

JOHANNES CLAUBERG
(1622-1665)
AND CARTESIAN PHILOSOPHY IN
THE SEVENTEENTH CENTURY

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5. JOHANNES CLAUBERG ON PERCEPTUAL KNOWLEDGE

Johannes Clauberg became acquainted with Cartesian philosophy during his studies in the Netherlands.¹ He was a great admirer of Descartes² and showed an exceptional interest in his views. Yet, like his master Johannes de Raey³ at Leiden, he stuck to Aristotle⁴ and to the Peripatetic tradition.⁵ Indeed, Clauberg's reflections on knowledge acquisition and related issues made an attempt at harmonizing dualism with a dependency of perceptual ideas upon external things.⁶ However, there are also distinct traces of Plato and Augustine in his work.⁷ In particular, the influence of Renaissance Neoplatonism can be noticed, first of all through the countless references to the fifteenth-century Neoplatonist Marsilio Ficino.⁸ Like many Renaissance philosophers, Clauberg conceived of man as a microcosm⁹ and also, with explicit reference to Ficino, as a "miraculum divinum".¹⁰ Moreover, he defined the human mind as "divinae mentis aemula".¹¹ Also in his theory of ideas he was clearly influenced by ancient and Renaissance Neoplatonism.

Clauberg's reflections on perception and knowledge of the sensible world are intimately connected to his ideas about the metaphysical structure of the world and his view of the mind-body relation. In the first section, I analyze how Clauberg's psychology depends on traditional and contemporary metaphysics. In the second section I discuss the relation between mind and body. The third section is devoted to Clauberg's views on perception. In the final section I analyze the nature and generation of perceptual ideas.

1. INTELLIGIBILITY AND IDEAS

The metaphysical assumptions underlying Clauberg's psychology are laid down in a number of interrelated views which he derived from various philosophical schools, including Scholasticism, Neoplatonism, and Cartesianism. Clauberg endorsed the scholastic theory of transcendentals and thus accepted the idea that truth has an ontological basis.¹² His theory of ideas was clearly influenced by ancient and Renaissance Neoplatonism, since he postulated the presence of ideas in God's mind as well as in the human mind. And, like Descartes, he argued that all philosophical knowledge was to be based on the idea of God.

Far from simply grafting these conceptions onto one another, Clauberg tried to work them into a new and coherent synthesis. For example, the prominent function of the idea of God in the development of philosophical and scientific knowledge, was connected by Clauberg to a thesis derived from Averroes, namely, that the "scientia Dei" is the cause of all finite things.¹³ As we shall see, also Clauberg's theory of (perceptual) ideas was in effect a new synthesis of Platonic, Cartesian and Peripatetic views.

Clauberg believed that thought and knowledge are based on the intrinsic intelligibility of the world:

Praeterea, omne ens potest cogitari seu intelligi, ideoque Cogitabile & Intelligibile appellatur, (...) Ding res & denken cogitari ejusdem sunt originis.¹⁴

Elsewhere, Clauberg explicitly endorsed the central thesis of the Scholastic theory of transcendentals: "existentia & veritas pari passu ambulant".¹⁵ The intelligibility of the world is intimately connected with the role Clauberg assigned to knowledge of God in philosophy, and with his theory of ideas. Indeed, Clauberg regarded the idea of God as the starting point of all knowledge. Moreover, he believed that things are intelligible in virtue of their correspondence to divine ideas.¹⁶ In the following I take a closer look at these views.

At the outset of his main philosophical work, *Exercitationes Centum de Cognitione Dei & Nostri*, Clauberg argued that without knowledge of God, science is impossible.¹⁷ Like Descartes, Clauberg thought that the idea of God must be innate, since a finite substance cannot generate the idea of an infinite object. Knowledge of God is prior to all other knowledge, not temporally, but logically.¹⁸ The idea of God has a specific function, it is like a candlelight that guides our knowledge.¹⁹ Thus, Clauberg suggested, God as the light of the soul guarantees the (formal) correctness of our knowledge. This is the Platonic-Augustinian strand in his psychology.²⁰ The prominent place of the idea of God in science and philosophy, is connected with Clauberg's ontology of ideas, which he conceived of as present both in the divine mind and in the human mind.

The doctrine of ideas as present in the divine and in the human mind has its origins in the Hellenistic interpretation of Platonic philosophy. The psychological twist in the notion of idea was developed between Plato and Plotinus. The ancient Stoics interpreted Platonic ideas as mere representations of our thought.²¹ Similarly, Cicero saw ideas as human thoughts, but he also considered them to be innate rules of conduct, shared by all individuals.²² Philo and other representatives of middle-Platonism, possibly in a critical reaction to the Stoic interpretation of ideas as human thoughts *tout court*,²³ characterized ideas as the thoughts of God.²⁴ This doctrine, also present in Augustine,²⁵ reappeared in Macrobius. In Macrobius's commentary on Cicero's *Somnium* (probably written between the end of the 4th and the beginning of the 5th century), we read that God's mind contains the "rerum species", which may be called ideas.²⁶

During the Middle Ages the term "idea" was mainly used for divine ideas. By contrast, some Renaissance authors such as Marsilio Ficino and Giordano Bruno, started to use it again for human ideas.

