

# Self-examination, Understanding, Transmission: On Becoming a Teacher in Clauberg's *Logica vetus et nova*

Adi Efal-Lautenschläger

**Abstract:** This paper takes a fresh look at Johannes Clauberg's *Logica vetus et nova*, in order to try to clarify its nature and character. Differently from prior readings of Clauberg that analyze his philosophy from the point of view of the construction of "ontology," the approach of the present paper sees in Clauberg's philosophy a late-Humanist work, accentuating his pedagogic and hermeneutical interests. Indeed, in Clauberg's philosophy, hermeneutics and pedagogy are intrinsically bound together. This, the paper suggests, is supported not only by the concrete subject-matters of his logic, but also by the examination of Clauberg's milieu and of his sources. Analysis, in this framework, has a strictly hermeneutical usage.

**Keywords:** Johannes Clauberg, logic, hermeneutics, teaching, pedagogy, didactics.

## 1. Introduction

This study aims to capture the late-Humanist conception of knowledge from the perspective of how knowledge is transmitted in a pedagogical framework. During the 17<sup>th</sup> century, philosophers were well aware of their pedagogical responsibility. Late-Humanists and Cartesian thinkers were carefully considering the manner in which the knowledge they had acquired could be transmitted in an educational or even instructional context. Recently, a scholarly volume addressed the pedagogical concerns of the Cartesians and shed new light on this highly influential aspect of 17<sup>th</sup> century philosophical production (Cellamare and Mantovani 2022). The volume highlights the integration of the scientific achievements of Descartes in pedagogical, mostly institutional practices of philosophers around Europe. One of those Cartesians, who were clearly addressing the transmission of knowledge in a pedagogical perspective, was Johannes Clauberg (1622–1665). In this framework and notably in Clauberg, "knowledge" does not mean exclusively scientific knowledge: the understandings of the Classics and Sacred Literature and the means to articulate them precisely also played an important role in the specific transmission of knowledge. This is the basis for the following inquiry concerning Clauberg's *Logica vetus et nova*. Though the *prima facie* aim of this treatise is logic, from the first lines of the treatise, one learns that

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Clauberg considered logic as an approach to attain knowledge.<sup>1</sup> In this context, knowledge is inherently connected to an activity of correctly understanding both one's own thoughts and the works, words, and thoughts of others. This pertains to Clauberg's engagement with hermeneutics, as discussed below. Because this hermeneutical framework is not overtly Cartesian, one of the questions that will be addressed below is the following: how does this hermeneutical knowledge stand in regard to Clauberg's avowed Cartesianism?

Clauberg's *Logica vetus et nova* was published at least in two Latin forms in the Clauberg's lifetime, first in 1654, and then in its final form in 1658.<sup>2</sup> The second edition of the treatise is dedicated to Tobias Andreae (1604–1676), Clauberg's mentor in Groningen and a fellow Cartesian.<sup>3</sup> The present paper deploys the general framework of Clauberg's *Logica*, while emphasizing the pedagogical principles that are to be found within its pages. The proposition of the present paper is more qualitative than argumentative: I try to pinpoint the character of Clauberg's logic and demonstrate its differentiated position against the background of early 17<sup>th</sup> century treatises of logic written in the milieu in which Clauberg was working: the Calvinist philosophy of the first half of the 17<sup>th</sup> century. The important difference between the philosophical baggage of Clauberg and of his predecessors, is Clauberg's close acquaintance with the philosophy of Descartes, an acquaintance which in the 1650ies was already well established.<sup>4</sup> However, Clauberg's adherence to the Cartesian creed cannot explain the overall structure, as well as some of the determining terminologies that one finds in this treatise, which is constructed as a handbook, a didactic guidebook to the art of logic. In order to adequately and qualitatively characterize Clauberg's logic, one should acknowledge both its pedagogical and its hermeneutical motivations. According to the present reading, one should understand Clauberg's procedure in his *Logica* as adhering in the first place to a hermeneutic motivation, which is not prominent in the logical treatises of his predecessors in Calvinist philosophy, but which is obviously not a consequence of his Cartesian convictions either. The pulsating hermeneutic motivation that one finds in Clauberg's logic also provides the foundation of Clauberg's *pedagogical* concerns. What is, or are, however, the source/s of Clauberg's explicit engagement with hermeneutics? This question hides within itself another question, which in itself isn't trivial: what are Clauberg's actual sources in writing his *Logica*? The reasons that this ques-

<sup>1</sup> One must emphasize that Clauberg was also occupied with teaching natural science: his *Physica* (1664; in Clauberg 1691, 1–208) contained wide-reaching discussions of physics and biology. See Smith 2013; Strazzoni 2014.

<sup>2</sup> Clauberg 1654; Clauberg 1658. See also the excellent French translation: Clauberg 2007. I consulted this translation when preparing the translations into English. In 1657, Clauberg published in Amsterdam a translation into Dutch.

<sup>3</sup> On the editions of the *Logica* see Verbeek 1999, 189; On Andreae see Savini 2011, chapter 3; Omodeo 2022, chapter 6.

<sup>4</sup> On the accepted typification of Clauberg as forming a mixture between Scholasticism and Cartesianism see Savini 2006; Hamid 2020.

tion is not trivial, are two: first, Clauberg is not very generous in citing his immediate sources. One finds only a few of them throughout the *Logica*. Clauberg is more generous when he uses primary sources, from ancient Greek, Roman sources or the Old and New Testaments. The second reason why this question is not trivial is related to Clauberg's Cartesianism. In order to pin down the distinctive character of Clauberg's Cartesianism, one should chart his precise interlocutors. However, the text itself reveals very little about those interlocutors, at least in the framework of the *Logica*. In relation to the hermeneutical element of Clauberg's logic, it is not that clear who is the main interlocutor, and whether this interlocutor is related or not to Cartesianism.

One of the more evident influences on Clauberg's hermeneutical occupations is Johann Conrad Dannhauer (1603–1666).<sup>5</sup> Clauberg cites his *Idea boni interpretis* at least three times in the third part of the *Logica*, in which Clauberg begins to discuss the hermeneutical part of logic (Clauberg 1691, 845, 855, 870). Dannhauer, the Lutheran theologian from Strasbourg, revived the practice of hermeneutics as the determination of the true meaning of given documents and written or spoken discourses, mostly in the context of reading the Bible. In the case of Clauberg, however, there is no limitation of the art of interpretation to religious material. In general, Clauberg's ideas refer to any kind of spoken, written or even cogitated discourse (the third is referred to by Clauberg as "internal discourse"). If, then, one wishes to see in Clauberg a follower of Dannhauer in matters of hermeneutics, then indeed, it appears that Clauberg opened the sense of hermeneutics and widened its objects beyond the borders of theological discourse. In any case, what is certain is that the influence of Dannhauer should be counted as an independent trope not necessarily related to Clauberg's Cartesianism.

What makes our task of qualification even more complicated, is that Clauberg's hermeneutics is explicitly presented as a pedagogical endeavour. In other words, if the essence of logic is the understanding of discourses, then the framework of the logic shows the scope and principles of the realization of that task and the manner in which to transmit that true understanding to others. Hence, the pedagogical framework that one finds in Clauberg is double-layered: in the first stage, one should learn to read well (both oneself and others); at the second, necessary stage, one must learn to transmit the true sense of what is read to one's students. In other words, Clauberg's logic is intended to train teachers of logic, to train teachers for true interpretation or for true *understanding* (*Verstehen*).<sup>6</sup>

One should further note that the occupation with the *art of logic* cannot be considered as Cartesian and may even be understood as an un-Cartesian activity. Descartes's position regarding logic was in general negative: he aspired, according to his own avowal, to replace the art of logic with his own method,

<sup>5</sup> On Dannhauer, see Bolliger 2020.

<sup>6</sup> Andrea Strazzoni has suggested to understand in this specific sense Clauberg's Scholastic Cartesianism: Clauberg is a Cartesian Scholastic, in the sense of a philosophy intended and oriented towards the School. See Strazzoni 2014, 156.

which, instead of leaning on the pre-conceived instruments of syllogisms, will lean on the power of the natural light and its correct guidance.<sup>7</sup> In this sense, the project itself of creating a new art of logic seems to be missing one of the central and most essential Cartesian moves, which is to make logic redundant altogether. Theo Verbeek also recently suggested that the pedagogical concern is quite strange to Descartes's philosophy in itself (Verbeek 2022). Descartes's grudge towards the pedants of the Schools is well known. Nonetheless, Descartes's structural occupations with the method are seemingly well supported. In this view, Clauberg's work as a teacher reflecting on one's own art can also be viewed as trying to implement the more rigorous methodological aspects of the Cartesian method in the various domains he was professing.

