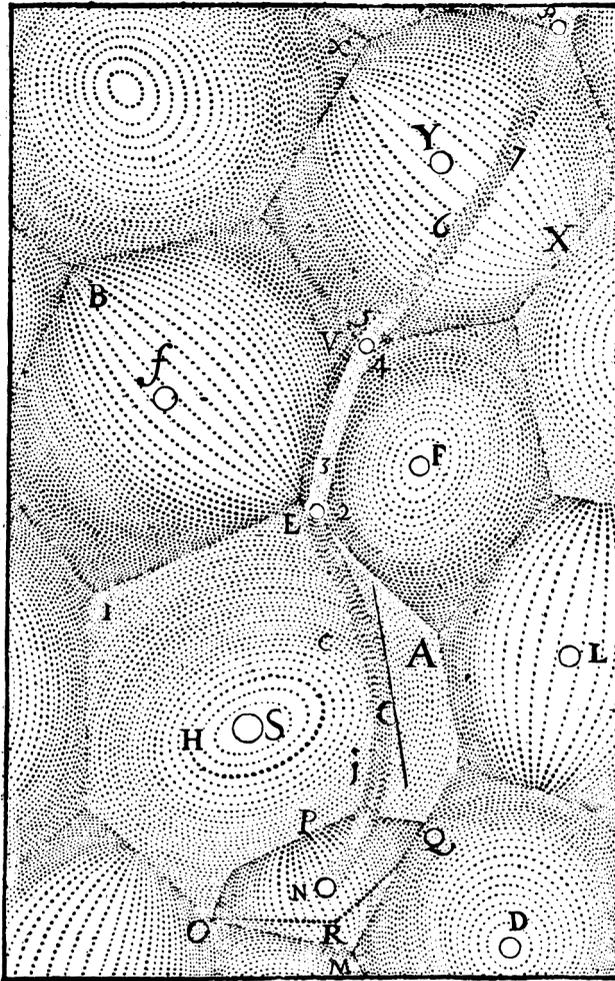
#### 4.2.5. *Descartes on the French*

Further statements by Descartes reported by De Raey could not be retrieved in any known text by Descartes. These are provided in his *Annotata*, in commenting upon Descartes's *Discours*:

*Ingenii*: [...] cogitandi celeritas dependet a spirituum vigore. Hinc non Gallos suae philosophiae capaces esse dixit author, sed potius ad mercaturam, rethoricam, et poësin esse obligandos, propter summam eorum in cogitando celeritatem.<sup>121</sup>

*Satis temporis*: tale est ingenium Italarum, uti et Gallorum. Quos eapropter author ineptos esse iudicat, ad suam philosophiam percipiendam. Atque propter hanc Gallorum petulantiam, plerumque assuescunt studiis mathematicis, ut sedatum inde colligant animum. Atqui magnum privilegium habet ingenium velox, fatemur ad medicinam, poësin, iurisprudentiam, linguas, et mercaturam multum valere.<sup>122</sup>

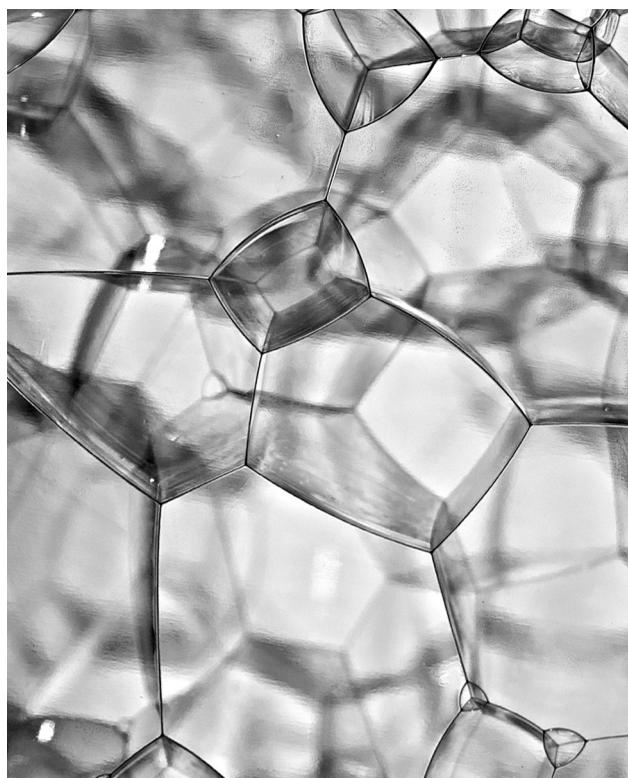
[*Intelligence*: [...] the swiftness of thinking depends on the strength of the spirits. Therefore, the author said that the French are not capable [of understanding] his philosophy, but rather they have to be addressed to commerce, rhetoric, and poetry, because of their great swiftness in thinking.



**Figure 1.** Descartes's vortices.

*Enough time:* such is the intelligence of the Italians, as well as of the French, who therefore the author considers inept to learn his philosophy. And because of this petulance of the French, many [of them] become used to mathematics, in order to calm [their] soul. However, a swift intelligence has a great advantage: admittedly, it avails much to medicine, poetry, jurisprudence, languages, and commerce.]

Such statements apparently develop on the classical idea of the sanguine temperament of the French,<sup>123</sup> and on the idea (overtly endorsed by Descartes in his correspondence with Elisabeth of Bohemia), that the agitation of spirits disposes those provided with a firm brain to poetry, as it excites the imagination.<sup>124</sup> Such statements are consistent, moreover, both with De Raey's recurrent attempt to differentiate between philosophical and practical disciplines, and with the harsh contempt towards the French that he was to show to Baillet (as seen above), which he re-stated during a disputation taking place at Amsterdam in June after the publication after Baillet's *Vie*, a book which De Raey labelled as "vain and the most full of lies [...], adding the reason that this is not surprising, having been written by a Frenchman".<sup>125</sup>



**Figure 2.** Bubbles of sea-foam.

#### 4.2.6. *Fragments from a French version of Descartes's Principia*

Lastly, it is worth mentioning that in De Raey's *dictata* we do find three passages attributed by De Raey to the French version of Descartes's *Principia*, but in fact absent in all the printed editions of this treatise. It is the case of the commentaries on *Principia* III.83, IV.18, and IV.189, which I illustrate in [Appendix 2](#). Of course, it might be that these were just misattributions by De Raey, who in his *dictata* suggests several additions and corrections to the Latin text of Descartes's *Principia*, overtly or covertly drawing them from his *Principes*.<sup>126</sup> However, one of the passages dictated by him echoes Descartes's words from the *Entretien*, concerning the same lemma from *Principia* III.83 as in [Appendix 2](#). This cannot be coincidental: given the fact that thanks to Burman's questions Descartes came to reflect again on his *Principia*, he could afterwards have put his reflections on paper, in French. Notably, in the so-called Stockholm inventory are mentioned "sixty-nine sheets, whose continuation is interrupted in several places, containing the doctrine of his *Principia* in French and not entirely consistent with the Latin print".<sup>127</sup> As reconstructed by Matthijs van Otegem, such sheets were, *teste* Jean-Baptiste Legrand, by Descartes's hand. It was on the basis of this evidence that Legrand, therefore, wrongly labelled the articles from III.41 to the end of Descartes's *Principia* as having been translated by Descartes himself (a claim in fact contradicted by some contents of Descartes's correspondence, testifying that the whole text was translated by Picot).<sup>128</sup> Therefore, such sheets contained a copy, by Descartes, of the French translation of the articles of the *Principia* from III.41 onwards, including of

course III.83, IV.18, and IV.189.<sup>129</sup> It might be that the variants reported in De Raey's *dictata* were written by Descartes in such a manuscript, to which he could have access along with Descartes's *Olympica*. In any case, the variants reported in De Raey's *dictata* are absent in the French editions of the *Principia* which appeared in 1668 (Paris, Girard), bearing the sub-title *Revised, and corrected in this last edition (Reveus, et corrigez en cette dernière édition* – by an editor whose identity could not be ascertained), and, more notably, in 1681: this bears the sub-title *Revised and corrected very exactly by Mr. CLR (Reveuë et corrigée fort exactement par Monsieur CLR*, Paris, Girard, this being the only edition bearing such a sub-title), and was apparently edited by Clerselier, who had received from Chanut such sheets from Stockholm. Therefore, De Raey might have seen such additions on another manuscript: for instance, one of the papers contained in the Leiden trunk. In fact, De Raey's own disclosure of the original title of this treatise (*Elementa philosophiae*) reveals that he had access to a further manuscript version of Descartes's treatise. In any case, such 1668 and 1681 editions contain negligible variants with respect to the first French edition (1647),<sup>130</sup> so that we can suppose that they were prepared without any collation with a manuscript, and even that Clerselier did not take part in their editing. In turn, De Raey edited the text of the 1656 Elsevier Latin edition of Descartes's *Principia*, correcting the typographic errors present in the previous editions, but he did not provide any addition to the text.<sup>131</sup>