Clauberg endorsed the view that ideas are present in the divine mind as "archetypae" of created things. Man's ideas of God and of the things created by God are defined as "ectypae":

Ex ideis aliae sunt *ectypae*, qualis est idea Dei & aliarum rerum ab homine non factibilium, aliae *archetypae*, quae rerum faciendarum formulae & exemplaria sunt & à Philosophis ad causam efficientem referuntur (...).²⁷

Mediated by the sensible world, human knowledge is related to the divine ideas. Perceptual ideas depend essentially upon the sensible world.²⁸ Now, in the following I want to argue that Clauberg's theory of ideas must be understood in terms of Renaissance Neoplatonism.

Renaissance authors, such as Ficino, Pico and Bruno, regarded the idea as an eternal model with a specific function in the relation between God, world, and human soul. As "cognitionis generationisque fundamentum", the idea is not only a formal principle of reality, but also a possible object of knowledge.²⁹ Significant is Ficino's definition of the ideas as "primum in aliquo genere",³⁰ which was also echoed by Clauberg.³¹ Clauberg's view of the ontological and psychological function of ideas was most clearly anticipated by Giordano Bruno, however, who developed his cognitive psychology in the framework of what is called the theory of the three worlds: God, the infinite universe or nature, and the human soul. On Bruno's view, the contents of the human soul are related to the formal structure of natural reality and to the origin of the latter.³² The new cosmology led Bruno to a partial departure from the Neoplatonic view of hierarchy: in an infinite universe there can be no qualitative hiatus between the sublunar and the celestial world. Bruno distinguished between, on the one hand, the world of God and of divine ideas ("mundus supremus"), on the other hand the world of natural reality ("mundus ideatus"). God and the divine ideas form the basis of the natural world and guarantee its knowability.³³ On this construal the human soul can represent the "corpus idearum" at a mental level.³⁴

Notice that Clauberg, like Descartes, did not distinguish between representational principle (idea in the mind) and known content (essence of sensible bodies or image of a divine idea). Ideas are mental items with representational content. This conflation of representation and content also had a parallel in late sixteenth-century eclectic authors such as Giordano Bruno and Scipio Agnello. Bruno assigned to "umbra" and species a representational and instrumental function, but often he also regarded them as the object of knowledge.³⁵ Agnello assimilated species to idea, regarding both as the cognitive object.³⁶

It is obviously highly improbable that Clauberg was acquainted with all the sources mentioned above. To be sure, he quoted at length from the works of Ficino. He was probably not acquainted with the writings of Bruno, however, although he did have knowledge of ideas that are very similar to Bruno's, namely, through the work of the relatively unknown German author Conrad

Berg.³⁷ This may explain the unmistakable affinity between Clauberg's views and Bruno's. Like his Renaissance 'precursors', Clauberg situated the intelligible world in the divine mind,³⁸ and held that this world of ideas is mirrored in natural reality. This construal guarantees the intelligibility of natural reality, and, as in Bruno, enables the human mind to 'follow' the ideas, that is, to reproduce them at a mental level.

2. MIND AND BODY

Like Descartes, Clauberg thought that body and mind are two distinct substances. He ruled out the idea of a causal or physical interaction between body and mind. Yet, he believed that body and soul are intimately ("arctè"³⁹) related to one another: the motions of bodily organs may determine or change the states of mind,⁴⁰ and the mind in its turn is able to govern and to move the body.⁴¹ Between mind and body there exists a "conjunctio" or "nexus"⁴² that is guaranteed by divine providence. This conjunction may be seen as a special case of the more global formal coherence between God and the world, grounded in the ontology of ideas. Indeed, the mind's relation to the body was explicitly compared to that between God and the world.⁴³

Clauberg endorsed the Cartesian view of the soul as "res cogitans",⁴⁴ rejecting the Aristotelian definitions of the soul as "actus corporis", "forma assistens" or "informans",⁴⁵ and also rejecting the metaphor of the sailor and the ship.⁴⁶ With Descartes and De Raey he shared the view that the soul is present in the whole body, but has the pineal gland as its privileged seat where mind and body may interact:

In quam cerebri partem cùm & corpus per suos spiritus, & anima per saum voluntatem agere possit, contingit interdum ut inter se pugnent & confligant.⁴⁷

That mind and body are related to one another, is clear from the fact that there are perceptions in the mind which depend on bodily motions, and on the fact that the body is moved by the soul's will.⁴⁸ The bond between body and soul is not a substantial union but rather a "conjunctio vitalis", that is to say, body and soul are connected through their operations.⁴⁹ Clauberg regarded the body as the instrument of the soul.⁵⁰ The non-causal relation between the two he compared to that between lord and servant, or between rider and horse.⁵¹ Indeed, mental operations do not depend on the body, and the acts of the soul-body complex are defined as "actus transeuntes".⁵²

Interesting from an epistemological point of view is Clauberg's thesis of the "objective" presence of the body to the soul:

Est quidem animo corpus nostrum etiam objective præsens, quoties de eo cogitat (...) Objectiva illa præsentia est inter signum & signatum, imaginem & exemplar, inque sola intentionali & vicaria, imò picta quadam entitate consistit.⁵³

The presence of the body to the soul (which in the above passage is phrased in the same terms used by the schoolmen to indicate the presence of cognitive objects in the mind⁵⁴) is subsequently explained in Cartesian terms: bodily movements can stir the soul to an activity, in the sense that they can give the occasion for the soul to develop thoughts.