As just noted above, Clauberg's logic proposes a theory of *knowledge*, and this is indeed its decisive character: logic, in the Claubergian sense, willingly drops its scholastic model of being a self-contained system of rules for the determination of the truthfulness or the falseness of propositions; instead, it assumes a wider task which is the establishment of the capacity for knowledge of the world at large. But this also must not be necessarily understood as a Cartesian trait. Instead, in this Clauberg presents a relation to a thread of thinking deriving from Francis Bacon (1561–1626), a line of influence which the historiography of German philosophy of the 17<sup>th</sup> century has not yet characterized clearly enough. However, the importance of Bacon's philosophy to a more complete understanding of Clauberg's philosophy is beginning to become consensual among scholars.<sup>8</sup> Not only did Clauberg know Bacon's writings (he refers to Bacon numerous times in his *Opera omnia*), he also borrowed from them some of his general principles. Clauberg's education was pregnant with Baconism: his teacher in the Gymnasium of Bremen, Gerhard de Neufville (1590–1648), was engaged in the reading and application of Bacon's conception of science (Verbeek 1999, 182; Strazzoni 2012, 259; Collacciani 2020). This Baconian thread moreover is also concomitant with the kind of hermeneutics that we find in Clauberg's logic. The knowing of nature, in this framework, is understood as an *interpretation of nature*. However, at least in the framework of the logic, what is interpreted is explicitly discourse (*sermo*): discourse of one's own or discourses of others.

Francesco Trevisani emphasized the quasi-empiricist character of Clauberg's philosophy in general and not only of his logic: if one scrutinizes the milieu of Calvinist metaphysics of the 17<sup>th</sup> century,<sup>9</sup> according to Trevisani, one finds on the one side the tendency to approach a purification of the abstract set of categories and principles of reasoning, such as in Clemens Timpler (1563–1624), and on the other side one finds the experience-oriented tendency which is closer to the

<sup>7</sup> On logic in Descartes see Mehl 2005. On the relationship between logic, ontology, *ontosophia* and metaphysics see the very helpful Savini 2009.

<sup>8</sup> Bacon was influential in the Dutch philosophy of the 17<sup>th</sup> century: Strazzoni 2012.

<sup>9</sup> For a discussion of the empirical element in Clauberg and the "Duisburg school," seen as Cartesian medical philosophy, see Smith 2013.

Aristotelian and the late Scholastic occupation with the apprehension of *things* (real beings), as in Bartholomäus Keckermann (1572–1609), whose epistemological positions Trevisani considers as closer to Clauberg’s epistemology (Trevisani 2006, 106–9). In this orientation the art of logic is presented as a general method for obtaining valid judgments of things in all existing domains, via a critic of sensual experience; in other words, logic, in the just mentioned framework, is the other name for early modern theory of knowledge, or epistemology. It is within the domain of logic that the theory of true knowledge about the world was developed. That experience-oriented logic that one finds in Keckermann and in Clauberg is less intended to the achievement of a purified, ordered language of valid propositions, but rather, it aims to supply a method for an *adequate reference to things*. We are talking here indeed about quite an innovative approach to logic which definitely deserves the name it received from Clauberg, the “new” logic. One should ask however whether this quasi-empiricist turn of logic should be attributed to a Cartesian influence. Paul Schuurman has identified such an empirically oriented logic in 17<sup>th</sup>- and 18<sup>th</sup>-century philosophy, the “logic of ideas,” beginning with Descartes, continuing with John Locke (1632–1704) and developed by philosophers as Jean Le Clerc (1657–1736) or Jean-Pierre de Crousaz (1663–1750). The “logic of ideas” which presented itself as a “new logic,” was motivated by Descartes’s occupation with method, and is characterized by Schuurman as no more rationalist than empiricist. The logic of ideas is furthermore conceived by Schuurman as a method to order and edify the “mental faculties.” Schuurman demonstrates the extensive influence that this new logic had in Holland and Germany, and indeed, this is also the context into which Clauberg’s work adequately fits (Schuurman 2004, 19–33).<sup>10</sup> The theological context of inner splits within Calvinism, which Schuurman extensively addresses, also characterizes Clauberg’s own milieu. However, one should not forget that Clauberg’s life ended in 1665, a time when the last two mentioned philosophers were still very young. In this sense, if we follow Schuurman’s roadmap, Clauberg’s *Logica* must be placed at the *very beginning* of this dynasty of thinkers, as the aftermath of Descartes’s method.

## 2. Clauberg and Aristotelian-Ramism

Can one say that Clauberg was a late Ramist thinker? Both Hotson (Hotson 2020, 145–75) and Trevisani place Clauberg within the framework of Dutch-German Ramism.<sup>11</sup> Indeed, Timpler and Keckermann are the two most relevant

<sup>10</sup> Regarding the question of Cartesian logic, see Gaukroger 1989. Gaukroger indeed argues for the existence of a genuinely *Cartesian* kind of logic. However, Gaukroger’s interpretation of Cartesian logic is inferential, that is to say, it leans heavily on the operation of *deduction*; hence, it is not at all an empirically-oriented understanding of Cartesian logic, as we may find in Clauberg. Moreover, the inferential understanding of Cartesian logic does not give an essential place for hermeneutics, which is so central in Clauberg.

<sup>11</sup> On the relationship between Cartesianism and Ramism in the context of Dutch universities, see Hotson 2022.

thinkers in this regard. Both are mentioned a few times in Clauberg's *Opera omnia* and there is no doubt that he knew their works. Like Clauberg, Timpler (the Protestant) and Keckermann (the Calvinist) pertained to a group of philosophers adhering to the Reformed confession. Both Timpler and Keckermann were directly influenced both by the Paduan Aristotelian Giacomo Zabarella (1533–1589) and by the Late Scholasticism of the School of Salamanca and the work of Francisco Suárez (1548–1617). Zabarella and Suárez are to be found (again, very sporadically) in Clauberg's *Opera*. Timpler, Keckermann and Clauberg were occupied with a critical reception of Aristotelian philosophy. Clauberg, however, is differently positioned than Timpler and Keckermann. In as much as in Timpler and Keckermann one finds a direct recourse to Scholastic terminologies, Clauberg was rather trying to *criticize* and *renovate* Aristotelian and Scholastic questions with the help of Cartesianism.

Both Timpler and Keckermann are often considered within the framework of the group of thinkers that are considered in a general manner as “Philippo-Ramist.” Both Howard Hotson and Marco Sgarbi supplied the background for that commonly overlooked chapter in the historiography of early modern philosophy, extending between the last decades of the 16<sup>th</sup> century and the first decades of the 17<sup>th</sup> century (Hotson 2007; Sgarbi 2016). Hotson described Clauberg's intricate relationship with the Philippo-Ramist school, and demonstrated that Clauberg's philosophy cannot be detached completely from the generation of his predecessors, but nor we can see in Clauberg a purely Ramist thinker (Hotson 2020, 142–48, 156–81). The entire (however short) academic career of Clauberg was made against two intellectual, conservative adversaries: the Ramist conservatives and the Aristotelian conservatives (Trevisani 2006, 93–5). And the close relationships with the Ramists in Herborn leave no doubt as to the latent problem of Ramism behind Clauberg's preoccupations, Cartesian and others. The observation that the present paper suggests is that Clauberg's concerns are not only partially but essentially Ramist: he *engages critically* with this school of thought, and, in a way, Clauberg's Cartesian convictions serve as an instrument in the criticism Clauberg suggests of Ramism. What stayed as an influential character in Clauberg's philosophy is its pedagogical concerns, which derive directly from the reformed Ramist occupation with the renovation of the system of education and learning (Wilson and Reid 2011; Hotson 2020, 224–304). According to Frédéric Lelong, during the years following the Wars of Religion what was at stake was the constitution of a new style of civility (Lelong 2021). And it is to the education of that civility that the newly constructed institutions of Reformation Germany, both in Herborn and in Duisburg, were dedicated. One of the rising influences in this orientation in the Reformed world of teaching was Comenism, issuing from the Calvinist pedagogical thinker Jan Amos Comenius (1592–1670). Comenian didactics was occupied with the universalization of knowledge, as an educational application of Philippo-Ramist encyclopedism (Sadler 1966; Lukaš and Munjiza 2014; Schmidt-Biggemann 1983). In Clauberg, however, one does not find that all-encompassing *ordering* of knowledge that one easily detects in Comenius. Also, if Clauberg refers to Comenius

a couple of times in his corpus, there is no direct engagement with Comenian pedagogy in his writings.<sup>12</sup> In Clauberg, if encyclopedism is latently present, it is in the form of a “scrambled” encyclopedism, re-ordered both through the newly revived method of hermeneutics and through the Cartesian method. Effectively, the Cartesian method is called by Clauberg to serve in the task of re-ordering encyclopaedic knowledge. Moreover, one does not find in Clauberg’s writings that systematic style of tables, schemes and lists that one finds in the Ramism and Comenism. Instead, what we do see in Clauberg is the emphasis on the beginning of philosophizing, trying to provide a method for a re-education of the mind, in a search for its purity, which leads to a true understanding of the world. In our modern terms, one could say that Clauberg is occupied with developing a theory of *continuing* education, aspiring to begin *anew* the directing of reason after it has been *necessarily* corrupted. The beginning of philosophizing is especially emphasized in his *Defensio Cartesiana* (1652) as well as in his *Initiatio philosophi* (1655),<sup>13</sup> and it is heavily pregnant with Cartesian terminology.