## Notes

1. Statement of Burchard de Volder to Gottlieb Stolle, from a colloquium dating to 18 July 1703 reported in Stolle's *Reisejournal*: Warsaw University Library, Cod. IV oct. 49, 592. Transcription kindly provided by Martin Mulsow.
2. De Raey, *De igne*, dedicatee's page; Sorbière, *Relations*, 687–688; De Raey to Melchior Leidekker, 25 October 1687: De Raey, *Cogitata*, 666; Du Rieu, *Album*, XLII, 344, and 366; Molhuysen, *Bronnen*, volume 3, 2; Siegenbeek van Heukelom-Lamme, *Album*, 122. On De Raey, see Verbeek, "Tradition and Novelty"; Strazzoni, "Johannes de Raey"; Del Prete, "Duplex Intellectus".
3. Verbeek, *Descartes and the Dutch*. Moreover, De Raey was student of Adolph Vorstius (1597–1663) at Leiden, dedicating to him his inaugural disputation in medicine: De Raey, *De arthritide*, dedicatee's page. Vorstius was a correspondent of Descartes, and even if he "left hardly any writings, so it remains unknown whether he was sympathetic to Descartes' medical and physiological ideas" (Verbeek, "Vorstius", 756), the dissertation De Raey dedicated him nonetheless contains criticisms to the humoral theory (De Raey, *De arthritide*, thesis 4). Accordingly, Vorstius might have shared with De Raey at least some support for Descartes.
4. Verbeek, "Johannes Clauberg: A Bio-Bibliographical Sketch".
5. See Section 2.
6. Van Miert, *Humanism*, 97–100.
7. Descartes acknowledged his role in Regius's *Physiologia* (albeit critically) in a letter to Regius of early May 1641: "queri sane non possum de tua et Domini de Raey humanitate, quod meum nomen vestris thesibus praemittere volueritis; sed neque etiam scio qua ratione a me gratiae vobis agenda sint", Descartes and Regius, *Correspondence*, 64.
8. "Johannes De Raey, quem ipse Philosophus hoc ornavit testimonio, quod suam optime doceret philosophiam", Clauberg, *Logica: Tobiae Andreae [Epistola]*, 3 (unnumbered).
9. Such a meeting is testified to by Johann Eberhard Schweling (1645–1714) in his *Exercitationes cathedrae in Petri Danielis Huetii [...] Censuram philosophiae Cartesianae* (1690), reporting an extract of their colloquium: "dixerat aliquando Descartes Hagae Comitibus praesentibus Claubergio et de Ræi, puerile esse certam hypothesin excogitare, eademque supposita retentaque quaedam phaenomena explicare et explicationem

- tueri: quin potius videndum, utrum semel data hypothese omnia sic possint exponi, ut una expositio alteram trahat, nullaque sit inter omnes pugna”, Schweling, *Exercitationes*, 184. Schweling enrolled at Leiden as a student of theology on 25 July 1668: Du Rieu, *Album*, 547. Certainly he heard this anecdote from De Raey himself, from whom he reports other statements by Descartes: “nullatenus recordor eorum, quae post tempora inventae methodi habuit pro veris, et dein agnita ab eo sunt pro falsis: nisi quod acceperim ex Cl. Viro Johanne de Raëi, Renatum Descartes aliquando in animum induxisse renunciare dogmati transsubstantiationis, incassum conciliato cum principiis philosophiae; nostramque fidem voluisse amplecti; quodque dedisset hoc effectui, nisi eristicis de Confraternitate Mariana Voetium inter ac Maresium scriptis absterritus coepto fuisset”, Schweling, *Exercitationes*, 91–92. For a commentary, see Armogathe, “Early German Reactions”. From September 1648 to September 1649 Descartes was residing at Egmond-Binnen, after having come back from France. He was present at The Hague at the end of May 1649 (when he met Pierre Hector Chanut on 28–29 May) and in mid-August 1649 (when he wrote a letter to Pierre de Carcavi on 17 August): AT V, 359–360 and 391.
10. “Regius [. . .] salutatur te quam humanissime. Idem meo nomine quaeso faxis, occasione data, apud Dn. Heijdanum, dn. Hoogelandium, et dn. Gilotti patrem, optimum Senem, et c. communes nostros amicos, imprimis Nob. dn. des-Cartes, si forte adesset”, Dotzen to De Raey, 19/29 July 1649: Bremen City Archive, ms. StAB 2-P.6.b.1.a.16.l., 21c.
  11. On 19–23 August 1638 Descartes wrote to Regius allowing him to visit him together with Henricus Reneri: however, Reneri became ill and they could not meet during the Autumn. Later, Descartes allowed Regius to visit him alone, after a request of Regius probably dating to January 1639: see the letter of Descartes to Regius of early February 1639 (Descartes and Regius, *Correspondence*, 12–14) and the diary entry of Ole Borch of 9 March 1661: “ex colloquio Dn. de Raëi, [. . .] Regium [. . .] ex tractatib. quibusdam Dn. Cartesij et cum ipso colloquiis multa hauvisse quæ suæ Philosophiæ inspexit”, Borch, *Itinerarium*, volume 2, 43. See also Buning, *Reneri*, 232
  12. Schmaltz, “The Early Dutch Reception of *L’Homme*”.
  13. De Raey, *De igne*, dedicatee’s page; Descartes, *De homine: Interpretis epistola ad amicam*, 1–4 (unnumbered); Comenius, *Suite de l’Admonition*, § 69; Borch, *Itinerarium*, volume 2, 217. Notably, on 19 January 1648 Heereboord acted as witness in the baptism of De Raey’s son Jacob at Leiden: Leiden Municipal Archives, Dopen NH Hooglandsche Kerk, 11 december 1644 - 11 augustus 1652, archief 1004, inventarisnummer 235, 19 January 1648.
  14. Descartes to Andreae, 27 May 1644: AT IV, 123.
  15. See the diary entry of Borch of 29 July 1661: “[. . .] visitavi [. . .] Comenium (in de neglantierse gracht) [. . .]; opera sua varia mihi ostendit sed affecta, opus pansophicum sed in generalibus tantum occupatum, aliàs magno judicio conscriptum; trigam quæstionum contra Cartesium, cum Tobias Andreae socer (in cujus aedib. diu vixerat Cartesius) post tridui velitationem non posset eum ad Cartesianismum pertrahere”, Borch, *Itinerarium*, volume 1, 185.
  16. Descartes, *Correspondence 1643*, xxi–xxiii; Agostini, *Clerselier*, volume 1. Even if no letters between De Raey and Andreae have survived, evidence on their acquaintance is given in Clauberg, *Logica: Tobiae Andreae Epistola*, as well as in the letters of De Raey to Clauberg of 3/12 November 1652 and of Andreae to Clauberg of 23 June 1657: see Strazzoni, “On Three Unpublished Letters”.
  17. “Il étoit particulièrement attaché à M. de Hooghelande, qui ne contribuoit pas peu à le fortifier contre Revius et les autre ennemis de M. Descartes”, Baillet, *Vie*, volume 2, 350. Baillet does not declare his source. See also *supra*, n. 10. On Van Hogelande, see Van Ruler, “Hogelande”.
  18. Van Schooten was present at the opening of Descartes’s trunk at Van Hogelande’s house in March 1650. Moreover, De Raey and Van Schooten took care of the editing of the 1656 publication of Descartes’s *Opera philosophica*. He was in possession of a manuscript copy of Descartes’s *Compendium musicae* and of other items now preserved at the Groningen University Library. See Descartes, *Principia* (1656): *Typographus ad lectorem*; Descartes, *Correspondence 1643*, 14; Dopfer, “A Life of Learning”; Descartes, *Specimina philosophiae*, 15.

19. “M. de Raey reste aujourd’huy le seul de ceus qui auroient pu dire des nouvelles d’un paquet de papiers et de lettres qui se trouverent dans ce coffre [. . .]. Il se rencontra aussi parmi divers livres et papiers, quelques écrits, et quelques lettres de M. Descartes ramassées en un paquet”, Baillet, *Vie*, volume 1, xxvii–xxviii, and volume 2, 428–429. On the Leiden trunk, see Descartes, *Correspondence 1643*, xi–xv.
20. Leiden Municipal Archives, Archief van notaris Frans Doude, 627: Minuutakten (1650), ff. 157–159; 652: Minuutakten in het Frans (1650), ff. 122–123.
21. “M. de Raey a eu la bonté de répondre sur le premier chef que les papiers qui s’étoient trouvez dans le coffre étoient en *trés petit nombre con de peu d’importance: que M. Descartes avoit emporté les principaux en Suède*”, Baillet, *Vie*, volume 1, xxviii. Baillet refers to now lost letters by Van Limborch of 10 March and 15 April 1690.
22. Baillet, *Vie*, volume 1, xxviii–xxix, and volume 2, 386.
23. “Si elles n’ont pas été brûlée, il n’y a peut-être eu que la crainte de les rendre utiles au public qui luy [De Raey] en a fait faire un mystère a M. Van Limborch”, Baillet, *Vie*, volume 1, xxix.
24. “Nous aurions souhaité le désintéressement de M. Chanut, ou le zèle de M. Clerselier, à ceux qui se sont rendus maîtres de ces écrits; et il faut espérer que la justice qu’ils doivent à l’amitié de M. Descartes leur fera restituer au public un bien qu’il est en droit de leur redemander”, Baillet, *Vie*, volume 2, 429.
25. De Raey consulted Johannes Hudde (1628–1704) before replying to Baillet: “Il a consulté M. le Bourgmastre Hudde [. . .], et après avoir mûrement considéré ce qu’on étoit capable de faire en France, ils ont été d’avis *de ne se mêler en aucune maniere dans cette description de la vie de M. Descartes, et de n’y contribuer aucune chose*. M. de Raey a dit en particulier [. . .] *vita Cartesii res est simplicissima, et Galli eam corrumperent*. C’est ce qu’il a encore répété depuis à M. Le Clerc, de peur que M. Van Limborch n’eut pas bien compris la méchante opinion qu’il avoit de la bonne foy des François. Je souhaite [. . .] que Dieu benisse M. de Raey, et j’ose espérer de tout la Nation qu’il a outragée, qu’il n’y trouvera personne qui daigne se vanger de luy”, Baillet, *Vie*, volume 1, xxix–xxx. His source is the letter by Van Limborch of 15 April 1690. Hudde had been a student of De Raey at Leiden from 1654, and lived at his house: De Jong, “The Most Versatile”, 10. See also *infra*, n. 125.
26. Baillet, *Vie*, volume 1, xxxi–xxxii. His sources are unspecified letters by Van Limborch and others.
27. Descartes, *Correspondence 1643*, xii. De Raey’s participation to the Elsevier Latin edition of Descartes’s *Epistolae* of 1668–1683 (whose texts reveal differences with Clerselier’s edition of 1657–1667) and to the 1701 Blaev edition of his *Opuscula posthuma, physica et mathematica*, admitted by Charles Adam, is not however supported by any direct evidence: for a discussion, see Bortolotti, “I manoscritti”. If De Raey’s contribution to the edition of the *Epistolae* can be hypothesized on the ground of his participation to that of Descartes’s *Opera philosophica* in 1656 (published by the Elseviers), his involvement in the 1701 edition can be excluded, given the fact that it included a Latin edition of Descartes’s *Le monde*: whose publication in 1664 had been criticized by De Raey in his academic *dictata*: “vocatur tractatus ille (Gallice conscriptus) De lumine, ab imprudentibus editus, cum primae et rudes tantum cogitationes sint, ex quibus hoc opus est”, De Raey, *Analysis*, 45r (this is an addition to the main text of the *dictata*; for bibliographical details on De Raey’s *dictata* see Section 3).
28. Lipstorp, *Specimina*, 73–88. A first edition of Borel’s biography could have appeared in 1653: AT XII, vii.
29. Du Rieu, *Album*, 422.
30. “Cet auteur, n’ayant pas voulu laisser perdre les particularités de la vie de M. Descartes qu’il avait apprises en Hollande tant de M. Schooten l’ancien que de M. de Raey docteur en médecine, nous a donné en deux feuilles d’impression plus que l’on aurait dû attendre d’un étranger qui n’a travaillé que sur des relations subreptices”, Baillet, *Vie*, volume 1, xiii–xiv.
31. “C’est à M. de Raey qu’il étoit particulièrement redevable de tout ce qu’il a dit de meilleur; mais parce qu’il a oublié de le reconnaître au moins publiquement, je me crois obligé de suppléer à ce défaut, et de rendre à M. de Raey la justice qui lui étoit due par M. Lipstorp.