Inferius in superius agere non potest entitatem se nobiliorem verè efficiendo: attamen potest ei producendae certam atque validam occasionem dare, potest incitamentum esse fortissimum.⁵⁵

No natural bond or necessity can explain the mutual interaction between mind and body; all we can say here is that it is grounded in God's will.⁵⁶ This is the upshot of Clauberg's occasionalism. Thus, Clauberg was not a 'classical' occasionalist.⁵⁷ Indeed, he neither endorsed the causal inefficacy of the human mind, nor did he postulate or argue for a continuous divine intervention in the generation of perception and cognition.⁵⁸

3. PERCEPTION

Clauberg did not lay down a definitive theory of perception in any one particular work. The question of how the human mind may gain knowledge of the sensible world returned on many occasions, and was addressed by him from different angles in different works, depending on the context in which it was raised. Thus, he sometimes presented only concise notes and definitions (as in *Theoria Corporum Viventium*), while at other times he dwelled more extensively on physiological aspects and on more strictly psychological and cognitive issues (as in *Conjunctio* and *Exercitationes*).

In his *Theoria Corporum Viventium*, Clauberg stated that some "cogitationes" are actions ("volitiones"), while other are passions:

Passionem generaliter appello omne genus *perceptionis*, quae in nobis invenitur, quia saepe accidit, ut animus noster eam talem non faciat, qualis est, & semper eam recipimus ex rebus, quae cognoscendo representantur.⁵⁹

Perception is a passive, or more precisely, an involuntary process, when it regards an external object.⁶⁰ Indeed, perception depends on soul or body.⁶¹ All perceptions depend on the nervous system, however, not just insofar as they are effects of bodily causes, but as "compositum ex aliquo corporis nostri motu & mentis cogitatione".⁶² Thus, all perception involves the mind-body complex.

Clauberg endorsed Descartes' view of perception as a process involving three stages. The first stage consists in the affection of the sense organ and the subsequent transmission of sensory stimuli through the nerves to the brain. The second stage is the actual perception of an external object by the soul, insofar as the latter is present in the pineal gland. Descartes argued that for this perception no intentional species were required, because the brain may affect the mind without introducing anything into it. Clauberg, who was less polemical

towards scholastic psychology, stated that a repeated sensitive affection leaves a "vestigium" in the brain, which the "philosophers" call "species & phantasma".⁶³ It is obviously the "conjunctio" of mind and body that makes it possible for appropriate brain activity to give the mind occasion to have an idea or intellectual representation which corresponds to the condition of the brain's being triggered by the sense organs. The last stage is the formation of a perceptual judgement.⁶⁴ A more extensive analysis of the three stages is presented elsewhere.⁶⁵

For a better understanding of Clauberg's position, it is helpful to compare it to that of Descartes and to traditional psychology. Clauberg followed Descartes' concept of the ontology of the sensory process.⁶⁶ Notice that the first stage of perception, as described above, is not essentially different from the Aristotelian idea of the affection of sense organs as a necessary condition for sensation. As for Clauberg's and Descartes' second stage, however, there is a substantial difference with the Peripatetic view of the relationship between perception and knowledge. The second stage seems to comprise both perception and the mind's simple apprehension, as conceived by the Peripatetics. Indeed, Descartes distinguished between sensation (pertaining to the mind-body complex) and imagination or perception as such (a mental event), but he also tended to conflate sensuous and non-sensuous perception, as may be derived from the thought-experiment of the wax tablet in the Second Meditation.⁶⁷ Also Clauberg, though distinguishing between sense perception and mental perception, regarded perception as a mental function.⁶⁸ Moreover, truth and falsity do not apply to the first two stages.⁶⁹ According to the Peripatetics, this holds for the perception of sensibles pertaining to specific senses, and for the mind's simple apprehension of an individual essence. In Aristotle, perceiving involved a phenomenon that was difficult to explain in terms of Aristotelian physics, namely, the absorption of the form of the object by the senses. Clauberg and Descartes replaced this process by a non-mechanical reading of patterns in the pineal gland.

In *Conjunctio*, Clauberg distinguished between the two sorts of perception, confused and pure. Confused perception he attributed to the imagination and to the senses; it has its ground in the complex of soul and body. Pure perception he also described as mental or intellectual perception.⁷⁰ Sense perception takes place by means of material signs, which merely *indicate* but do not *represent* external objects.⁷¹ Through the senses we know *that* things exist, but we do not come to know *what* they are.⁷² Intellectual perception, by contrast, takes place by means of formal signs, that is, by means of mental images:

Puri intellectus perceptio fit per signa *formalia*, quae res verè repraesentant, quatenus earum sunt imagines mente pictae.⁷³

An important point that should be mentioned here is that Clauberg described mental representations as "formal signs", a definition that was often used for the intelligible species.⁷⁴ What is more, Clauberg identified mental representations as images depicted in the mind. Also Descartes sometimes suggested that ideas are images, but he eventually rejected that view.⁷⁵

The distinction between sense perception and mental perception seems to suggest a return to something like the Aristotelian distinction between perception and cognition. This interpretation is confirmed by Clauberg where he described the acts of the soul-body complex as "actus transcuntes", and cognition as an "actus immanens".⁷⁶ This is an Aristotelizing restatement of Descartes' distinction between sensation and imagination or perception as such.