In this framework of initiation, logic is presented by Clauberg as a proto-philosophical, propaedeutic method: one must master the art of logic before starting, or at least *upon starting* to philosophize and to approach the things of the world. This turn in the understanding of logic incorporates a change in its conception. Clauberg’s predecessors in Calvinist philosophy did not hold such an explicit epistemological orientation towards the understanding of works oriented by a theory of logic. Much more, they developed what Marco Sgarbi has articulated as facultative logic; a trope of philosophy which is concentrated on the examination of the faculty of reason (Sgarbi 2018). Sgarbi demonstrated the existence of a lineage of facultative logic in the second half of the 16<sup>th</sup> century and in the 17<sup>th</sup> century up to Immanuel Kant (1724–1804), a lineage of questioning in which logic, method and epistemology have been synthetized, forming a science of the principles and conditions of reasoned knowledge. Sgarbi gives a definition of facultative logic thus:

First, facultative logic has to do with a ‘habituated’, that is, a consolidated way of using the mind, and investigates its principles. [...] The second aspect is that this logic should determine the ways in which the mind acquires knowledge by helping to discover the truth or to form a well-grounded opinion starting from sensible experience (Sgarbi 2018, 271).

These two essential characteristics of facultative logic (habituation and sensible experience as a starting point) are adequate to a description of Clauberg’s logic. In his writings on method, Clauberg emphasizes the process of the acquisition of the capacity to reason well. It seems, moreover, that the habituated nature of Clauberg’s method is stronger than the one finds elsewhere: Clauberg

<sup>12</sup> However, Clauberg’s *Ontosophia*, and especially its first edition was well informed by the Comenian idea of *pansophia*. See Leinsle 1999.

<sup>13</sup> On the *Initiatio*, see Ragni 2019.

postpones and prolongs the stage of habituation. He puts the emphasis in his philosophy on the preparation and emendation of the mind, and indeed, also his “metaphysical” writings (as for example the well-known *Ontosophia*), should be taken, according to the present understanding of Clauberg’s philosophy, *within* that framework. In other words, metaphysics takes a part in the *pedagogical* project that Clauberg is constructing, and it is not to be understood merely as that higher stage of philosophizing, metaphysics, that one must achieve *after the method*; in other words metaphysics is combined and entangled with method itself.

Clauberg’s logic must be placed in the framework of facultative logic, as it fits into the guiding principles of the thinkers that Sgarbi draws attention to: logic is no longer presented as a system of syllogistic verification, but rather it is reframed as a manner to enhance the faculty of reasoning. However, according to my reading, one should also acknowledge where Clauberg parts ways with Philippo-Ramist facultative logic. In the first place, Claubergian logic is directed at the establishment of the ability to understand (*verstehen*) given proposition, and hence it is an activity of *understanding* (*Verstehen*).<sup>14</sup> As is the case in many of his predecessors, Claubergian logic is also genuinely a didactic endeavour: it constructs a training program for the instructors of logic. Logic itself, in this framework, is being conceived as an essentially pedagogical endeavour. It serves not only as the medicine for the corrupted habits of the mind, but it also prepares the mind for philosophical occupations. The didactic character of logic is enhanced and emphasized throughout the *Logica*, dealing explicitly with the position of the teacher, the instructor of logic. Moreover, Clauberg presents logic as a training in the development of the capacity to understand (compositions of) signs as well as, in the last phase of logical examination (the fourth chapter of the *Logica*), to judge and evaluate them adequately.

In the lineage of facultative logic, the group of thinkers, belonging to the Reformed faith, the “Philippo-Ramists” takes a leading role (i.e. thinkers such as Rudolph Goclenius, 1547–1628, Keckermann, Timpler, Johann Heinrich Alsted, 1588–1638).<sup>15</sup> This group of thinkers belongs to the generation just preceding Clauberg, who was educated in the intellectual milieu of their works. Though one does not find in the Claubergian corpus much direct references to the above listed thinkers, his work is structurally informed by the Philippo-Ramist mental habitus. According to the reading suggested in the present paper, Clauberg presents a later, possibly a last, *critical* phase of Philippo-Ramism, one which is already synthesized with the Cartesian understanding of method and with the early fruits of the hermeneutical method; these two influences are actively integrated by Clauberg into the institutionalization of higher education in the Reformation period after the Peace of Westfalia (1648; see Ehrenpreis 2005).

<sup>14</sup> Clauberg 1691, 913 (*Logica contracta*, par. 5): “wol verstehen.”

<sup>15</sup> This list is not exhaustive. Many more important philosophers belonged to that group, which Sgarbi describes fully.



This element of the institutionalization of Calvinist higher education should not be taken only as an exterior, circumstantial part of Clauberg's intellectual biography. It must be acknowledged as informing his philosophical motivations. The educational influence of Ramism, leaning on compendia and oriented to the nurturing of that civil, political and mercantile society which was establishing itself as determining not only the transmission but also the production of knowledge (Hotson 2020, 224–64). Clauberg taught for two years at Herborn, which was at the time the epicenter of Reformed schooling. However, Clauberg was also forced to quit Herborn, due to his Cartesian preoccupations (Verbeek 1999, 185–86). In this, one can witness in Clauberg's biography also the inner tensions within the Calvinist education system, which was actively engaged in the politico-religious struggles of the time. Those tensions were feeding from the relationship of Germany with the Netherlands and with the Cartesianism developed there, as Andrea Strazzoni has demonstrated (Strazzoni 2018). Clauberg's relationship with Dutch philosophy is evident in his biography (Verbeek 1999, 182–84). He terminated his studies in Groningen and also studied for a brief while with Johannes de Raey (1622–1702) in Leiden. In 1648, Clauberg transcribed in Egmond, on the seashore near Amsterdam, the conversation with Burman. In that sense, Clauberg's philosophy is related in the strongest sense to Dutch Cartesianism,<sup>16</sup> and the conflicts that characterize his philosophy are also characteristic of the inner tensions and divisions within the Dutch Calvinist milieu.

The tensions and rifts within Calvinist education seem to express a general divide between encyclopedist systematization and an emphasis on *method*: the latter stands for the tendency to emphasize the question of the roots and initiation of philosophical inquiry (Ragni 2019). For this task, the Cartesian creed was *well suited*, but it was not the sole cause of that tendency, which was well underway over the 16<sup>th</sup> century (Gilbert 1960).

### 3. The Condition for the Beginning of Thought: Genetic Logic

The *Proemium* of the first edition of the *Logica* (1654) holds in a nutshell Clauberg's attitude towards logic as an art of thought. This proem does not appear in the later editions of the logic (the 1658 edition is already devoid of it), but it holds important clues regarding the motivations of Clauberg in composing this treatise. According to Clauberg, logic directs internal discourse (“dirigit sermonem internum”).<sup>17</sup> What is this internal discourse? Clauberg's internal discourse is another name for the mental process of reasoning.<sup>18</sup> Clauberg explains that the establishment and ordering of interior discourse is necessary for the more advanced students in logic. One cannot arrive at the hermeneutical *analytics*,

<sup>16</sup> For more on Netherland Cartesianism see Van Bunge 2019.

<sup>17</sup> The proem appears only in the 1654 edition: Clauberg 1654, *Proemium*, 1 (unnumbered).