- Il est bon que l'on sache que ç'a été à l'insu de M. de Raey et sans sa participation que M. Lipstorpheus a publié ce qu'il en avait appris touchant la vie de M. Descartes. M. de Raey avait un disciple nommé M. van Berhel jeune homme de beaucoup d'esprit et de grande capacité, à qui il avait donné divers petits mémoires curieux. M. Lipstorpheus, ayant reçu de M. van Berhel quelques-uns de ces mémoires qui regardaient M. Descartes, les avait donnés de bonne foi au public, sans examiner s'il avait besoin du consentement de M. De Raey, ou s'il devait les autoriser de son nom", Baillet, *Vie*, volume 1, xiv–xv. Baillet's source is the letter by Van Limborch of 15 April 1690. Baillet does not provide insights on such a student, and omits his first name. Given the fact that Baillet refers to a young man, he was certainly Petrus or Pieter van Berkel from Leiden, born around March–April 1634 (being baptized on 2 April), who enrolled at the University in April 1646 as 12 years old student. He acted as *respondens* in two disputations presided over by De Raey (*Disputationum physicarum, ad Problemata Aristotelis, tertiae, de origine motus, pars prior* (1651); *Disputatio physica de aestu maris eiusque continuo motu ab oriente in occidentem* (1653) – in the latter disputation being also the author). No information on his graduation(s) or later life could be retrieved, even if at some point he probably graduated in medicine. He was also a student of Van Schooten (to whom he dedicated his *De aestu maris*) in mathematics, being mentioned (along with De Raey) in a letter of Lipstorp to Van Schooten of 18 January 1654, in the letters of Christiaan Huygens to Van Schooten of 20 September and 23 October 1653, in Huygens's mathematical annotations of 1 September 1653, and in a mathematical manuscript part of the Van Schooten Collection at the Groningen University Library (Hs 112). See Leiden Municipal Archives, Dopen NH Hooglandsche Kerk, 20 augustus 1628 - 1635, archief 1004, inventarisnummer 233, 2 April 1634; Du Rieu, *Album*, 368; Huygens, *Oeuvres*, volume 1, 242, 246, and 274; volume 12, 80; Molhuysen, *Bronnen*, volume 3, 252–253; Dopper, "A Life of Learning", 275–276.
32. I assume that De Raey did so in his private lectures, given the relatively advanced contents of the commentaries and given the fact that public lectures were often overcrowded and noisy. Nonetheless, private lectures were a substantial part of academic teaching: Wiesenfeldt, *Leerer Raum*, 100–105. On Cartesian *dictata*, see Verbeek, "Les *Principia*"; Verbeek, "Clauberg et les *Principia*"; Collacciani, "Manuscrits"; Cellamare, "A Theologian"; Strazzoni, "Neglected Sources on Cartesianism".
  33. The TPQ can be determined as to 1657, because De Raey quotes from Descartes's letter to Elisabeth of Bohemia of 4 August 1645, published for the first time by Clerselier in the first volume of Descartes's correspondence (1657): "honores ac divitiae: epistola ad Elisabetham", De Raey, *Dictata in Meditationes*, 37. Cf. Descartes, *Lettres*, volume 1, 11: "les honneurs, les richesses et la santé". As to the TAQ, in De Raey's *Annotata* (1658) there is a reference – in an addition – to an annotation to page 5 of the *Meditationes*. Therefore, at the time of the insertion of additions in his *Annotata* De Raey had already prepared a commentary on the *Meditationes*. Accordingly, a tentative TAQ is 1658.
  34. The manuscript is undated. As to the TPQ, in the main text of the commentary De Raey refers to Clauberg's *Disputationes physicae de motu* (1657–1658) and to Dirk Rembrandt van Nierop's *Wiskonstige musyka* (1659): De Raey, *Dictata in Dissertationem de methodo, in Principia philosophiae*, 125, 188, and 224–225. A precise TAQ could not be determined: in any case, De Raey was still professor at Leiden.
  35. The manuscript is undated. As to the TPQ, in the main text of the commentary there is a reference to the 1664 apparition of a comet: namely the comet C/1664 W1, observed from November 1664 to February 1665. In an addition on the same line, there is a reference to the apparition in 1665: De Raey, *Analysis*, 58v. Moreover, De Raey mentions (in an addition) the annexation of the Franche-Comté to France (De Raey, *Analysis*, 56r), which took place in 1668. The TAQ can be in any case determined as to 1668 itself because De Raey is labelled as professor at Leiden in the title.
  36. Precise TPQ and TAQ could not be established, given the fact that these *dictata* do not contain suitable references to other text or facts. Since the manuscript is preserved at Amsterdam, we can nonetheless date these *dictata* to De Raey's Amsterdam years (1669–1702).

37. See *infra*, n. 62.
38. On him, see Arbib, “Villebressieu”.
39. On other biographies of Descartes which appeared during the seventeenth century, see Baillet, *Vie*, volume 1, xvi–xx.
40. De Raey, *Annotata*, 11. This text is an addition. The use of italics indicates the commented lemma. The commentary is on “totos dies solus in hypocausto morabar, ibique variis meditationibus placidissime vacabam”, AT VI, 545. Cf. the original French: “je demeurais tout le jour enfermé seul dans un poêle, où j’avais tout loisir de m’entretenir de mes pensées”, AT VI, 11. See also *infra*, n. 97.
41. AT X, 213–256.
42. Sabra, *Theories of Light*, 105–110. Schuster, *Descartes-Agonistes*, 153 and chapter 4.
43. On early modern biographies see Ribard, *Raconter*.
44. See *supra*, n. 27.
45. Schuster, *Descartes-Agonistes*, chapters 8 and 12.
46. “Hanc enim eius fuisse perpetuam consuetudinem, ut mane experrectus in reclinatorio suo ad clarum usque diem meditabundus iaceret, norunt illi, qui ipsum familiarius noverunt, quique tunc eius ingenii vires saepius sunt periclitati. Hac ratione invenit speciosam suam algebra, omnium liberalium artium et scientiarum clavem, optimam verum a falso dignoscendi methodum. Hanc veritatis ducem cum securius in dies persequeretur, et interea in vulgari analysi geometrica a praeceptore suo exerceretur, id consequutus, ut non tantum dexteritate ingenii aliis suis in hocce studio analytico commilitonibus palmam praeriperet, sed et praeceptoris exspectatione opinione citius maior factus, nihil iam amplius, quantum ad analysin istam spectaret, sibi proponere permetteret, quod non miro artificio protinus solveret. Imo ipsum praeceptorem, in algebraicis forsitan non tam exacte versatum, novis quaestionibus ita defatigavit, ut eum non amplius sua informatione indigere ingenuo testimonio confirmaret. Erat autem ipsi paulo ante difficilior quaestio a magistro proposita, quam per novam suam methodum artificiose solverat, solutaque copiam magistro fecerat. Is novum solvendi modum per quantitates quasdam simplices, post habitis numeris, conspicatus, ipsum monuit, ut Viêtam consulere, qui eiusdem argumenti nonnulla concinnaverat. Tum ille gaudio ingenti delibutus, quod alium quoque huius methodi peritum extitisse intellexerat, non destitit praeceptorem rogare, ut sibi huius copiam facere”, Lipstorp, *Specimina*, 75. Absent in Borel’s account. See Cook, *The Young Descartes*, 85–86.
47. Rabouin, “What Descartes Knew of Mathematics”.
48. “Je croyais avoir déjà donné assez de temps [...] à la lecture des livres anciens, et à leurs histoires, et à leurs fables”, AT VI, 6.
49. De Raey, *Analysis*, 4r–v. This text is an addition. The commentary is on “eram tunc in Germania”, AT VI, 545. Cf. the original French: “j’étais alors en Allemagne”, AT VI, 11. In the transcriptions, the use of “{ . . . }” indicates unreadable words. On Descartes and Beeckman’s first meeting, see Belgioioso and Armogathe, “Introduzione”, 22.
50. “Agebat tum temporis, cum primum Gallias reliquit, vigesimum primum aetatis annum; et quia fabulae humanae spectatorem simul atque actorem agere gestiebat, primo omnium militiam sequutus est, et in Bataviam progrediens Gloriosissimo Arauniensium Principi Mauritio, confaederati Belgii Gubernatori, et Generalissimo, nomen dedit, tanquam miles (ut vocant) voluntarius. Haerebat hic princeps tum temporis cum copiis suis circa Bredam in Brabantia, quae urbs uti et nunc potentissimorum Ordinum iugum agnoscebat, necdum enim a Marchione Spinola recuperata erat. Accidit autem tum temporis, cum noster Des Cartes Bredae commoraretur, ut aliquis tenuioris fortunae mathematicus, iniquiorem suam sortem cum meliore commutaturus, problema quoddam mathematicum omnibus eius loci viris solvendum proponeret, idque per schedulam in publico affixam. Confluebant huc omnes viatores, et inter eos quoque noster Des Cartes. Sed quia nuperrime in Belgium venerat, vernaculi huius gentis idiomatis nondum callens erat, ideoque proxime sibi adstantem virum (quem postea Clariss. Becmannum, Gymnasii Dordracensis moderatorem philosophum et mathematicum non incelebrem esse cognoscebat) rogavit, ut si posset, Gallico vel Latino