By virtue of the vital conjunction between body and mind, the mind is able to perceive sensible objects. The role of the body, although essential in perception, is subordinate to that of the soul. In perception the body is the organ or instrument of the soul, compared to the blind man's stick.⁷⁷ To certain bodily stimuli correspond precise mental reactions,⁷⁸ but perceptual ideas are only apparently brought about by the body. Indeed, the bodily motions only stir the soul to perceive. The body furnishes the necessary stimuli, but perception as such is a mental function. Sense-perception does not capture the essences of things, but merely communicates their existence to the soul.⁷⁹ A clear and distinct perception requires the attention of the mind.⁸⁰ Indeed, the imagination may be perfected by "interna meditatio".⁸¹

4. PERCEPTUAL IDEAS

Human ideas are not actualizations of innate dispositions, as in Descartes. Rather, like many Scholastics and Renaissance Platonists, Clauberg in his theory of ideas emphasized their ontological status. Ideas are regarded as entities,⁸² existing both in the divine mind and in human minds.

In *Exercitationes* Clauberg again described the idea as "pictura rei in mente".⁸³ Ideas are involved in acts of simple apprehension, and as such they are similar to perception, thought, and concept.⁸⁴ Clauberg assigned a twofold mode of being to ideas:

Duplex in omni idea, in omni imagine esse consideramus, quorum unum ab altero variis nominibus distinguimus, jam reale & intentionale, jam materiale & formale, jam formale & objectivum, jam proprium & vicarium opponendo.⁸⁵

As an immanent act or an operation of the mind the idea is a 'real' thing, to be classified in the category of action. Its second mode of being is described as "plus quam omnino non esse", that is, as a diminished kind of being. In this mode the idea represents things in the mind:

Et hoc ipsum *repraesentare* sive exhibere, per modum imaginis, vocamus idearum nostrarum esse vicarium, seu objectivum, seu intentionale.⁸⁶

By virtue of the representational force of ideas the soul may "become all things", as Aristotle had put it. To support his claim that ideas are something 'real', Clauberg invoked Augustine's conception of the soul as "imago", Zabarella's argument for the existence of intentions, and Piccolomini's argument for the existence of spiritual beings. Of the latter two Clauberg remarked

that they sometimes expressed themselves rather obscurely, but that they still had valuable things to say on the ontology of ideas and mental images.⁸⁷ Still, Clauberg was well aware of the differences between traditional species and Cartesian ideas.⁸⁸ Indeed, in the subsequent section he questioned the interpretation of Cartesian ideas given by Conrad Berg, mentioned above, who had assimilated them to intelligible species in the traditional sense.⁸⁹

Perceptual ideas are generated by the mind on the occasion of bodily motions:

Quapropter corporis nostri motus tantummodo sunt causae *procatarticae*, quae menti tanquam causae *principali* occasionem dant, has illasve ideas, quas virtute quidem semper in se habet, hoc potius tempore quàm alio ex se eliciendi ac vim cogitandi in actum deducendi.⁹⁰

Bodily events provide the occasion for the mental occurrence of ideas. Clauberg endorsed neither a strictly Cartesian innatism of ideas, nor did he claim that ideas come from perception. In this sense his position was similar to that of many medieval authors who opposed the naturalistic strand in Aristotelian philosophy, and who were critical of the species doctrine in particular. Examples here are Peter Olivi and Godfrey of Fontaines.⁹¹ A brief survey of their positions may help us understand the possible historical background of Clauberg's position.

Peter Olivi⁹² ruled out all effective interaction between soul and extra-mental reality in cognitive processes. Cognition originates from a mental principle with a totally self-supporting activity, that is, stemming from its "nuda essentia".⁹³ Somewhat paradoxically, the human mind is supposed to open itself up to an object that has no efficient causal role in the production of the mental act directed at the object.⁹⁴ The impact of sensory stimuli occasions mental activity, whereas the cognitive assimilation of the object is a purely intra-mental process. Olivi did not rule out that the object may play a role in knowledge acquisition, but he emphasized that it is the intellect that tends towards the object, whereas the object only serves to 'terminate' the cognitive act.⁹⁵ According to Olivi, cognition rests on a relationship, called "aspectus", between the cognitive faculty and the object. This link is established by a conversion caused either by the will or by a stirring of the senses.⁹⁶ The cognitive act directed at a sensible object naturally follows the conversion of the intellect to the object. In the same context, Olivi developed an epistemological theory of the "colligantia" between body and soul, which reappeared in the work of Suarez and which may be seen as one of the historical roots of Clauberg's occasionalism.⁹⁷

Godfrey of Fontaines was implicitly referred to by Clauberg where he postulated the existence of a "contactus virtutis" between body and soul.⁹⁸ Godfrey of Fontaines⁹⁹ identified the interaction between intellect and sensible images in the generation of mental contents with a "contactus spiritualis" or "virtualis", by which the substantial quiddities contained in sensory representations manifest themselves.¹⁰⁰ The "virtual contact" suffices for the agent intellect to produce the mental act which may also be called intelligible species, provided one regards it as contained *virtualiter* in the intellect's own light.¹⁰¹

Thus, the mental act is already virtually contained in the agent intellect's light. As far as its content is concerned, however, the act-species seems to depend on the effects of the phantasm's purification.