<sup>18</sup> For more on the theme of “internal discourse” see Maclean 2017. However, this topos of “internal discourse” must be researched further.

which is the end-goal of logic, without passing through the stages of *genetical* logic, occupied with the establishment of *that inner discourse*. Genetic logic is not yet hermeneutical; it incorporates rather the rationality of Adam, that human existence which is not already even accompanied by Eve (Clauberg 1654, *Proemium*, 1, unnumbered). In that sense, if we remember Clauberg's biographical engagements with the theological tensions of the times, he is referring here to adamic reason before the Fall (but it is also a reason which is condemned, that is to say predestined, to be fallen). This adamic reason, that genetic logic tries to approach, erupts from a human existence which is not yet embedded in social intercourse. In this, according to Clauberg, the genetic part of logic is primary both chronologically and in dignity to analytic logic: it precedes chronologically the establishment of the logic being occupied with the analysis of the work of men, and it precedes also in dignity the logic which is occupied with the understanding of works of men, because it regards the purer state of human thought, the state of self-examination. A most inadvisable thing, says Clauberg, is the common tendency to condemn something when one actually is not yet capable of judging. The framework that Clauberg proposes is a one which consciously and reflectively *prepares the instruments* of logic, such as repaired attention, firm memory, excited diligence, and clear and distinct perception.<sup>19</sup> The last expression, clear and distinct perception, is evidently Cartesian. However, one must also pay attention to the other instruments that Clauberg's logic suggests, especially firm memory, excited diligence and repaired attention, as in the later parts of the *Logica* Clauberg treats these elements extensively.

In the second part of the *Logica*, Clauberg argues that the language of the teacher of logic must establish a commensurability between inner and outer discourse.<sup>20</sup> In as much as inner discourse is educated through the genetic process, the analytic process makes outer discourse adequate to express that inner discourse. The first condition for the achievement of such parallelism between internal and exterior discourses is the minimalism of outer discourse (par. 106): analytic, outer discourse must be clear (Clauberg adds here an analogy to medicine which aspires to give a cure which is as simple as possible). The conclusion of the interpretative process must also be presented in a homogenic manner:<sup>21</sup> obscure phrases must be ordered so that the true sense will be made clear. One of the common mistakes in the development of reason, states Clauberg, is to un-

<sup>19</sup> I counted about 25 times in the 1654 edition where the Cartesian notion of "clear and distinct" appears.

<sup>20</sup> Clauberg 1691, 824 (*Logica vetus et nova* 2, 5): "Generalibus de sermone externo dicta ad efferenda simplicia, ad substantias, ad attributa, imprimis ad composita et relativa, nec non ad alia quaelibet speciatim ita sunt applicanda, ut sermo exterior respondeat interiori."

<sup>21</sup> Clauberg 1691, 837 (*Logica vetus et nova* 2, 15, 106): "Argumenta *analytica* sunt eiusdem disciplinae, cuius est quaestio, adeoque disciplinae alicuius propria, et conclusioni homogenea. Maxime autem *simplicitati* et *paucitati argumentorum* studet analyticus, bonos medicos imitatus, qui, ubicunque possunt, simplicia malunt adhibere medicamenta, quam compositorum multitudine aegros fatigare."

derstand interior discussion following the rules of exterior discussion. In this, says Clauberg, one can observe only *artificial skeletons* of thought and not a living body. The living body of internal discourse must be worked-out through the intricate dynamics of genetic logic. Clauberg clarifies that within the discussion of genetical logic he does *not* include a consideration of the question of the *Categoriae*, which he rather discusses in his most known treatise, the *Ontosophia*.<sup>22</sup> Hence, one may want to look at the *Ontosophia* not as an essay in metaphysics, but as an essay in *logic*, paralleling the position of the Aristotelian *Categoriae*. Clauberg furthermore specifies, importantly, that following Rodrigo de Arriaga,<sup>23</sup> one should look at the *Categoriae* as merely a concluding list of common manners of speaking (Clauberg 1654, *Proemium*, 3, unnumbered), and not as eternal ideas or principles. This essentially nominalist approach to the *Categoriae* is not a common trait of the Philippo-Ramist lineage. Timpler and Keckermann made Aristotelian categories (or in their other name the “predicaments”) an integral part of the system of logic. For example, in the table provided at the beginning of Keckermann’s *Systema logicae* (1601), where all the parts of logic are hierarchically listed and charted (in a manner which is common to Philippo-Ramism), the predicaments appear at the very middle of the table, as one of the two primary manners to refer in “simple terms” to things.<sup>24</sup> Also Timpler’s *Logicae systema methodicum* (1612) assigns an operative role to the categories (Timpler 1612, 77–8): categories are defined as logical instruments, by which the intellect is directed in the cognition of things. They serve to order all matters in comprehensible series.<sup>25</sup> Hence for Timpler, the categories still serve as an essential, primary tool of the logical art. In Clauberg’s *Logica*, however, they become secondary and practically disappear. We can also relate that the nominalist, artificial understanding of the categories, as a contingent, useful set of primary, canonic terms, with Clauberg’s discussion of the relation between inner and outer discourse: in as much as external discourse is inherently artificial, inner discourse retains a kind of purity of thought, and in fact the task of logic is to make outer discourse tuned and ordered according to inner discourse. In the framework of the *Logica*, hence, the categories belong to the tools of exterior discourse, to the part of the transmission of valid judgments onwards to the pupils.

Thus Clauberg’s *Logica* is *technical* in nature: it is a book of guidance, an enumeration of principles, in which all the sections are constructed as questions and

<sup>22</sup> On the *Ontosophia* and for readings of Clauberg in the “ontological” manner see Brosch 1926; Carraud 1999; Pätzold 1999; Strazzoni 2014; Ragni 2016; Collacciani 2020.

<sup>23</sup> Rodrigo de Arriaga (1592–1667) was a follower of Suárez and a student at Salamanca, and thereafter a nominalist philosopher. He taught at Prague. See Tozza 1998; Armogathe 2004. From Arriaga himself see Arriaga 1632.

<sup>24</sup> Keckermann 1601, 7. Kerckermann lists explicitly the Aristotelian categories: substance, quantity, quality, action, passion, relation, place, time, site and habitus.

<sup>25</sup> Timpler 1612, 78: “Quia categoriae sunt instrumenta logica, per quae in rerum cognitione intellectus noster dirigitur: quatenus nimirum omnium rerum sunt series, h. e. per certos ordines ordinumque gradus distinctiones et dispositiones.”

replies. This technical character of logic reminds of his predecessors Keckermann and Timpler. Not only the technical but also the propaedeutic concerns stand in the center of both Clauberg's and the Ramist logicians, whose propaedeutics appear in the form of the posing of logic as the preparatory stage in the development of the philosophical mind. However, in Clauberg, the beginning of the acquisition of this proto-technical capacity begins at a different starting point from the one we find in his predecessors. Clauberg's starting point is essentially *corrective* and even *medical*: one begins the acquisition of logic with a coming-to-terms with the already *deformed habits of reason*, acquired through the state of childhood. In other words, *all* logical propaedeutics begin with a *morbid state*, which is a necessary outcome of the stages of childhood. The stage of erring is hence a necessary stage of the education of the philosopher. To sum up this point, Claubergian logic has a technical side, but it also holds a latent metaphysical demand, which is to purify the already corrupted internal and external discourses.

Clauberg's logical method is meant from the outset as a cure against the auto-referentiality of traditional logic. In the *Prolegomena* to the *Logica* Clauberg (appearing only from the 1658 edition onwards) insists that logic must be capable of referring to concrete things and phenomena, and that Scholastic logic which is closed within the syllogistic structure is not adequate for such a task. That is to say, the object which one studies influences the manner in which one proceeds in the investigation. And along these lines, logic must be renewed if one aspires to make it relevant to knowledge of the world and the things in it. This assertive task should definitely be seen as influenced by the Cartesian method, but it is also very much a reflection of Baconian influence.<sup>26</sup> Logic must be able to help the student approach all problems whatsoever, from any domain of knowledge. This means, that logic's end task is *referential* and not only *inferential*. This renovation of logic endows logical investigations with an epistemic tenor: logic helps us get to *know things that are found in the world*: it can no longer remain the self-enclosed system of rules for constituting true phrases. Logic is not an inferential system which is concentrated on determining the truth value of the object which is explored; rather there is a meaning to be found "within" the object and it is this meaning which is the task of logical understanding to explore. This referential capacity of logic is bound up with the hermeneutical impulse that one finds in Clauberg's method. Moreover, in the framework of Clauberg's logic, the epistemic tenor is not simply directed at things in the world but, at least as we find it in Clauberg's logic, it is directed to texts, expressions, concepts, metaphors etc., things *that are already made*. In this orientation the task is to examine given phrases and expressions of every kind. Hence, logic is understood by Clauberg as a method of occupying oneself with already existing propositions, either one's own or those of others. What derives from this is a clear retroactive, or what one may want to call an *a posteriori* orientation of logic.