idiomate formale huius problematis exponeret. Ille, honesto eius petito annuens, movit nostrum, ut in codicillos problema coniceret, eiusque solutionem ipsi Becmanno promitteret, qui et nomen et aedes suas ipsi indicaverat. Nec fefellit eum opinio. Nam domi illud iuxta leges methodi tanquam ad Lydium lapidem examinans, protinus eius victor extitit, haud maiori opera et promptitudine, quam qua olim Viëta trihorii spatio superabat omnes illius problematis molestias, quod ab Adriano Romano omnibus totius terrarum orbis mathematicis erat propositum. Itaque, ut fidem suam liberaret, non diu moratus, ad Becmannum perexit, ei cum solutione ipsam eius constructionem offerens. Ibi ille Cartesium intueri, exspectatione sua maiorem, eius ingenium mirari eum perofficiose colere, et perpetuas cum ipso amicitiae dexterarum iungere coepit. Quanti vero ipsum per omnem vitam suam fecerit, testis est Batavia sublimium ingeniorum ad invidiam usque ferax et cultrix”, Lipstorp, *Specimina*, 76–77 (on Faulhaber, see 78–79). Absent in Borel’s account.

51. Borel, *Compendium*, 2. Descartes himself cited such an episode from Plato’s *Meno* in his *Epistola ad Voetium* (1643): AT VIII-2, 166–167.
52. Descartes to Mersenne, 31 March 1638: “[. . .] presque celuy du monde qui sçait le plus de ma methode”, AT II, 89. On Gillot, see Witkam, “Jean Gillot (Een Leids ingenieur)”; Witkam, “Jean Gillot (Een Leids ingenieur) tweede deel”. He is mentioned also in Lipstorp, *Specimina*, 85.
53. Dotzen to Gillot, 1 July 1649, Dotzen to De Raey, 19 July 1649, and De Raey to Dotzen, 2 August 1649: Bremen City Archive, ms. StAB 2-P.6.b.1.a.16.l., 20, 21, and 22.
54. De Raey, *Annotata*, 505–506. This commentary (but not the lemma itself) is an addition. The commentary is on “spiritus et exhalationes, nonnulla etiam metalla, ut aes, ferrum, stibium, ex terra interiore ad exteriorem adducunt”, AT VIII-1, 247.
55. AT XII, 107–108; Buning, *Reneri*, 170–171.
56. AT I, 137. On Descartes and chemistry, see Matton, “Cartésianisme et alchimie”; Joly, *Descartes et la chimie*.
57. I quote from a letter of Reneri to David de Wilhem of 10 September 1631, whose text is provided in Buning, *Reneri*, 125: “perficere poterit saltem valde illustrare, generaliore illam philosophiam D. de Cartes”.
58. Matton, “Cartésianisme et alchimie”.
59. De Raey, *Analysis*, 8r. The commentary is on “ante octo annos, ut omnibus me avocationibus quae inter notos et familiares degentibus occurrunt liberarem, secessi in hasce regiones”, AT VI, 557. Cf. the original French: “il y a justement huit ans, que ce désir me fit résoudre à m’éloigner de tous les lieux où je pouvais avoir des connaissances, et à me retirer ici”, AT VI, 31.
60. Published by Clerselier in 1657: Descartes, *Lettres*, volume 1, 579–582. Cf. AT I, 202–204.
61. As detailed in Clarke, *Descartes*, 421–423.
62. “Relictis Parisiis [. . .] e Gallia in Bataviam concessit, inque ea cum eremo philosophica aulae delicias commutavit. Et ita nunc Egmondæ, mox Endgestæ, mox Amstelodami, mox Lewardæ in Frisia occ., mox Daventriæ, rursus prope Harlemum in villula, iterum Harderwici, mox Ultraiecti, rursus Lugduni Batavorum, potissimum vero in villulis solitarius egit, et hoc pacto viginti et quod excurrit annorum spatio auso feliciter potius est”, Lipstorp, *Specimina*, 81–82. Borel provides an account more similar to De Raey’s, but still not matching it, and not following a chronological order: “in Italia vero Galileo aliosque claros convenit viros, indeque ad Gavensem obsidionem iuxta Genuam venit, et tandem in Galliam rediit et in obsidione Rupellensi [. . .] adfuit. [. . .] Postea in Daniam iter facere voluit, [. . .] sed ab Imperatoris cohortibus detentus fuit in comitatu Hemedensi, hinc Tyrolum et Venetiam adire moliebatur, hincque Casali obsidioni adesse instituerat [. . .]. Sed Amstelodamum iterum petiit, et inde Lutetiam [. . .]. Anno 1648 in Hollandia fuit et Lutetiae a Rege optimis evocatus conditionibus. Dum Lutetiae esset, reditus suos annuos ita direxit, ut ubicumque liberet, per amici manus eos acciperet. Bataviam ergo petiit, ubi opera sua in eremo dilecta egit [. . .]. Germaniam et Pannoniam etiam olim viderat, dum veritatem

- inquireret, ubi Imperatoris coronamento adfuit. [...] Cum nil dignum apud homines scientiae suae invenisset, eremum [...] elegit sibi iuxta Egmondum in Hollandia, sibi que solitarius in villula per 25 annos remansit”, Borel, *Compendium*, 5 and 7.
63. Verbeek, *Descartes and the Dutch*, 29–31; Verbeek, “Johannes Clauberg”, 182–183; Descartes, *Correspondence 1643*, 183–192; Clarke, *Descartes*, 242–243.
64. De Raey, *Annotata*, 98.
65. De Raey, *Analysis*, 8v. The commentary is on the sub-title *Principiorum philosophiae pars prima. De principiis cognitionis humanae* (AT VIII-1, 5).
66. Wittich’s *Observationes* on Descartes’s *Meditationes* contains references to Clauberg’s *Paraphrasis in Renati Descartes Meditationes de prima philosophia* (1658) and to Wittich’s own *Consensus veritatis in Scriptura divina et infallibili revelatae cum veritate philosophica a Renato Des Cartes detecta* (1659); Wittich, *Observationes in Meditationes*, 13 and 14 (unnumbered). Therefore, the TPQ of his *Observationes in Meditationes* is 1659. Wittich’s commentary on Descartes’s *Principia* does not contain references allowing us to date it, but since it was certainly part of the same course on metaphysics, we can presume that it was coeval with the *Observationes in Meditationes*. The TAQ of both the commentaries can be established as to 1664. Indeed, the cover of ms. 3415 reports two dates: “A[nn]o 1656”, and “M[ichael] D[e] Mandeville, med. studios., die ultimo mensis Aprilis 1664”, and three other names: “Gualtherus De Mandeville”, “Antonette”, and “Joachimus”. While the two latter persons could not be identified, Walter de Mandeville (1637–1662; brother of Michael, 1639–1699, and uncle of Bernard, 1670–1733) enrolled at Franeker as a student of medicine on 28 August 1655, then at Leiden as student of medicine on 30 September 1656, and graduated in medicine at Franeker on 10 March 1659, before becoming, in February 1661, professor of medicine at Nijmegen. Therefore, he might have transcribed at least one part (as at some point the hand of the writer changes) of the only dated content of ms. 3415, namely De Raey’s *dictata* on Daniel Sennert’s *Epitome Institutionum medicinae* (1631), reporting, on their first page, “inceptum collegium die 29 Septemb. 1656”, i.e., the day just before Walter’s enrollment at Leiden: see De Raey, *Dictata ad Epitomen*, 1 and 35. Later, Michael might have completed the manuscript with the transcription of Wittich’s commentaries on Descartes’s *Meditationes* and *Principia*, written by a third hand, which are the last contents of the manuscript itself. Michael enrolled at Leiden as student of law in October 1665, before obtaining a degree in medicine at Nijmegen in 1666. Even if no evidence of his studies at Nijmegen before 1665 could be retraced, he might have followed Wittich’s lectures there in 1664. In fact, there are no traces of enrolment of his at Leiden in the second half of 1650s, so that we can (hypothetically but reasonably) (1) rule out that he continued to copy De Raey’s 1656 *Dictata* after his brother, and (2) attribute to him the copying of Wittich’s commentaries, which he presumably finished in April 1664, according to the date reported on the manuscript cover. See Centraal Bureau van Genealogie, “The Mandeville Genealogy”; Cellamare, “A Theologian”; Strazzoni, “Neglected Sources on Cartesianism”; *infra*, n. 111, where I discuss other *dictata* by Wittich.
67. Later, Wittich was a colleague of Clauberg at Herborn and Duisburg in 1651–1655. On him, see Eberhardt, *Christoph Wittich*. Notably, Wittich also reports that Alphonse Pollot (ca. 1602–1668), correspondent of Descartes, lost his arm at the siege of Breda (1624–1625), rather than at the siege of ’s-Hertogenbosch in 1629, as reported by Constantijn Huygens in one of his poems (Huygens, *De gedichten*, volume 2, 224–225): “*audiveram*: hic facit exemplum puellae Parisiensis de quo in Principiis. Idem contigit cuiusdam cohortis praefecto summo authoris amico nomine Pilot, postquam in obsidione Bredana globo tormentario brachium amisisset, qui postea Aulicus fuit Principis, ac tandem fortalitii cuiusdam in Flandria constitutus gubernator”, Wittich, *Observationes in Meditationes*, 59 (unnumbered). Cf. Wittich, *Annotationes*, 140 (reporting the same text, with slight variants), AT VII, 77, and AT VIII-1, 320. As alluded to by Wittich, Pollot was then chamberlain of Frederick Henry (from 1642) and commander of the fortress of Saint Anna in the Flanders (from 1645). See AT XII, 567–575; Descartes, *Correspondence 1643*, 289–292.
68. Wittich, *Observationes in Principia*, 2 (unnumbered).