Clauberg's own solution for the generation of perceptual ideas involved the existence of divine sparks in the soul,¹⁰² and the belief that perceptual ideas depend for their content on material objects. In *Exercitatio XVII*, Clauberg proposed an account of the origin of ideas in terms of their twofold being. The human mind is the spontaneous cause of its own operations, hence also that of ideas with respect to their formal being. This does not hold for ideas with respect to their representational being, however, which requires a necessary rather than a spontaneous cause. Clauberg observed that Descartes' words at the beginning of the fifth Meditation, on mind as the cause of its true ideas, are difficult to grasp.¹⁰³ He also questioned Descartes' account of our idea of God. Clauberg pointed out that we should first deal with ideas of common objects before turning to exceptional cases, and that mental representations normally depend on external objects as their "exemplar". It belongs to the nature of the soul to think, but to have determinate thoughts depends upon precise "causae exemplares". For their formal being, perceptual ideas depend on the mind, but for their "esse obiectivum", that is, for their being representations, they depend on external bodies.¹⁰⁴ Or, as was pointed out in section 1, above, perceptual ideas are "ectypae" of sensible objects.¹⁰⁵

Clauberg's view of the role of external bodies in the rise of perceptual ideas was most probably derived from Suarez. Suarez had ruled out that the (inner) senses and their representations can have any direct influence on the production of intellectual knowledge. They merely provide the occasion for the mind to generate mental representations and cognitive acts. Suarez's psychology drew on ideas from declared opponents of Thomist psychology, such as Peter Olivi, and probably also from Neoplatonic Peripatetics. In his psychology, the phantasm has no instrumental causality: as "causa quasi exemplaris"¹⁰⁶ it merely offers the occasion for a mental operation to take place. Suarez probably believed that the unity of the soul, as the ensemble perceptual and cognitive faculties, is sufficient to explain the relationship between mind and phantasm, in such a way that no causal relation between intellect and sensory representation is required for the generation of sense-dependence cognitive contents.

The 'occasionalist' explanation of the sense-dependence of intellective cognition is a clear token of affinity between Suarez and Neoplatonic interpretations of Aristotle's psychology found in Renaissance authors such as Marsilio Ficino, Marcantonio Genua,¹⁰⁷ and Teofilo Zimara.¹⁰⁸ An important point of difference with these authors, and with Clauberg, too, should also be mentioned here, namely, the fact that Suarez did not endorse any type of nativism.¹⁰⁹ The mind produces immaterial representations whenever the inner senses enable it to perform a 'parallel' operation. The intelligible species is an exclusive product of the mind, but it is not innate. It arises or emanates in the same instant when the phantasy generates a phantasm.¹¹⁰ Elsewhere, Suarez defined this non-essential relationship between the operations of the intellect and the inner sense as "concomitantia".¹¹¹

Let me finally compare Clauberg's explanation of the generation of perceptual ideas with the account given by Descartes. According to Descartes, external objects cause motions in the sensory organs, where they trigger a complex pattern of motions; once these motions reach the brain, they occasion the soul to perceive the various qualities of the object.¹¹² The mind produces perceptual ideas on the occasion of, and attending to, the patterns in the pineal gland. Now, while Descartes believed that nothing is known without ideas, Clauberg argued that no ideas exist without things.¹¹³ Moreover, Clauberg held on to a view that was explicitly refuted by Descartes, namely, that of the formal similitude between ideas and things. Ideas for Clauberg are basically images, that is, imitations of the things they represent. In this sense, then, Clauberg's position owed as much to Peripatetic psychology as to the Cartesian theory of ideas. Mind autonomously generates its acts, but the acts depend on sensible reality for the contents they express.¹¹⁴

5. CONCLUSION

Clauberg's theory of perceptual knowledge was based on a systematic elaboration of views derived both from traditional philosophy and from Cartesianism. His outlook in psychology shows a clear affinity with Descartes, but it is also remarkably cognate to some Scholastic critics of the naturalizing tendencies in Aristotelian philosophy, as well as to Neoplatonic theories of ideas. Clauberg's account of the acquisition of perceptual knowledge was based on two key concepts, one concerning the metaphysical position of the soul, which in virtue of inborn divine "sparks" is connected to the divine ideas and to the latter's sensible images, the other concerning the mind's sensitivity to cerebral motions, that is, its unacquired ability to interpret the world without being causally affected by it.

Clauberg remained rather vague about the nature of the inborn sparks. He described them as simple perceptions that may serve as the basis for further knowledge. In this sense, Clauberg may be said to have anticipated Leibniz's view of the "petites perceptions" developed in the *Nouveaux Essais*. However, Clauberg did not hold that these sparks determine the content of our perceptual knowledge, emphasizing as he repeatedly did that sensible bodies are the exemplars of our ideas. Thus, unlike Leibniz, he was not a nativist with regard to content. The sparks should most probably be seen as principles with a role in organizing the acquired ideas. In this sense they would seem to be related to Thomas Aquinas' doctrine of first principles,¹¹⁵ which was also echoed in Descartes' notion of inborn seeds.¹¹⁶

Clauberg believed that the mind is the efficient cause of perceptual ideas, which are generated upon the impingement of external stimuli on the sense organs. The extramental object has no causal effect on the soul, yet its role goes beyond that of being a mere occasional condition for a mental state to instantiate the object's form or essence. Sensible objects reflect the "archetypae", and are thus able to determine the content of perceptual ideas. Clauberg argued that perceptual knowledge is principally mediated by the body, the sense

organs, and the ideas. The function of the body and of the senses is to transmit the stimuli from external bodies, which determine the content of our ideas. And the ideas are the vehicles of all knowledge. They are not a "tertium quid", however: Clauberg did not subscribe to a representational view of cognition, in the strict sense in which ideas are seen as cognitive objects. A representational theory of mind generally entails of perceptual experience whose content cannot be identified with anything in the external world. Clauberg's doctrine of ideas, by contrast, postulates the possibility of grasping the essences of material objects. In Clauberg's view, the ideas are signs relating mind to world.¹⁷ The basis for their representational power is the metaphysical claim that human ideas 'follow' the "ectypae", which in turn mirror the divine ideas.