<sup>26</sup> On Bacon in Clauberg, see Strazzoni 2012, 251–58, 267–70. On the Baconian influence in German philosophy of the 17<sup>th</sup> century, see Hotson 2020, 265–70.

It is a logic which relates to propositions that have already been composed and synthesized, whether it is the beliefs and judgments of one's own mind (when we are teachers), carrying all its corrupt presuppositions and customs that must be reordered and expurgated, or the sayings or writings of others.

The overall task of the logic is defined by Clauberg as *analytic*, analytic, however, only in the very specific and limited sense of the understanding of the true sense of complex propositions. In as much as the preoccupation with one's own already composed propositions is called the *genetic* part of logic, the second, more advanced part of logic, which is preoccupied with the understanding of the propositions of others is called the analytic part of logic par excellence. According to Clauberg, in as much as all analytic procedure must lean on the genetic procedure, the latter can also stand by itself: all analytic logical procedures include a genetic part; but genetic logical processes do not usually include an analytic part. In order to arrive at an established understanding of the discourses of others, one must begin with a preliminary process of genetic examination and prepare one own's mind for the inquiry into the works of others.

#### 4. The Preliminary Principles of the *Logica*

The first issue which is discussed in the *Prolegomena* to the *Logica* (in the second edition), is that one should begin by *correcting* the acquired maladies of the human mind. This means that Clauberg acknowledges in the first place the situation in which something *has already gone wrong* in the development of the mind. We must begin with an emendation of the corruption of our relation to truth. In this, one should note that Clauberg's approach is different from that which one finds in Goclenius, Keckermann and Timpler, because, for them, logic can begin to operate immediately, without the demand to go through the stage of preparation and emendation. Instead, in the logic of the Philippo-Ramists, logic itself is the groundwork for the construction of the habitus of science. For Clauberg, one should first establish in the mind a clean slate, and only then can one begin a reconstruction of the mind. However, what exactly went wrong in our childhood, according to Clauberg? What went wrong issues from the very nature of the state of childhood, in which there is no clear understanding of the separation between the senses and the mind. In this sense, there is no possibility of not being in error; error is structurally relevant to the state of childhood. All human development must pass through a stage of erring. Children think that what one derives through the senses is as it is represented by them. The error of childhood is presented as an error of interpretation, as an error in understanding, and even bluntly as the problem of corporeal egoism: we think as children that the world is as it is mirrored through our tendencies, tastes and desires. It is this misinterpretation which must be amended.

In order to use logic well, one has rather to act as the good farmer (par. 6): the farmer considers the nature and the defects of the earth in order to learn how to cultivate it, he cleans the land before planting his seeds. It is this work of cleaning which must be accomplished by the genetic part of logic (par. 7). Another

metaphor that Clauberg uses is that of the leader that governs the spirit, basing his rule on the preliminary understanding of the capacities and the deficits of the people. Already here, Clauberg refers to Francis Bacon (par. 15) in stating that as long as the malady remains latent in the patient, no medicine can cure it. In this sense, the first step in the learning of logic is to get to know the maladies of reason and to bring them out so that they can be cured. The first task is to excavate and expose the errors of the mind. And then the second task is to direct and lead the mind according to the separated, purified, clean state of the spirit. This expression of the direction of the mind will notoriously appear in Descartes's *Regulae*, written probably around 1628 but published only in 1701, even though parts of it were already in circulation, kept in the circles of Dutch Cartesians.<sup>27</sup> Because one finds at various points an affinity between this unpublished text of Descartes and what one finds in Clauberg's writings on method, there is no reason to exclude the possibility that Clauberg had at some stage seen the manuscript of the *Regulae*.

The task of reining in and directing the mind through logic, however, was also articulated by Clauberg's predecessors. Keckermann says: "Logica est ars dirigens mentem in cognitionem rerum." Logic is an art that directs the mind in the cognition of things (Keckermann 1601, 8). However, unlike Clauberg, for Keckermann the difficulty does not lie with the maladies of the soul themselves, but rather with the difficulties of the problems that one must solve. That is to say, the difficulty lies with the aims and tasks of logic. For Clauberg, on the other hand, the difficulties begin with the *person who performs* the logic. Logic's task is to teach the mind the rules to be able to stay close to the thing it examines, without being led astray. Keckermann also refers directly to Philip Melanchthon (1497–1560), who defined logic as an art that teaches righteousness, order and clarity.<sup>28</sup> For Timpler as well as for Keckermann, logic must direct human reason. Logic is the art of true cognition, teaching to discern the true from the false. It is the invention and transmission of truths. Its office is the formation and the direction of human reason.<sup>29</sup> As in Keckermann and Timpler, in Clauberg, too, logic directs the mind, but in Clauberg, the pedagogical, therapeutic aspect is highlighted.

<sup>27</sup> On the history of the manuscript of the *Regulae*, see AT X, 351–57.

<sup>28</sup> Keckermann 1601, 8–9: "Id quod etiam voluit Philip. Melanchton, cum logicam definit, artem recte, ordine, et perspicue docendi, ubi per synecdochen rerum cognitionem vocat docendi facultatem. Docemus enim vel nos, vel alios: cum nos docemus, proprie dicimur circa res cognoscendas versari. Tribus autem istis quae addit determinationibus: *recte, ordine, et perspicue*, significat a logica nobis expectandam: primo quidem mentis in cognoscendo rectitudinem, post in explicando perspicuitatem, denique in conferendo et disponendo concinnum ordinem."

<sup>29</sup> Timpler 1612, 14 (part 1, *quaestio* 5): "Rationes ipsorum sunt: 1. quia logica est ars cognoscendi verum, seu disciplina diiudicandi et discernendi verum a falso; 2. quia propter cognitionem veri logica a philosophis primitus fuit inventa, posterisque tradita; 3. quia principale officium logicae est rationem hominis sua natura coecam praeceptis suis informare et dirigere, ne in studio disciplinarum a vero aberret."

In chapter 2 of the *Prolegomena*, Clauberg determines that the errors of childhood are the major cause of our errors as adults. The task of logic is, therefore, to correct the errors of childhood. Clauberg's method here is genealogical: he intends to follow the development of the errors, and to discover their cause. This method of finding the cause of a situation is also bound up with the Zabarellian understanding of the synthetic method,<sup>30</sup> the task of which is to demonstrate the relation between a cause and the situation which results from it. The state of childhood, according to Clauberg, is one in which body and soul are confused, and in which the soul is too much connected to the pleasures or the displeasures of the body. For the child, if an object does not affect the body, it does not exist. While there may be an aspect of Cartesianism in this argument, it is not exclusively Cartesian. What it actually propagates is the existence of mental tokens that are not in any way mediated through sensual signs. Hence, the independence of and the distinction between body and mind is Cartesian, while the latent argument is rather theological in nature: there is a mental, pure reality which is separated from the body and from the senses, and the inner, spiritual pupil who aspires to be able to *understand*, must learn to use and operate those pure tokens of the mind. Understanding, hence, is a mental and not a sensual operation. Teaching and learning are the tasks of the pure soul, not only a matter of civility or commerce.

In his second logical text, the *Logica contracta*,<sup>31</sup> Clauberg differentiates between natural logic and instrumental logic, in as much as natural logic consists of what any (healthy) mind possesses, i.e. intelligence, judgment and memory, instrumental logic consists of definitions, divisions and syllogisms (Clauberg 1691, 913, *Logica contracta*, par. 7). Logic must be developed and understood according to *usage*, as each instrument is only activated rightly or wrongly according to its usage.<sup>32</sup> The usage of logic lies with the action of understanding. The attainment of the usage of logic must rely on the stage of genetics. As already mentioned, Clauberg determines in par. 107 of the *Prolegomena*, genetic logic can exist without the analytic, but the analytic cannot exist without the genetic. The genetic part of logic assures the correct emendation of the mind, while analytic logic is occupied with the understanding of the discourses of others.

##### 5. The Initiation into Philosophy and the Formation of the Teacher

Evidently as one of the results of his Cartesianism, Clauberg's philosophy is constantly occupied with the entry into philosophy. Indeed, it seems that Clauberg's strongest point in defense of the Cartesian creed was exactly that one should strengthen and clarify the foundation of any philosophical endeavour. The most

<sup>30</sup> On the synthetic method in Zabarella, see Sgarbi 2013, chapter 4; Maas 1995, chapter 14.

<sup>31</sup> The *Logica contracta*, which is *not* an abridgement of the *Logica vetus et nova* but is rather a self-standing treatise, was published in 1659. See Verbeek 1999, 190.