69. “Non alia principia in physica, quam in geometria, vel in mathesi abstracta, a me admitti. [...] Suppono meos lectores vel prima elementa geometriae iam novisse, vel saltem ingenium satis aptum habere ad mathematicas demonstrationes intelligendas. Nam plane profiteor me [...] nihil [...] ut verum admittere, quod non ex communibus illis notionibus, de quarum veritate non possumus dubitare, tam evidenter deducatur, ut pro mathematica demonstratione sit habendum”, AT VIII-1, 78–79. Descartes refers here to the principles of physics, nonetheless acquired in metaphysics: see Garber, *Descartes’ Metaphysical Physics*.
70. Descartes, *The Philosophical Writings*, volume 2, 110–111. Cf. AT VII, 155–156.
71. Newman, “Descartes on the Method of Analysis”, 74.
72. Descartes, *The Philosophical Writings*, volume 2, 111. Cf. AT VII, 156.
73. Descartes, *Conversation with Burman*, 12. Cf. AT V, 152–153 (on the lemma, from Descartes’s *Meditationes*, “nullum plane habebō” – originally in AT VII, 42).
74. Gueroult, *Descartes selon l’ordre des raisons*; Curley, “Spinoza – As an Expositor of Descartes”; Garber, *Descartes Embodied*, chapter 3; Newman, “Descartes on the Method of Analysis”.
75. Curley, “Spinoza – As an Expositor of Descartes”, 136–137. I owe these quotations to Garber, *Descartes Embodied*, 57.
76. Garber, *Descartes Embodied*, 58.
77. “*Tulimus*: hic loquitur author in plurali, atque ita supponit quaedam per methodum syntheticam, quae nondum erant probata. In Meditationibus loquitur in singulari de se solo, de quo per intimam conscientiam, accuratam potuit habere cognitionem”, Wittich, *Observationes in Principia*, 3 (unnumbered). Cf. AT VIII-1, 5. Also Clauberg noticed the differentiation between the use of the singular in the *Meditationes* and of the plural in the *Principia*, in his commentaries on the latter. However, only Wittich explicitly relates this to the use of a synthetic method. Cf. Clauberg’s commentaries: “considera etiam differentiam inter Primam Meditationem et hos articulos: v.g. ibi numero singulari de se, hic in plurali de nobis loquitur, quia Principia philosophiae publici iuris faciens voluit contendere ut, si vera essent, a quam plurimis reciperentur”, Clauberg, *Initiatio*, 376–377 (see also 214–215); “hic loquitur auctor in numero plurali, secus ac in Meditationibus, quia hoc scriptum cum ederet, iam paratus erat contendere, ut si vera essent, quae in eo traderet, a quamplurimis reciperentur”, Clauberg, *Opera: Notae breves in Renati Descartes Principia philosophiae*, 494. Clauberg, like Thomas Hobbes in his *Elementorum philosophiae sectio tertia, De cive* (1642), adopted such a title in his *Elementa philosophiae sive Ontosophia* (1647). Notably, Wittich extensively discussed the use of analytic and synthetic method in his *Anti-Spinoza*, posthumously published in 1690, and criticizing the adoption of a synthetic method in metaphysics: Wittich, *Anti-Spinoza: De methodo demonstrandi*. For a discussion, see Verbeek, “Wittich’s Critique of Spinoza”; Douglas, “Christoph Wittich’s *Anti-Spinoza*”.
78. Garber, *Descartes Embodied*, 59.
79. AT I, 287. On the phases of preparation and publishing of Descartes’s *Principia*, see Ariew, “*Les Principia*”; Ariew, *Descartes and the First Cartesians*; Van Otegem, *A Bibliography*, volume 1, 254–257.
80. AT IV, 213.
81. Descartes to Mersenne, 30 September 1640: AT III, 185.
82. “Je répondrais très volontiers à ce que vous demandez touchant la flamme d’une chandelle, et choses semblables; mais je vois bien que je ne vous pourrai jamais bien satisfaire touchant cela, jusqu’à ce que vous ayez vu tous les principes de ma Philosophie, et je vous dirai que je me suis résolu de les écrire avant que de partir de ce pays, et de les publier peut-être avant un an. Et mon dessein est d’écrire par ordre tout un Cours de ma Philosophie en forme de Thèses, où, sans aucune superfluité de discours, je mettrai seulement toutes mes conclusions, avec les vraies raisons d’où je les tire, ce que je crois pouvoir faire en fort peu de mots; et au même livre, de faire imprimer un Cours de la Philosophie ordinaire, tel que peut être celui du Frère Eustache, avec mes Notes à la fin de chaque question, où j’ajouterai les diverses opinions des autres, et ce qu’on doit croire de toutes, et peut-être à la fin je ferai une comparaison de ces deux Philosophies”, Descartes to Mersenne, 11 November 1640: AT III,

- 232–233 (see also 231–235). The same contents are repeated, with some variants, in the letter of Descartes to Mersenne of 10 or 17 December 1640, where Descartes labels his *Philosophie* or *Cours* as an *Abregé*: AT III, 258–260. On Descartes and the Scholastic treatises, see also the letters of Descartes to Mersenne of 3 December 1640 (AT III, 251), 21 January 1641 (AT III, 286), and 22 December 1641 (AT III, 470).
83. “[...] cette année, que j’ai résolu d’employer à écrire ma Philosophie en tel ordre qu’elle puisse aisément être enseignée. Et la première partie, que je fais maintenant, contient quasiment les mêmes choses que les Méditations que vous avez, sinon qu’elle est entièrement d’autre style, et que ce qui est mis en l’un tout au long, est plus abrégé en l’autre, et vice versa”, Descartes to Mersenne, 31 December 1640: AT III, 276.
  84. In Descartes’s *Responsiones quartae* (AT VII, 252), and in his letters to Constantijn Huygens of 29 July 1641 (AT III, 772–773) and to Mersenne of 22 December 1641 (AT III, 465). See also Huygens to Descartes, 17 July 1641 (AT III, 769).
  85. Descartes to Huygens, 31 January 1642: AT III, 523. See also Descartes to Mersenne, 19 January 1642: AT III, 481. The news that Descartes wanted to prepare a refutation of Scholastic philosophy, in particular, of Eustache’s *Summa*, circulated in the Netherlands: see the letter of Heereboord to Andreas Colvius of 8 April 1642: AT VIII, 196.
  86. In the letters of Descartes to Regius of 5–10 March 1642 (Descartes and Regius, *Correspondence*, 134) and 10–25 March 1642 (Descartes and Regius, *Correspondence*, 137), to Mersenne of 7 December 1642 (AT III, 598) and 2 February 1643 (AT III, 615), to Huygens of 5 January 1643 (AT III, 801), 24 May 1643 (AT III, 670), 20 September 1643 (AT IV, 753), and 26 February 1644 (AT IV, 770–771). See also Descartes’s *Epistola ad Dinet* (1642): AT VII, 574. In his letter to Colvius of 20 April 1643 (AT III, 646–647) Descartes does not mention any title of his treatise, which he discusses in the letter itself. See, moreover, the letter of Sorbière to Mersenne of 25 August 1642 (Mersenne, *Correspondance*, volume 11, 241), referring to Descartes’s *Physica*, and the letters of Huygens to Descartes of 5 October 1643 (AT III, 756) and 23 November 1643 (AT IV, 767), referring to Descartes’s *Physique*.
  87. “Il luy communiqua à son tour les desseins qu’il avoit de faire imprimer premièrement sa Philosophie, c’est-à-dire ses Principes de Physique pendant l’année qu’il devoit passer dans la maison”, Descartes, *Correspondence 1643*, 28.
  88. “Brevi legemus Partem Physicarum Meditationum quae Amstelodami apud Ludovicum Elzevirium excuduntur, unde plenius de autore judicare poterimus”, Descartes, *Correspondance*, volume 5, 317. Discussed in Descartes, *Correspondence 1643*, 219.
  89. Descartes to Huygens, 20 September 1643: AT IV, 753.
  90. Descartes to Pollot, 1 January 1644 (AT IV, 72–73). As reconstructed by Mattijs van Otegem on the basis of the watermarks, 96 pages namely parts 1, 2, and one fifth of part 3 were printed separately from the remaining of the book: therefore, were those printed before Descartes finished it. In fact, according to the letter of Descartes to Huygens of 26 February 1644 the figures – which can be found especially in parts 3 and 4 – were starting to be cut only at that date. The figures were cut by the publisher: see Descartes’s letter to (probably) Jacques Grandamy of 2 May 1644 (AT IV, 122–123). For a full-blown reconstruction, see Van Otegem, *A Bibliography*, volume 2, 255. Moreover, Descartes labelled his treatise as *Principia* and *Principes de ma philosophie* also in undated letter to an unknown Jesuit (Descartes, *Correspondence 1643*, 178), certainly posterior to May 1642 (but, given the use of such a title, probably not earlier than 1643), and in his letter to Grandamy of 2 May 1644.
  91. Descartes to Mersenne, 31 December 1640 (AT III, 276), Descartes to Huygens, 29 July 1641 (AT III, 772–773). See Van Otegem, *A Bibliography*, volume 2, 254–255.
  92. Descartes to Colvius, 20 April 1643: AT III, 646–647.
  93. Descartes to Huygens, 24 May 1643: AT III, 670.
  94. Descartes to Pollot, 1 January 1644: AT IV, 72–73. See *supra*, n. 90.
  95. See *supra*, nn. 85 and 86.
  96. Descartes, *The Philosophical Writings*, volume 1, 116. Cf. AT VI, 10–11 and 545–546.