NOTES

1. For biographical information, and for sources of Clauberg's philosophy, see W. Weier, *Die Stellung des Johannes Clauberg in der Philosophie*, Mainz 1960, 1–6. All quotations are from *Opera omnia philosophica*, Amstelodami 1691.
2. See *Corporis et animae in homine conjunctio*, p. 237, where Clauberg called Descartes "Philosophus", which was the epitheton medieval Scholastics used for Aristotle.
3. For discussion of De Raey (1622–1707), see Verbeek, *Descartes and the Dutch. Early Reactions to Cartesian Philosophy, 1637–1650*, Carbondale and Edwardsville 1992, pp. 48 and 71–72; idem, *De vrijheid van de filosofie, Reflecties over een Cartesiaans thema*, Utrecht 1994.
4. Cf., for example, *Conjunctio corporis et animae*, XXXV.7, p. 239, where Clauberg endorsed a central thesis of Aristotelian psychology regarding the relation between the three souls in man. For a general discussion, see E. Viola, "Scolastica e cartesianesimo nel pensiero di J. Clauberg" in *Rivista di filosofia neoscolastica* 67(1975), 247–266; Weier, *Die Stellung des Johannes Clauberg in der Philosophie*, 172; cf. also Verbeek, *Descartes and the Dutch*, 8. Also other late Cartesians, such as E. Maignan and J. Du Hamel, tried to fit Aristotelian notions within an overall Cartesian framework. See my *Species intelligibilis. From Perception to Knowledge*, vol. II: Renaissance Controversies, Later Scholasticism and the Elimination of the Intelligible Species in Modern Philosophy, Leiden 1995, ch. XII, § 3.
5. There are many references to Durandus of Saint-Pourçain, Scotus, the Renaissance Aristotelians, Suarez etc.
6. See *Exercitationes Centum de Cognitione Dei & Nostri*, LXXXVII.3–4, p. 744. For Clauberg's attempts to harmonize Aristotelian and Cartesian philosophy, see also *Differentia*, LXXXI, p. 1234.
7. See Weier, *Die Stellung des Johannes Clauberg in der Philosophie*, 162.
8. *Exercitationes*, 512, 599–600, and *passim*.
9. *Theoria Corporum Viventium*, 187. For the view of man as microcosm, see, among others, Giovanni Pico della Mirandola, *Heptaplus*, in *De hominis dignitate, Heptaplus, De ente et uno e scripti vari*, ed. E. Garin, Firenze 1942, p. 192, and Cornelius Agrippa, *De occulta philosophia*, ed. K.A. Nowotny, Graz 1967 (reprint of the 1533 edition), III.36. p. 296.
10. *Exercitatio* LXXIX, p. 731–32.
11. *Exercitatio* LII.24, p. 680.
12. The "locus classicus" of the doctrine of transcendentals in Thomas Aquinas is *De veritate* I.1; for discussion, cf. L. Oeing-Hanhoff, *Ens et unum convertuntur. Stellung und Gehalt des Grundsatz in der Philosophie des Hl. Thomas von Aquin*, Münster 1953.
13. *Exercitatio* II.1, p. 596. See Averroes, *Commentarium magnum in Aristotelis De anima libros*, ed. F. St. Crawford, Cambridge (Ma.) 1953, p. 501: "(...) neque causa entium est aliud nisi scientia eius"; idem, *In Aristotelis Metaphysicorum librum XII*, in *Aristoteles*,