<sup>32</sup> On the instruments of logic see Clauberg 1691, 786 (*Logica vetus et nova* 1, 3, 18).

edifying treatise in this respect is Clauberg's *Initiatio philosophi* (1655; see Ragni 2019), which is entirely dedicated to the exploration of the initiation of the philosopher and to the place of doubt in this propaedeutic stage of philosophizing. Hence the propaedeutic, initiating part of philosophy has both inner-Ramist and Cartesian undertones and overtones. This aspect of the concern for elementary schooling in philosophy is constant throughout Clauberg's writings, and all his three versions of the *Ontosophia* and the *Logica* exhibit these concerns.

Clauberg's considerations throughout the *Logica* exhibit a constant pedagogical preoccupation, striving to delineate the guidelines of the initiation into philosophy, and hence, placing philosophy as a pedagogical project. This pedagogical nature of Clauberg's philosophy was often overlooked in Clauberg research, notably in works that place Clauberg as one of the first thinkers in ontology.<sup>33</sup> What is more important to notice is that the genetical part of Claubergian logic is not only pedagogic but also explicitly *auto-didactic* in its nature. The self-preparation and the self-examination of the initiating logician must precede any advancement in the direction of logic. One should indeed also remember, that Clauberg's writings, throughout, are polemical. His entire academic career (from 1647 onwards) is ranged against the opponents of Cartesian philosophy (especially Jacobus Revius, 1586–1658, and Cyriacus Lentulus, 1620–1678). The latent argument that Clauberg brings out in this genetic part of logic, is: before you express judgments regarding the propositions of others, you must examine yourself. Before you are allowed to condemn the thoughts and expressions of others, you yourself must be willing to put your own presuppositions to the test. In so doing, Clauberg furnishes his logic in a manner which will be also suited to defend Cartesianism against its opponents; the logic, in this sense, is also an instrument in the defense of Cartesianism.

Another specific difference of Claubergian logic against the backdrop of Philippo-Ramism is its *personalized* character. One of the first questions that Clauberg poses at the opening of the *Logica* is the problem of "who": *who* is the student of logic? This question of "who" is extremely important and cannot be dismissed as merely a stylistic measure: Clauberg emphasizes that logical processes are being carried out by specific persons, and every person will have a specific starting point, and hence a specific history of errors and a quite individualized series of genetic questioning. It is not a rigid and general scheme that can be applicable to any thinking mind, but rather a specific thinking process of *a* mind that begins its training. This personalized approach to the study of logic is, as far as I know, absent from the writings of his predecessors, and is, so it seems, directly enhanced by the Cartesian approach to method.

The second part of the *Logica* supplies, therefore, a genuine theory of philosophical pedagogics. Within the preliminary framework of the strictly pedagogical considerations, Clauberg brings up the issue of the age of the student (Clauberg 1691, 784: *Logica vetus et nova* 1, 1, 7), because not all the objects

<sup>33</sup> On Clauberg and ontology, see for example, Ferrater Mora 1963; Jaroszyński 2018, chapter 8.



of study are proper to any age: youth must turn to the study of languages, the basics of mathematics, astronomy and geography and subjects of that kind, which require the mastery of the senses and of memory, that are very strong in the adolescent. Only when one arrives at a riper age, when judgmental ability appears, only then can one proceed to study philosophy, which is more precise and searches for the causes and the principles of things. Notice that Clauberg does not talk about a precise numerical age: he is talking in general on periods in a person's development and the ripening of the person. Hence, logic is placed in the propaedeutic stage, in which one can already approach the study of philosophy, but which does not belong to philosophy itself. In any case, we learn from this section that the study of philosophy is allowed to be initiated only at a second phase of learning, and this phase occurs when the learner has acquired the capacity of *judgment*. Does the study of philosophy belong to the study of general knowledge (adequate to the younger age) or to the stage of the initiation into philosophy (which is possible only from the moment when one has already acquired the capacity of judging)? From the structure of the specific section in Clauberg's text the relationship between logic and philosophy becomes clearer. Clauberg conflates the moment which is proper to begin the study of logic with that proper to begin studying philosophy: when judgment appears in the person, one can begin preparing oneself to philosophize, by going through the process of passing through the genetic part of logic, and then passing from the genetic stage of logic to the analytic stage of logic. As we are about to see, the passage from the genetic to the analytic phase is determinative and difficult. In the following step (par. 8), one should get to know one's own natural mental dispositions:

What is second in my consideration? Response: what is explored is one's own *ingenium*, whether it is fast or slow, is it made for a rush of thought, or for a sedentary meditation, [is it] sharp or dull, confident or doubting oneself, diligent or negligent, towards what his natural impetus carries him, for what [activities] is he apt, [and] for what [activities] he is inapt. Some [persons] are made to mathesis, some to eloquence, other to poetry, much less people that are made for many [domains] or to all of them. Hence, those whose intellect cannot know a lot, and even people who can know everything, must take care, according to domain, status and conditions to acquire the knowledge only of the necessary matters in the limits of time. The *ingenium* disposes each man [towards something]; *wherever fate leads, I follow*.<sup>34</sup>

<sup>34</sup> Clauberg 1691, 785 (*Logica vetus et nova* 1, 1, 8): "Quid in mei consideratione secundum est? Resp.: explorandum est *ingenium*, num sit velox an tardum, praeceps ad festinandum, an ad sedatas meditationes factum, actutum an hebes, confidens an dissidens sibi, diligens an negligens, ad quae naturae impetu imprimis feratur, ad quae aptum, ad quae ineptum. Neque enim existimandum est tali homines ingenio esse praeditos, ut sapientes cuncti esse possint, aut in iisdem omnes artibus excellere. Alii ad mathesin, alii ad oratoriam, alii ad poësin, paucissimi, qui ad multa vel omnia facti. Ac proinde cuius intellectus non potest vera plurium, multo minus omnium rerum cognitione imbui, annitatur saltem, ut pro captus, temporis,

We see in the first place that Clauberg follows here the precise constellation of the Aristotelian differentiation between disposition and habitus: in as much as disposition refers to the unwilling, contingent situation changing the subject, or tendency, habitus is already a fixed and established tendency that becomes second nature. All habitus, according to the Aristotelian conception, must begin as a disposition, but this disposition must be worked through, repeated and habituated, in order for it to become a habitus.<sup>35</sup> In the reception of Clauberg, one must begin by getting to know one's own dispositions, one own's mental tendencies, capacities and limitations. The fate that our disposition registers for us in advance is the beginning point of the study of logic. However, from this point onwards one begins an artful, if not artificial exercise that may install in the student the capacity to understand. At the opening of the second part of the genetics, Clauberg burdens further the student with the obligatory duty to teach. He asks:

He who has correctly formed his own thoughts, perceived many things, judged them and memorized them, does he not have the right to take a rest, as someone who has acted well and achieved his task? Response: He must look further and not keep within himself the acquired science, but he must diffuse it. [...] he who communicates to others that which he knows makes the science in his own soul more firm and more solid. As, when he instructs others, in stopping on certain points, and giving them more attention, he makes his perception more clear and more distinct, and fortifies his own memory.<sup>36</sup>

In reading this paragraph, one's attention is naturally drawn to the local usage of the Cartesian principles of clear and distinct perception: however, the application of these Cartesian terms is different from the one we find in Descartes. In order to fortify the existence of clear and distinct perceptions in one's mind, one must pass them onwards; the fortification of one's mind is necessarily done by the transfer of our science to others, by the work of teaching. This stands in contrast to the Cartesian declaration in the *Discours de la méthode* that the necessity of spreading his thoughts is a burden rather than a privilege (CSM 1, 141–51). Clauberg mentions here the importance of the exercise of memory, which is one of the problems that Descartes acknowledges but, in a way, bypasses, as the latter wishes to reach the point where science will overcome the frailty of

loci ordinisque sui ratione maxime necessariorum scientiam comparet. Quo genius quemque suos inclinat, quo fata trahunt sequendum." Coqui and Lagrèe identified the end of the passage as a paraphrase of Virgil, *Aeneid* V, 709. See Clauberg 2007, 63, note 2.

<sup>35</sup> On habitus in Philippon-Ramism, Semi-Ramism and Anti-Ramism, see Pozzo 2012, chapter 3.