97. De Raey, *Annotata*, 12. This text is an addition. Cf. the Latin version: “totos dies solus in hypocausto morabar, ibique variis meditationibus placidissime vacabam. Et inter caetera, primum fere quod mihi venit in mentem, fuit, ut notarem illa opera quibus diversi artifices, inter se non consentientes, manum adhibuere, raro tam perfecta esse quam illa quae ab uno absoluta sunt”, AT VI, 545–546.
98. Rodis-Lewis, *L'oeuvre de Descartes*, volume 1, 46–47; Gaukroger, *Descartes*, chapter 4; Strazzoni, *Dutch Cartesianism*. Rodis-Lewis provides a discussion of the various interpretations of Descartes's *inventum*. See also Crapulli, *Introduzione a Descartes*, 28–32.
99. See *supra*, n. 28.
100. “C. Olympica et ad marginem, XI novembris, caepi intelligere fundamentum inventi mirabilis”, Borel, *Compendium*, 17.
101. “Liber anni 1619, Kal. Ian. sub titulo Parnassi de considerationibus mathematicis”, Borel, *Compendium*, 17. Cf. AT X, 7 (as to the original text of the inventory): “C. Un petit registre en parchemin, quotté en dedans de la couverture: Anno 1619 Kalendis Januarii, où se trouvent premierement 18 feuillets de considérations mathématiques sous un tiltre Parnassus. [...] En prenant le livre d'un autre sens, le discours intitulé *Olympica*, et à la marge: XI Novembris coepi inteligere fundamentum inventi mirabilis”. On the Stockholm inventory, see Descartes, *Correspondence 1643*, xvi–xxi.
102. “[...] un traité [...] en forme de discours, intitulé *Olympica*, qui n'étoit que de douze pages, et qui contenoit à la marge, d'une encre plus récente, mais toujours de la même main de l'auteur, une remarque qui donne encore aujourd'hui de l'exercice aux curieux. Les termes ausquels cette remarque étoit conçüe portoient XI Novembris 1620, caepi intelligere fundamentum inventi mirabilis, dont M. Clerselier ni les autres cartésiens n'ont encore pû nous donner l'explication. Cette remarque se trouve vis à vis d'un texte qui semble nous persuader que cét escrit est postérieur aux autres qui sont dans le registre, et qu'il n'a été commencé qu'au mois de novembre de l'an 1619. Ce texte porte ces termes latins: X Novembris 1619, cum plenus forem enthusiasmi, et mirabilis scientiae fundamenta reperirem et c.”, Baillet, *Vie*, volume 1, 50–51 (cf. AT X, 179). See also volume 1, 81, providing a French rendering of the second passage, and the fragments copied by Leibniz in 1676, which do not include it: AT X, 216.
103. Constantijn Huygens to Elisabeth of Bohemia, 31 December 1653: Huygens, *De briefwisseling*, volume 5, 193–194. See Descartes, *Correspondence 1643*, xviii–xix, showing that the Stockholm inventory was prepared at The Hague in 1653–1654 with the help of Christiaan Huygens.
104. Dopper, “A Life of Learning”, 34–35.
105. De Raey, *Annotata*, 209–210. This commentary (but not the lemma itself) is an addition. The commentary is on “sensus, affectus, et appetitus, qui quidem etiam clare percipi possunt, si accurate caveamus, ne quid amplius de iis iudicemus, quam id praecise, quod in perceptione nostra continetur, et cuius intime conscii sumus. Sed perdifficile est id observare, saltem circa sensus: quia nemo nostrum est, qui non ab ineunte aetate iudicarit, ea omnia quae sentiebat, esse res quasdam extra mentem suam existentes”, AT VIII-1, 32.
106. Ariew, “Descartes and the Tree of Knowledge”; Verbeek, “Tradition and Novelty”.
107. Strazzoni, “Johannes de Raey”; Del Prete, “*Duplex Intellectus*”.
108. Chapter 18, thesis 7, in Clauberg, *Defensio*, 204–205. Cf. AT V, 177 (on the lemma, from Descartes's *Discours*, “assuefacere ingenium meum veritati agnoscendae” – originally in AT VI, 19 and 551).
109. In the commentaries to the lemmas “vel a sensibus vel per sensus”, “supponam igitur”, and “malignum, potentem, callidum”, in Clauberg, *Initiatio*, 271–276, 350–351, and 360–361. Cf. AT V, 146–147. The original lemmas are in AT VII, 18 and 22. Clauberg's *Notae* was presumably prepared in 1654–1655, as it contains references to his own *Logica vetus et nova* (first edition 1654); moreover, the dedicatory letter opening Clauberg's *Initiatio* dates to 13 February 1655: Clauberg, *Initiatio*, 5 (unnumbered), 135, and 161.
110. *Exercitatio* 69, thesis 22, in Clauberg, *De cognitione Dei et nostri*, 453–454. Cf. AT V, 168 (on the lemma, from *Principia* II.2, “propter nos solos” – in AT VIII-1, 81). See Hübener, “Descartes-Zitate bei Clauberg”; Descartes, *Gespräch: Einleitung*.

111. Is worth noting also that while in his *Notae* on Descartes's *Meditationes* Clauberg uses contents of the *Entretien* also in the case of the lemmas "supponam igitur" and "potentem", as to the former De Raey provides a different commentary (albeit consistent with Clauberg's: see the textual comparison provided in [Appendix 1](#), case of lemma "supponam igitur"), and does not comment upon the latter. Interestingly, the same commentary on "a sensibus vel per sensus" given by De Raey is provided – as revealed in [Appendix 1](#) – also by Wittich, both in his *Observationes in Meditationes* and in his *Annotationes ad Renati Des-Cartes Meditationes*, posthumously published in *usum studiorum* by Salomon van Til in 1688, as a collation (according to the front-page) of three manuscripts whose provenance is not specified by the editor. Wittich's *Annotationes* is not dated, however, it contains the same references to Clauberg's *Paraphrasis* (1658) and Wittich's *Consensus veritatis* (1659) given in his *Observationes in Meditationes*: Wittich, *Annotationes*, 19 and 20; see *supra*, n. 66. Moreover, the text of his *Annotationes* largely matches that of his *Observationes in Meditationes* (as evident from [Appendix 1](#)). Therefore, its TPQ is 1659. The only sure TAQ is 1687, when Wittich died. Accordingly, De Raey's *Dictata in Meditationes* was most probably antecedent to both Wittich's ones, and Wittich likely based his commentary on De Raey's. See, for instance, the case of lemma "supponam igitur", in [Appendix 1](#), showing that Wittich might have abridged De Raey's text. All this does not mean that Wittich relied exclusively on De Raey, in accessing the *Entretien*: indeed, in commenting on the lemma "si fas est dicere" (from Descartes's *Meditatio secunda*) he re-used Clauberg's 1654–1655 commentary (presumably antecedent to his own) on the lemma "malignum, potentem, callidum" – which includes a commentary also on the lemma "si fas est dicere" – or the almost identical one given in the *Entretien* (in which the same commentary is repeated, with some variants, both in commenting the lemmas "summe potentem" and "et si fas est dicere malignum"): cf. Clauberg, *Initiatio*, 360–361, Wittich, *Observationes in Meditationes*, 22 (unnumbered; "[...] hoc addit, quia summa potentia et malignitas non videntur posse consistere, si per summam potentiam intelligatur illa absolutissima et simpliciter summa, sed mera est suppositio"), Wittich, *Annotationes*, 36, and AT V, 147 and 150–151 (the original lemma "si fas est dicere" is in AT VII, 26). See also Wittich's commentary on the lemma, from Descartes's *Meditatio tertia*, "eius ope" (AT VII, 47), echoing the *Entretien*: cf. Wittich, *Observationes in Meditationes*, 37 (unnumbered): "eius ope: si enim habeam cognitionem infinitam, ego videor mihi intelligere media, quae faciunt ad obtinendas reliquas perfectiones divinas"; Wittich, *Annotationes*, 79: "eius ope: quia sic perfectissime videor intelligere media, quae ad istas perfectiones obtinendas faciunt", and AT V, 154: "[...] evadimus sapientiores, prudentiores, cognoscimus clarius illas perfectiones et sic illas clare cognitatas facilius conquiremus, cum sapientia prudentiaque media ad eas conquirendas suppeditatura sit". De Raey does not comment upon such lemmas. Moreover, Wittich briefly reports a further content of the *Entretien* also in his *Theologia pacifica* (1671), re-stating it in his *Theologia pacifica defensa* (1683): cf. Wittich, *Theologia pacifica*, 86, Wittich, *Theologia pacifica defensa*, 167, and AT V, 150 (commenting on the lemma, from the *Responsiones quartae*, "quamobrem non dubito" – AT VII, 246). Such a lemma is commented neither by Clauberg nor by De Raey – so that Wittich probably had access to a manuscript copy of the *Entretien*.
112. Descartes, *The Philosophical Writings*, volume 1, 120. Cf. AT VI, 19 and 550.
113. De Raey, *Annotata*, 22. This text is an addition. Cf. the Latin version: "longae illae valde simplicium et facilium rationum catenae, quarum ope geometrae ad rerum difficillimarum demonstrationes ducuntur, ansam mihi dederant existimandi, ea omnia quae in hominis cognitionem cadunt eodem pacto se mutuo sequi", AT VI, 550.