- Opera cum Averrois commentariis*, 11 vols., Venetiis 1562–1574, vol. VIII, p. 337. Also Thomas Aquinas endorsed this view, see: *Summa theologiae*, I, q. 14, a. 8; *Summa contra Gentiles*, I, cap. 61; *In XII Metaphysicorum Aristotelis*, lectio 12.2631. Cf. also Ficino, *In Parmenidem*, c. 32, in *Opera omnia*, 2 vols., Basileae 1576 (reprint: Torino 1983), 1149, and Giordano Bruno, *Spaccio de la bestia trionfante*, o *Dialoghi italiani*, ed. G. Aquilecchia, Firenze 1985³, p. 644.
14. *Ontosophia*, II.8, p. 283.
 15. *Ontosophia*, IX.155, p. 308.
 16. Cf. *Exercitatio XVI.12*, p. 620: "Veritas nihil aliud est quàm unio archetypi cum ectypo, vel ideae repraesentantis cum repraesentato"; and XXXI.12, p. 648–49, where Clauberg referred to the words of a French author: "Veritas rerum naturalium fundamentum est & radix intelligibilitatis earundem, &c. Ab eadem veritate seu conformitate rerum cum ideis, quae in Deo aeternae sunt (...)"; cf. *Ontosophia*, IX.153, p. 308.
 17. In *Exercitatio I*, pp. 592–595, Clauberg gave practical and theoretical arguments for the importance of knowledge of God. The latter is useful for refuting theoretical and practical atheists, as well as for refuting the arguments of Socinians against natural theology; moreover, natural knowledge of God strengthens faith and furnishes a theoretical foundation for those human disciplines, "quarum firma et evidens notitia expetitur". In *Exercitatio II*, p. 596–97, he argued that the knowledge of God is "Philosophiae principium, medium finis".
 18. *Exercitatio IX*, p. 611–12.
 19. *Exercitatio XI.7*, p. 613: "Quae clarè distincteque percipimus in rebus quibuslibet creatis, sunt quasi candelae singulae: eadem clarè percepta dum Deo conjunctim tribuuntur omnia, sed cum additamento & augmento creatam omnem perfectionem superante, accenditur quasi una ex omnibus junctis atque aliis innumeris additis conflata candela, quae non potest non esse lucidissima".
 20. Augustine believed that the soul is capable of an immediate cognitive grasp of its own essence and of the moral virtues, whereas divine illumination is needed for knowledge of God and of the sensible realm. Insofar as the latter is concerned, however, Augustinian illumination did not involve innate contents: it merely ensured the formal correctness of our reports of the sensible realm. Though accepting, as is well-known, the mind's acquaintance with the "eternal reasons", Augustine rejected innate cognitive contents; cf. his criticisms of Plato's *Meno* in *De Trinitate*, ed. W.J. Mountain, *Opera*, pars XVI.1–2, Turnhout 1968, XII, c. 15.
 21. Cf. *Die Fragmente zu Dialektik der Stoiker*. Neue Sammlung der Texte mit deutschen Übersetzung und Kommentaren, ed. K. Hülser, Band I, Stuttgart 1987, nos 315–321.
 22. See, for example, Cicero, *Orator*, 7–10. For discussion, see P.O. Kristeller, *Die Ideen als Gedanken der menschlichen und göttlichen Vernunft*, Heidelberg 1989, p. 9, who identifies Panetius as the likely source of Cicero; and J. Pépin, "Idéalidea dans la Patristique grecque et latine. Un dossier", in *Idea. VI Colloquio Internazionale del Lessico Intellettuale Europeo*, eds. M. Fattori and M.L. Bianchi, Roma 1990, 13–42, p. 34.
 23. In *Die Fragmente zur Dialektik der Stoiker*, ed. cit., no 318 and no 319, this interpretation was challenged by Plotinus, *Enneades VI.6.12* and by Proclus, *In Euclidis Elementa*, 89, II.15–20. On this discussion, see also G. Reale, *Storia della Filosofia Antica, IV, Le scuole dell'età imperiale*, Milano 1987 (first edition 1978), 336. Plato argued, already in *Parmenides*, that the identification of ideas with thoughts is absurd; cf. R.E. Allen, "Ideas and thoughts: Parmenides 132b–c", in *Ancient Philosophy* (1980), 29–38.
 24. Philo, *De officio mundi*, 16–25; Albinus, *Epitome*, ed. C.F. Herman, *Platonis Dialogi secundum Thrasylli tetralogias dispositi*, vol. VI, Lipsiae 1880 (second edition), 152–189, p. 163; ps. Plutarchus [= Aetius], *Placita*, I.10.3, quoted in H. Diels, *Doxographi graeci*, Berlin-Leipzig 1929³, 309, 3. Cf. also Seneca, *Epistola* 65, 7: "haec exemplaria rerum omnium deus intra se habet numerosque universorum, quae agenda sunt, et modos mente complexus est: plenus his figuris est, quas Plato ideas appellat, immortales, immutabiles, infatigabiles." For discussion, see: A.N.M. Rich, "The Platonic ideas as the thoughts of God", in *Mnemosyne* 7(1954), 123–133; H.A. Wolfson, "Extradeical and