<sup>36</sup> Clauberg 1691, 817 (*Logica vetus et nova* 2, 1, 1: "Qui recte cogitationes suas formavit, rebus quam plurimis bene perceptis, iudicates memoriaeque retentis, estne illi merito, tamquam re bene gesta et consummata quiescendum? Resp. Ulterius tendere, neque scientiam acquisitam in se veluti sepelire, verum ad alios propagare debet. [...] Quin etiam qui communicat cum aliis ea quae cognovit, scientiam in animo suo firmiorem ac solidiorem efficit. Nempe dum alios instituit, ipse rebus diutius immorando, magisque ad eas attendendo, perceptionem suam clariorem distinctio remque reddit, memoriam roborat."

corporeal memory<sup>37</sup> and will install in the mind a quick and prompt capacity to use installed knowledge as if in an automatic manner. The manner to achieve that prompt action of the mind is to keep on teaching, exteriorizing the emended internal discourse which is acquired in the genetic phase. This demand or advice should not be taken as exclusively Cartesian. It is well embedded in the humanist theory of method.

## 6. The Second Part of Clauberg's *Logica*: The Transmission of the True Sense

The person who is occupied with the acquisition of the logical habitus must therefore grow to be a teacher; in the second part of the *Logica*, Clauberg concentrates on the manner of transmitting onwards to others the propositions achieved in the genetic part of knowledge. Teaching, as an art of transmission, is in itself an art of interpretation, that is to say an art of analysis. Analysis, for Clauberg, is the manner of discerning the true sense of a certain given. Analysis is the art which understands the given. And the results of the analytic process must be transferred to others.

In the art of the transmission of the true sense of works, Clauberg suggests three divisions: 1) the transmission can be made by either writing or by the living voice; 2) transmission can be didactic or elenctic; 3) transmission can be acroamatic or exoteric. The first differentiation is the one between oral and written teaching (par. 16–7). In as much as teaching by the living voice is always limited in its scope (according to Clauberg), written teaching is directed at a wide and innumerable audience. Clauberg emphasizes the efficiency of living teaching, and hence supports the existence of Schools, Colleges and Academies; however, the best way to teach (i.e. to transmit the true sense of works) is to write textual commentaries and explications. The first supports memory, the second helps perception, and the unification of both (oral and textual) amplifies judgment (par. 17). Hence, Clauberg avows that textual work is essential and necessary to the work of teaching.

The second pedagogical differentiation Clauberg mentions is the one between didactic and elenctic transmission. Didactic transmission can be made to those students with an already clean mind<sup>38</sup> or those whose minds have already been corrected and amended. Elenctics must be applied to those who come with a deviant mind filled with preconceptions. Elenctics is hence first unlearning and is important and complex (Clauberg 1691, 818: *Logica vetus et nova* 2, 1, 4). Clauberg does not say this explicitly, but elenctics reminds one of the *genetic*

<sup>37</sup> In his earliest writings, Descartes speaks against the *ars memoriae* of his time: AT X, 230. On memory in Descartes see Sepper 1996, 76–9, 104–5. On logic and memory in early modern philosophy see Rossi 2000.

<sup>38</sup> In the *Defensio Cartesiana* Clauberg refers critically to the Aristotelian model of the *tabula rasa*, and in fact prefers the Platonic model of the inner powers of the soul, as being more fitting for the Cartesian model (he refers to Plato's dialogue *Theaethetus*). See Clauberg 1691, 1065: "Quasi mens omnino sit instar tabulae rasae seu chartae purae, cui nihil est inscriptum, et quae etiam ipsa nihil inscribere valeat."

part of logic discussed above, as the genetic part of logic is exactly the one in which the teacher learns through himself the process of the emendation of the spirit. Hence, elenctics is the process by which the teacher helps others to correct their minds. In this, one should note that the genetic stage of logic, which is also parallel to the operation of doubt in the Cartesian method, should be, in the Claubergian framework, put into *the elenctic* part of pedagogy. The usage of doubt, in this sense, is elenctic and methodic at the same time, and is a necessary part of any initiation into philosophy.<sup>39</sup> Didactics, however, is classified by Clauberg as more valuable than the elenctic. When the truth appears all the clouds disperse, and it is better to show the truth not through disputes but rather by a direct demonstration of the true. There is more dignity and more art in defense than in accusation, and there is more value in edification than in destruction. Reason, number, and order are more easily learned, because truth is simple and uniform, in as much as the forms of error are infinite.

A third differentiation that Clauberg mentions is the one between the acroamatic and the exoteric modes of transmission. The acroamatic mode is the one which penetrates the issues at hand, which Clauberg also calls didactic, and which is also in the strongest manner analytic (Clauberg 1691, 819–20: *Logica vetus et nova* 2, 2, 15 and 20). The exoteric mode, on the other hand, proceeds according to human opinions and beliefs, and is qualified by Clauberg as dialectical and popular. Indeed, in the last paragraphs of the second part of the first part of the logic, Clauberg admits that he sees *dialectics* as an inferior way of proceeding in logic, which is related to the exoteric mode of transmission (Clauberg 1691, 838–39: *Logica vetus et nova* 2, 16, 114). It is better to demonstrate the truth, than to argue with false opinions. This statement has many targets: not only the late scholastics and their internal disputations, but also Ramus's art of dialectic (Ong 1958; Bruyère 2000) is considered by Clauberg as secondary in importance and dignity. Logic is not to be mistaken for dialectics or to be limited to be the art of disputation. It is rather the art of the adequate transmission of valuable internal discourses.

In general (as said earlier, at chapter 5 of the second part of the first part of logic), the task of the teacher is to make external discourse conform with internal discourse, that is to say to make elenctic, didactic demonstration adequate to the corrected mind of the transmitter (the teacher). One must learn to clearly translate one own's thoughts into a discourse that will be sufficiently didactic, clear and facile, and will enable to pass from genetics to analytics. Translating adequately the ordering of inner discourse to the language of external discourse is the very task of logic.

The stage of adulthood of the mind is the one in which mind and body are thoroughly distinguished from each other. If the genetic part of logic is a kind of a purgatory, a cathartic process in which the mind is purged of its misconcep-

<sup>39</sup> The entire treatise *Initiatio philosophi* (1655), is dedicated to a thorough exploration of the place of doubt in the initiation into philosophy.

tions in preparation for the work of the understanding of works, in the analytic part of logic one is allowed to proceed towards the works themselves. This part of logic is inherently hermeneutic. It is, however, consonant with Dannhauer's presentation of hermeneutics as a part of logic, following the structure of the Aristotelian *Organon* (Bühler 2006). The "things" that are being analyzed in Claubergian logic are not natural things but rather the creations of men, written or spoken words of other men. In this sense, the subject matter of the analytic are things that are already composed, that is to say, synthesized things. Analytics in the framework of Claubergian logic means, in the first place, a reduction of the phrase into its "true sense" in order to be able to pass it onwards, to an audience, or to one's students. In more modern terms, one could say that logical analysis in the Claubergian sense is similar to the work of abstraction, of the reduction of the thing to its true essence.

The analytical part of logic also puts the thinker in an essential relation with one's surroundings. It is a communicative art, also drawing its sources from rhetoric. In genetic logic ("in logicam geneticam") the mind (*mens*) turns towards its own thoughts, in the analytical part of logic one turns towards the thoughts of others: in the first case, one considers the thoughts which must be primarily educated, in the second, one passes to consider the thoughts which are already formed. The first is therefore anterior and more necessary than the second, because composition is anterior to resolution (*resolutio*), and it is more important for every man to form his thoughts according to the rules than to know those of others; the one is necessary to all men, even the solitary ones, who love to educate themselves, and the other is valuable only for he who passes his life among men or he who wants to learn from another (par. 108).<sup>40</sup>

If one undertakes the work of examination, explication and transmission, one has to be aided by a method. The doctrine of method, hence, is pertinent to logic, and without it logic is lacking and mutilated. Finally, and again in line with the personalized tone of Clauberg's *Logica*, Clauberg raises the question of he who speaks in the proposition which is examined (Clauberg 1691, 846: *Logica vetus et nova* 3, 3, 12–3). One has to ask in the first place: who speaks? Is it a man or the divine? Is it a representative of the voice or the first person himself? Is the speaker the original or someone else representing her? Also in that line, one has to be attentive to the context of the discourse, to the circumstances that enabled the words and the arguments (Clauberg 1691, 847: *Logica vetus et nova* 3, 4, 17).

<sup>40</sup> Clauberg 1691, 780 (*Logica vetus et nova, Prolegomena*, par. 108): "In logica genetica mens in se reflexa versatur circa proprias cogitationes, in analytica mens versatur circa alienas; ibi formandae, hic formatae respiciuntur cogitationes: illa prior est et magis necessaria, quam haec, quia compositio prior est resolutione, et magis requiritur, ut suas quisque cogitationes rite formet, quam ut alienas cognoscat. Illud cuius homini eruditionis amanti, etiam solitario; hoc non nisi inter homines vitam agenti, vel ab alio discere volenti necessarium est."