114. Descartes, *Conversation*, 46. Cf. the original text: “[Burman:] Sed annon etiam in theologia omnia ita se sequuntur et connexa sunt? [Descartes:] Imo procul dubio; sed nos earum veritatum nexum ita consequi et intelligere non possumus, quia a revelatione dependent. Et certe theologia nostris ratiociniis, quae in mathesi et aliis veritatibus adhibemus, subiicienda non est, cum nos eam capere non possimus”, AT V, 176.
115. De Raey, *Annotata*, 384. This text is an addition. The commentary is on “idcirco, vis quam habent ad recedendum a centro L, efficit quidem ut nonnihil evagentur versus B, quia ibi occurrunt partibus circumpolaribus vorticis S, quae non difficulter ipsis cedunt”, AT VIII-1, 123. See the figure at page 122.
116. Cf. the complete sentence commented upon by De Raey: “consequently, the force which they have to recede from the center L causes some of them to advance toward B, because there they encounter the parts around the poles of the vortex S, which yield to them without difficulty”, Descartes, *Principles*, 121–122.
117. I touch upon a kindred passage from the *Entretien* in [Appendix 2](#).
118. [Figure 1](#) is from Descartes, *Principia* (1644), 78. [Figure 2](#) is from the Wikimedia Commons, [https://commons.wikimedia.org/wiki/File:More\\_Bubbles\\_2.jpg](https://commons.wikimedia.org/wiki/File:More_Bubbles_2.jpg). Attribution 2.0 Generic (CC BY 2.0). The picture has been rendered in black and white with respect to the original.
119. Strazzoni, *Burchard de Volder*, chapter 6.
120. Lüthy, “Where Logical Necessity Becomes Visual Persuasion”, 103 and 107. See also Zittel, *Theatrum philosophicum*.
121. De Raey, *Annotata*, 4. This commentary (but not the lemma itself) is an addition. The commentary is on “ego sane nunquam existimavi plus esse in me ingenii quam in quolibet e vulgo: quinimo etiam non raro vel cogitandi celeritate, vel distincte imaginandi facilitate, vel memoriae capacitate atque usu, quosdam alios aequare exoptavi”, AT VI, 540. Cf. the original French: “pour moi, je n’ai jamais présumé que mon esprit fût en rien plus parfait que ceux du commun; même j’ai souvent souhaité d’avoir la pensée aussi prompte, ou l’imagination aussi nette et distincte, ou la mémoire aussi ample, ou aussi présente, que quelques autres”, AT VI, 2.
122. De Raey, *Annotata*, 14. This text is an addition. The commentary is on “nempe permulti sunt, qui cum plus aequo propriis ingeniis confidunt, nimis celeriter solent iudicare, nunquamque satis temporis sibi sumunt ad rationes omnes circumspiciendas”, AT VI, 548. Cf. the original French: “ceux qui, se croyant plus habiles qu’ils ne sont, ne se peuvent empêcher de précipiter leurs jugements, ni avoir assez de patience pour conduire par ordre toutes leurs pensées”, AT VI, 15.
123. Lucan, *Pharsalia*, I, 567; Claudian, *De raptu Proserpinae*, II, 269; Propertius, *Elegiae*, II, 18.
124. Descartes to Elisabeth of Bohemia, 22 February 1649: AT V, 281. On Descartes and *ingenium* (which I have roughly translated with “intelligence”) see Garrod and Marr, *Descartes and the Ingenium*.
125. “Dn. Mayerum [...] praesentem, cum 1692 mens. Jun. in Belgio commoraretur, Amstelodami in disputatione aliqua philosophica audivisse Johannem de Raei [...] contra librum hunc, ab opponente forte allegatum, acriter declamantem, illumque ut futilem et mendaciis refertissimum reiicientem, addita ratione non esse mirum illud, cum ab homine Gallo fuerit consignatus”, Ritter, *De principum in Cartesium favore*, 4 (unnumbered). The direct witness was the theologian Johann Friedrich Mayer (1650–1712). See *supra*, n. 25.
126. E. g.: “efformant: atque ita pellucida reddant ea corpora, adde”, De Raey, *Analysis*, 65v. Cf. AT VIII-1, 209: “[...] transferendae actioni luminis idoneas, in illis efformant. Sicque omnino experimur [...]”, and AT IX-2, 207: “propres à transmettre l’action de la lumière que les droites, et ainsi de rendre ces corps transparents. Aussi nous voyons [...]”.
127. “[...] soixante et neuf feuillets, dont la suite est interrompue en plusieurs endroits, contenant la doctrine de ses Principes en françois et non entierement conformes à l’imprimé latin”, AT X, 12.
128. See the letters of Descartes to Picot of 9 February 1645 (AT IV, 175), 17 February 1645 (AT IV, 181), and 1 June 1645 (AT IV, 222).

129. Van Otegem, *A Bibliography*, volume 1, 301–303; AT IX-2, x–xiv.
130. AT IX-2, xiv–xv.
131. See *supra*, n. 18.
132. AT VII, 18.
133. AT V, 146.
134. Clauberg, *Initiatio*, 271.
135. De Raey, *Dictata in Meditationes*, 19.
136. Wittich, *Observationes in Meditationes*, 13 (unnumbered). The original text of the *Entretien* is echoed, moreover, by Wittich’s commentary on the title of the first part of Descartes’s *Principia*: “*cognitionis humanae: cognitio humana post lapsum valde corrupta fuit, ortaque est partim ex praeiudiciis infantiae, partim ex traditionibus Patrum et revelatione [...]*”, Wittich, *Observationes in Principia*, 2 (unnumbered). Cf. AT VIII-1, 5.
137. Wittich, *Annotationes*, 17.
138. AT VII, 22.
139. AT V, 147.
140. Clauberg, *Initiatio*, 350–351.
141. AT VII, 22.
142. De Raey, *Dictata in Meditationes*, 31–32.
143. Wittich, *Observationes in Meditationes*, 17 (unnumbered).
144. Wittich, *Annotationes*, 26–27.
145. AT VIII-1, 137–138.
146. AT IX-2, 149.
147. AT V, 172. The reference is to page 78 of the 1644 edition of Descartes’s *Principia* (Figure 1).
148. De Raey, *Dictata in Dissertationem de methodo, in Principia philosophiae*, 168. The reference is to page 100 of the two almost identical 1650 editions of Descartes’s *Principia* (published at Amsterdam by Louis Elsevier): the image is the same as in n. 147.
149. De Raey, *Analysis*, 51r.
150. AT VIII-1, 211.
151. AT IX-2, 209.
152. De Raey, *Annotata*, 457.
153. AT VIII-1, 315–316.
154. AT IX-2, 310.
155. De Raey, *Annotata*, 561.
156. De Raey, *Dictata in Dissertationem de methodo, in Principia philosophiae*, 221.
157. De Raey, *Analysis*, 88r.
158. De Raey, *De methodo-Principia*, 165. This text is an addition.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

## Funding

The research leading to this publication has received funding from the European Union’s Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 892794 (*REDESCARTES*), and, previously, from the Swiss National Science Foundation under the Spark grant number CRSK-1\_190670 (*Testing a Multi-Disciplinary Approach to an Unexplored Body of Literature: The Case of Cartesian Dictations*). A special thank goes to the Forschungszentrum Gotha der Universität Erfurt.

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## Appendix 1

<b>Descartes's <i>Entretien avec Burman</i> (1648)</b>	<b>Clauberg's <i>Notae</i> (ca. 1654–1655; published 1655)</b>	<b>De Raey's <i>Dictata in Meditationes</i> (ca. 1657–1658)</b>	<b>Wittich's <i>Observationes in Meditationes</i> (ca. 1659–1664)</b>	<b>Wittich's <i>Annotationes</i> (ca. 1659–1687; published 1688)</b>
<p><i>Vel a sensibus vel per sensus</i><sup>132</sup>;</p> <p>a sensibus, id est visu, quo colores, figuras et similia omnia percepi; praeter illum autem accipi reliqua per sensus, vel per auditum, quia ita a parentibus, praeceptoribus aliisque hominibus accipi et hausi ea quae scio [...].<sup>133</sup></p>	<p><i>Vel a sensibus vel per sensus</i>: ex mente authoris haec ita sunt exponenda: a sensibus, id est, a visu, quo primo quidem lucem, ac deinde lucis beneficio colores, figuras, magnitudines et similia omnia percepi. Per sensus, id est, per auditum, in vocibus humanis percipientis. Nempe praeter ea quae vidi, reliqua accipi per sensus, quia sic a parentibus, praceptoribus aliisque hominibus hausi ea quae credidi esse vera [...].<sup>134</sup></p>	<p><i>Vel per sensus</i>: hoc est propria sensuum perceptio vel experientia, vel per auditum ex aliis cognoscendo, quod ipse author dum viveret consultus sic explicuit. Quadruplicia sunt quae a sensibus accipiuntur, nimirum primo, sensuum quae dicuntur propria et per se qualitates tactiles, secundo, obiecta communia, qualia sunt extensio, magnitudo, figura, motus, et c., tertio, potentiae et vires agendi, quarto, universalia, qualia sunt substantia, existentia et c.<sup>136</sup></p>	<p><i>Vel per sensus</i>: id est, vel propria sensuum perceptio vel experientia, vel per auditum ex aliis cognoscendo, quod ipse author consultus sic explicuit. Quadruplicia sunt, quae a sensibus accipiuntur, (1.) obiecta propria et per se sensuum, ut qualitates sensibiles. (2.) Obiecta communia, ut extensio, magnitudo, figura, motus, et c. (3.) Potentiae, et vires agendi. (4.) Universalia substantiae, existentiae, et c.<sup>137</sup></p>	

(Continued)



(Continued).