## 7. Analytical Logic as the Art of Definitions of the Truth of Works

In the general theory of method before Clauberg and before Descartes, one of the great problems is that of the status of definitions. Galen (c.129–c.216) had argued against the exaggerated use of definitions in the proceedings of the (medical) method (Hood 2010). The question of definitions continues to be a constant part of the tradition of the discussion around method: Keckermann, for example, in his own logic was also occupied with the question of definitions (book 1, chapter 17) and divisions. It seems that if Clauberg is more sceptical regarding the power of definitions, then for Keckermann definitions are essential.

In par. 52 Clauberg differentiates “definitions of things” and “definitions of words” (Clauberg 1691, 879–80: *Logica vetus et nova* 4, 7, 52–4). Only in a state of confusion or obscurity, can definition contribute to the clearer and more distinct perception of the thing. But one should not use definitions automatically or excessively (as the Phillipino-Ramists do): when there is no confusion, one should no longer define further for no reason. In par. 54 Clauberg refers to Galen’s aversion towards definitions and mentions also *philoristia* (the malady of the exaggerated love of definitions). In searching to clarify further that which is already clear, one is being led more severely into confusion. One does not need to hold a lantern in the daylight; logical definition is required only when the natural light does not give us a clear enough image of the thing. But when the natural light shines on the thing, one should stop the procedure of definitions. Definition for Clauberg comes through the operation of division, and this is also the key to good teaching: *Qui bene dividit, bene docet*.<sup>41</sup>

Not only the teacher, but also the students must perceive the matter at hand clearly and distinctly, as, from the moment this clearness is achieved, the certainty of judgment follows from itself, and as a clear perception is acquired by definition and a distinct perception by division, this type of transmission is being performed, in the nice phrase of Clauberg, through chalk rather than through carbon (Clauberg 1691, 886: *Logica vetus et nova* 4, 9, 79). In other words, it is the duty of the teacher to present the true sense of texts in a manner which will be clear and distinct, and when this is achieved true judgment will necessarily follow. And how should the teacher arrive at that clear and distinct perception? One should reduce the thing to its class, and this is achieved in the *genus proximum* to show the property of difference.<sup>42</sup> All clearance of transmission must lean on the first and basic division, which is the one between cogitated and ex-

<sup>41</sup> Clauberg writes this phrase as an unauthored paraphrase, in *Logica vetus et nova* 4, 8, 65 (Clauberg 1691, 882).

<sup>42</sup> Clauberg 1691, 886 (*Logica vetus et nova* 4, 9, 79): “Duo ista nec semper necessaria, ut modo ostensum, nec sola sunt clarae distinctaeque perceptionis comparandae adminicula, sed alia plura, quae summam recensentur Log. I 122. Et 2. patet ex primo Logices gradu, rem, quam clarae distinctaeque perceptionis ergo attendimus, primo reducendam esse ad suam classem, deinde attributa eius varia consideranda, atque in communia et propria distinguenda, etc. porro ex communibus genus proximum, ex propriis differentiam seligendam, ex iis coniunctis tandem concinnari definitionem.”

tended things. The mind can only conceive of substances if they are either extended or cogitated. The cogitated, is, Clauberg adds, in this sense immaterial. This is the fundamental analytical division, and all other divisions develop from this one. Analytic division according to Clauberg, is thus the development of this basic duality,<sup>43</sup> which can be seen as corresponding to a Cartesian, but also to a Calvinist, vision of man.

#### 8. The Emendation of Perception as the High Task of Logic

In conclusion, Clauberg's logic does present a *sui generis* version of early modern logic. In the first place, the text, its structure and its terms combine several influences in a manner not easily found in other texts of the same period: Philippo-Ramism, the questioning of method in the wake of Galen, hermeneutics, pedagogics and Cartesianism. Intentionally, I put Aristotelianism and Scholasticism aside, as in the view of the present paper these are not as evident in Clauberg's work as sometimes assumed.

The general orientation of the *Logica* is clearly pedagogic, not only in the limited sense of educating the mind, but also more extensively in the sense of the formation of teachers. If one would need to choose the most important influence on this special conception of logic, the prominent move, according to the view of the present paper, is the hermeneutical one, taking the work of the true understanding of the works of others to be the central issue and aim of logic. In this, the emendation which occurs through the teaching of logic is the transformation of sense perception (the perception of works) into mental perception. At one place in the *Logica*, Clauberg states explicitly: the mind is perception.<sup>44</sup> And the mind, that is to say, perception, must reign both in what you say *and* your judgments. If you perceive well, you'll be able to judge well. But in order to judge well, you must perceive with a purified mind. This is the first step in the initiation into philosophy.

#### 9. Pending Threads: The German-Dutch School and Clauberg's Latent Socratic Ideal

In conclusion, let us try to redefine Clauberg's concept of logic, while taking into account both the influences and the characteristics discussed in the above inquiry. Similarly to Descartes, Clauberg did not produce a logic in the canonical sense of the term. His logic presented itself as innovative and endeavoured to exemplify the term of the "new" logic. The overall program of the

<sup>43</sup> Clauberg 1691, 885 (*Logica vetus et nova* 4, 8, 74): "Nulla substantia mente concipi possit, quae non sit extensa vel cogitans. [...] Recte Suarez: *immateriale esse et intellectuale esse inseparabilia sunt.*" One should note the resemblance of this definition to Spinoza's definition of the attributes, that are defined as the only two attributes through which the human mind can conceive of the substance.

<sup>44</sup> Clauberg 1691, 890 (*Logica vetus et nova* 4, 11, 94): "Mens, id est, perceptio, debet imperare quod dicas et iudices [...]."

logic presents itself as a process of training teachers (in the general sense of the term). The genetic part of the logic is more Cartesian in nature, and it proceeds as an auto-propaedeutic process, in which the mind learns to shed its own preconceived ideas. Afterwards, this same mind must learn to transmit this very mental purity towards one's pupils. The analytic part of logic is, however, less Cartesian and un-Scholastic. It is concentrated on the development of the capacity to *understand* and to *judge* the words of others. After the stage of establishing the meaning of a proposition, analytic logic aims to transmit this gained understanding towards one's pupils. Though one can state Dannhauer's hermeneutics as a source for this part of the logic, the analytic part in Clauberg's logic is less limited to theological texts such as one finds in Dannhauer.

Hence one cannot, in the present state of our knowledge of Clauberg's work, point to one exclusive source for his logical program. The creation of this mixture is itself genuinely Claubergian. However several further points are evident from the above: Claubergian logic is neither a purely Scholastic nor a purely Cartesian one. The typification as Cartesian-Scholastic is, at least in the case of the *Logica*, inadequate. However, there are more lines of influence that are evidently present in Clauberg that one must pursue further in order to be able to configure the place of Clauberg in the history of philosophy. One direction that must be considered further is the Baconist thread, which is highlighted by Trevisani, and which corresponds to the inner workings of what Clauberg promotes in his various writings, notably in the *Logica*. This Baconism has to do with the concentration on the understanding and criticism of the works of men, as well as with the consciousness of the importance of techniques of transmission of knowledge.

A second matter pending in the necessary further research regards Clauberg's closest allies, Tobias Andreae and Christoph Wittich (1625–1687), though Clauberg refers only rarely to their work. It is evident that both were Calvinist Cartesians, they were both educated in Germany and Holland, and they both were aware of the groundbreaking thought of Francis Bacon and of the growing strength of Ramism. However, their areas of competence were rather different than those of Clauberg. Andreae was involved in theology and medicine,<sup>45</sup> and Wittich was mainly occupied with task of defending a Cartesian theology.<sup>46</sup> Much research is needed into the biographical and philosophical relationship between those three philosophers, who created a real school of thought.

The last thread that must be researched further, is a hidden tendency in Clauberg to promote arguments that one cannot qualify but as Socratic: the priority of the quest after the foundation (Strazzoni 2018, 8–22); the initiation to philosophy; doubt as an instrument of method, self-examination, questioning of

<sup>45</sup> Andreae's work which is most concerned with questions of method is his *Methodi Cartesianae assertio* (1653). For a detailed presentation and analysis of this treatise, see Savini 2011, 139–60.

<sup>46</sup> Wittich's text that deals most extensively with issues of logic and method is his *Anti-Spinoza*, published much after Clauberg's lifetime (1690). On this see Douglas 2014. One important monograph exists already on Wittich's case: Eberhardt 2018. See also Del Prete 2013.



given propositions and, finally, seeing philosophy itself as a pedagogic endeavour. At least with regard to this latent presence of the Socratic ideal in his writings, Clauberg is far from Scholasticism, and, certainly, this Socratic thread is immanent in Clauberg's adherence to the Cartesian creed.

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