Descartes's <i>Entretien avec Burman</i> (1648)	Clauberg's <i>Notae</i> (ca. 1654–1655; published 1655)	De Raey's <i>Didata in Meditationes</i> (ca. 1657–1658)	Wittich's <i>Observationes in Meditationes</i> (ca. 1659–1664)	Wittich's <i>Annotationes</i> (ca. 1659–1687; published 1688)
<p><i>Supponam igitur</i><sup>138</sup>; reddidit hic auctor hominem tam dubium, et in tantas dubitationes comiicit ac potest; ideoque non solum obiicit illa quas obiici solent a Scepticis, sed etiam omnia illa quae obiici possunt, ut ita plane omnes dubitationes tollat; et in eum finem genium hic introducit, quem sursum dari aliquis oblicere potest.<sup>139</sup></p>	<p><i>Supponam igitur</i>: A. Supponam, 46 putabo, 47 considerabo hoc loco fere habentur pro synonymis. Non enim affirmatur aut negatur hic quicquam, sed rationes dubitandi sine ullo assensu aut dissensu considerantur. [...]</p> <p>C. Author omnia dubia proponit, quae ullo modo possunt, ut ita plane tollat omnia, quae allata unquam sunt vel adferri possunt, atque eum in finem hic genium introducit, quem forsandari quis obliceret.<sup>140</sup></p>	<p><i>Sed genium aliquem malignum</i><sup>141</sup>: potuisset auctor, hac suppositione omnis, simpliciter fingere seu supponere falsa esse ea quibus in ineunte aetate credulitatem suam addiderat, eaque suppositio nil potuisset, frequenti conscientia et experientia nostrorum errorum. Sed quia mirum nihil omitterendum erat quod a pertinacissimo oblici vel fingi posset, auctor prudenter admodum, hoc etiam largitur adversario supportitque non modo nos falli in opinionibus nostris a nobismet ipsis, verum etiam aliquem esse extra nos qui nobis imponat. Et ut omnem cavillandi occasionem effugeret a Deo quem fontem veritatis vocat transfert istam fraudem in rem cogitantem et satis potentem allam, quales censentur esse genii sive mentes separatae. Et quantum vix quisquam inter Christianos certitudini suae scientiae sibi { . . . } a malis geniis, certum est Gentiles multo maiorem vim iis tribuere multasque eorum experiri imposturas. Philosophia autem generalis esse debet et nulli religioni mancipata. Accedit denique peculiaris ratio huius suppositionis, quod primo multum iuuet ad fingamus et nostri corporis et aliarum rerum corporearum ideas nobis aliunde obtendi, quia tam manifestum est mentem quae habet tales ideas nullam talem rem corpoream esse. Adde quod valde { . . . } et certa debeat esse conclusio, { . . . } istante tam hyperbolica hypotesi sistere potest: prout videmus sequenti Meditatione de existentia mentis.<sup>142</sup></p>	<p><i>Supponam igitur</i>: sufficere potuisset supponi, nos falli in omnibus a nobis ipsis, sed ut nihil omitteret, quod a pertinacissimo adversario adduci potuisset, supponit etiam aliquem extra nos, qui nos data opera fallat. [...]</p> <p><i>Malignum</i>: quantum vix quisquam inter Christianos certitudini suae scientiae metuat a malis geniis, id tamen fit inter Gentiles, quae [sic] multas eorum experiantur imposturas. Et debet valde evidens esse et certa scientia, quae posita tam hyperbolica suppositione consistere potest, ut postea videbimus.<sup>143</sup></p>	<p><i>Supponam</i> et c.: sufficere potuisset supponi nos falli a nobis ipsis in omnibus: sed ut nihil omitteret, quod a pertinacissimo adversario adduci potuisset, supponit etiam esse aliquem extra nos, qui nos data opera fallat. [...]</p> <p><i>Malignum</i>: quantum vix quisquam inter Christianos a malis geniis, id tantum fit inter Gentiles, qui multas eorum experiantur imposturas. Philosophia qualis [sic] esse debet, et nulli religioni mancipata. Accedit, quod valde debeat esse evidens et certa scientia, quae posita tam hyperbolica suppositione consistere possit. Facit etiam multum ad distinctam cognitionem mentis, si fingamus, et nostri corporis et aliarum rerum corporearum ideas aliunde nobis obtendi, inde enim manifestum est mentem, qui [sic] habet eas ideas, nullam tamen rem corpoream esse. Epistolae ad Voetium pag. 32.<sup>144</sup></p>

## Appendix 2

	Descartes's Latin text (1644)	Descartes's French text (1647)	Descartes's Entretien avec Burman (1648)	De Raey's dictata
<b>III.83</b>	Spatium in quo tanquam in vortice circulariter aguntur, non sit accurate rotundum; tum quia alii vortices circumiacentes non sunt aequales, tum etiam quia illud debet esse angustius, e regione centri cuiusque ex istis vorticibus vicinis, quam e regione aliarum eius partium: necesse est ut [...]. <sup>145</sup>	Le ciel qui les contient et qui les emporte avec soy circulairement ainsi qu'un tourbillon n'est pas exactement rond à cause que les autres tourbillons qui se touchent ne sont pas égaux entr'eux, et aussi à cause qu'il doit estre plus serré vis à vis des centres de ces tourbillons qu'aux autres endroits, il faut necessairement que [...]. <sup>146</sup>	<i>Angustus e regione centri:</i> ut in figura p. 78 patet materiam, inter S et F centrum vicini vorticis contentam, arctari angustiori spatio, quam illam quae continetur inter S et E et F, quia scilicet ab S et F arctatur et compingitur, quae sibi mutuo adiacent, ab S et E et F autem non ita compingitur, quia spatium ibi est liberum, et nihil est quod eam constringat aut compingat. <sup>147</sup>	<i>Dictata in Dissertationem de methodo, in Principia philosophiae (ca. 1659–1668):</i> <i>E regione:</i> in Gallico haec habentur: e regione centrum horum vorticum, ut in spatio praecedentis figurae pag. 100, quod est in linea recta quae duci potest ab S ad F. <sup>148</sup> <i>Analysis (ca. 1664–1668):</i> <i>Vicinis:</i> in Gallico textu, qui accuratior est, additur: ut in spatio, quod est in linea recta, quae duci potest ab S ad F. <sup>149</sup>
<b>IV.18</b>	[...] donec eas inter aliquas alias ita disposuerint et ordinarint, ut non magis quam istae aliae ipsorum motibus obsistant, vel, cum ita disponi non possunt, donec eas a reliquis segregarint. Sic videmus ex musto faeces quasdam, [...]. <sup>150</sup>	[...] jusques à ce qu'elle ait tellement changé leur situation, qu'elles soient également répandues par tous les endroits de ce corps, et si bien ajustées avec les autres qu'elles n'empeschent plus ses mouvemens; ou bien si elles ne peuvent estre ainsi ajustées elle les separe entierement de ces autres, et en fait un corps different du leur. Ainsi il y a plusieurs impuretez, dans le vin nouveau [...]. <sup>151</sup>		<i>Annotata (1658):</i> <i>Obsistant:</i> adde ex Gallico: a quae dispositione pendent exacta liquorum mistio, puritas, et homogeneitas, <sup>152</sup> exemplum habemus in aqua salsa.
<b>IV.189</b>	[...] in cerebro, in quo solo non modo intelligit et imaginatur, sed etiam sentit: hocque opere nervorum, qui, florum instar, a cerebro ad omnia reliqua membra protenduntur, ilisque sic annexi sunt, ut [...]. <sup>153</sup>	[...] dans le cerveau, et que c'est là non seulement qu'elle entend et qu'elle imagine, mais aussi qu'elle sent, et ce par l'entremise des nerfs qui sont estendus comme des filets tres-deliés depuis le cerveau jusques à toutes les parties des autres membres auxquelles ils sont tellement attachez qu'on [...]. <sup>154</sup>		<i>Annotata (1658):</i> <i>Sentit:</i> motumque corporis gubernat, nam unum et idem principium esse debet actionum et passionum. <sup>155</sup> <i>Dictata in Dissertationem de methodo, in Principia philosophiae (ca. 1659–1668):</i> <i>Sentit:</i> motumque corpus [sic] gubernat. <sup>156</sup> <i>Analysis (ca. 1664–1668):</i> <i>Sentit:</i> motumque corporis gubernat, addidit author in Gallico textu. <sup>157</sup> <i>De methodo-Principia (ca. 1669–1702):</i> <i>Sentit:</i> motumque corporis gubernat. <sup>158</sup>