- intraideical interpretation of the Platonic ideas", in *Religious Philosophy. A Group of Essays*, Cambridge (Ma.) 1961, 27-68, on pp. 29f; L.M. de Rijk, "Quaestio de ideis. Some notes on an important chapter of Platonism", in *Kephalaion. Studies in Greek Philosophy and its Continuation*, eds. J. Mansfeld and L.M. de Rijk, Assen 1975, 204-213, on pp. 204f. See also C.J. de Vogel, "À la recherche des étapes précises entre Platon et la néoplatonisme", in *Mnemosyne* 7(1954), 111-122, on p. 120, and A.H. Armstrong, "The background of the doctrine that the intelligibles are not outside the intellect", in *Les sources de Plotin*, Genève 1960, 391-425, on pp. 399-404. P.O. Kristeller, *Die Ideen als Gedanken der menschlichen und göttlichen Vernunft*, argues on p. 13f that the doctrine of ideas as divine thoughts arises with Antiochus of Ascalon.
25. Cf. L.M. de Rijk, "Quaestio de ideis. Some notes on an important chapter of Platonism", 208. For other authors, see J. Pépin, "Idéalidea dans la Patristique grecque et latine. Un dossier", 28-36.
 26. Macrobius, *Commentarii in Somnium Scipionis*, ed. I. Willis, Leipzig 1970 (2nd ed.), p. 22: "aut enim deus summus est aut mens ex eo nata in qua rerum species continentur aut mundi anima quae animarum omnium fons est, (...)"; and 6: "(...) vel ad mentem, quem Graeci νοῦν appellant, originales rerum species, quae idéai dictae sunt, continentem, ex summo natam et profectam deo". This definition was frequently referred to in the Middle Ages; cf., among others, "Henry of Harclay's Questions on the divine ideas", ed. A. Maurer, in *Mediaeval Studies* 23(1961), 163-193, on pp. 174 and 181.
 27. *Exercitatio* XV.11, p. 618; cf. *idem*, XVI.12, p. 620: "Archetypum enim interdum est idea, ea videlicet quae existentiam rei antecedit (...)". Cf. *Ontosophia* XXIII.344-45, p. 339.
 28. *Exercitatio* XVI.22, p. 621: "Nempe sicut sunt *ideae seu species* in mente divina, quae ipsas res creatas & existentes realiter *antecedunt*: ita in nostris mentibus sunt *ideae seu species quaedam consequentes*, quibus repraesentantur res, ut jam à Deo factae & creatae sunt."
 29. Cf. Marsilio Ficino, *In Parmenidem*, in *Opera*, p. 1140; cf. Pico, *Commento sopra una canzone de amore composta da Girolamo Benevieni*, in *De hominis dignitatem, Heptaplus, De ente et uno e scritti vari*, pp. 467-68; Giordano Bruno *Sigillus sigillorum*, in *Opera latine conscripta*, eds. F. Fiorentino et alii, 3 vols., 8 parts, Neapoli-Florentiae 1879-1891, vol. II.2 p. 197.
 30. For discussion, see P.O. Kristeller, *Il pensiero filosofico di Marsilio Ficino*, Firenze 1953, Parte Prima, cap. VII; cf. Thomas Aquinas, *In librum De causis expositio*, ed. C. Pera, Torino 1955, lectio XVIII.340: "Secundo, considerandum est quod in unoquoque genere est causa illud quod est primum in genere illo a quo omnia sunt illius generis in illo genere constituuntur."
 31. *Ontosophia*, XXII.338, p. 338.
 32. Cf. *De umbris idearum*, ed. R. Sturlese, Firenze 1991, intentio xxx, 43-44: "Analogiam enim quandam admittunt methaphysica, physica, et logica seu ante naturalia, naturalia, & rationalia. Sicut verum, imago, & umbra. Caeterum idea in mente divina est in actu toto simul et unico. (...) In natura per vestigii modum quasi per impressionem. In intentione, et ratione per umbrae modum."
 33. *Sigillus sigillorum*, 164-65: "Itaque a mundo supremo, qui est fons idearum, in quo dicitur esse Deus vel qui dicitur esse in Deo, descensus est ad mundum ideatum, qui per illum et ab illo dicitur esse factus, et ab isto ad ipsum, qui utriusque praecedentis est contemplativus, quique ut est a primo per secundum, ita cognoscet primum per secundum." Cf. also *De la causa, principio et uno*, ed. G. Aquilecchia, Torino 1973, pp. 15 and 69. The background of this doctrine regarding the relation between God, the world and man is in: *Corpus Hermeticum*, eds. A.D. Nock & A.-J. Festugière, 4 vols., Paris 1946-54, X.1-14, p. 113-120; *Asclepius*, c. 10, in *Corpus Hermeticum*, vol. II, pp. 308-9: man is the second image of God, created according to the image of the world; cf. also *Corpus Hermeticum*, VIII.5, in vol. I, p. 89; Cusanus, *De coniecturis*, eds. J. Koch & W. Happ, Hamburg 1971, I.i, p.6.
 34. *Lampas triginta statuarum*, in *Opera*, vol. III, 51: "Intelligamus mentem primam parentem luminis, intellectum primum fontem idearum et ideam idearum, intelligentias specula.

species in natura idearum vestigia, rationes illarum specierum in nostro intellectu umbras idearum"; *De imaginum compositione*, in *Opera*, vol. III, 94: "Quae sane species ante naturalia appellatur idea, in naturalibus forma sive vestigium idearum, in postnaturalibus ratio seu intentio, quae in primam atque secundam distinguitur, quam nos aliquando idearum umbram consuevimus appellare"; *idem*, 97: "Sicut enim nostrae intentiones habent originem a rebus naturalibus, quibus non existentibus et ipsae non essent, velut nullo existente corpore nulla esset umbra; ita res ipsae naturales, mundus nempe physicus nequaquam esse posset, si metaphysicus ille, nempe idea portans omnia, ex actu mentis et voluntatis divinae se ipsam communicantis non praexistere"; *Theses de magia*, in *Opera*, vol. III, 463: "(...) ut autem est species abstracta et separata materiae secundum actum cognitionis sensitivae vel rationalis, sic perficitur tertium ideae genus quod est causatum a rebus naturalibus, quae dependet ab illis sicut secundum genus a primo." For a similar view, see Charles de Bovelles, *Liber de intellectu*, in *Opera*, Paris 1510, 10r and 11v.

35. *Sigillus sigillorum*, 197.
36. Scipio Agnello, *Disceptationes de ideis*, Venice 1615, pp. 108–109.
37. This author was frequently quoted by Clauberg in the *Exercitationes*; cf. pp. 599, 605, 612, 677. It is not easy to trace this Conrad Berg. Chr.G. Jöcher, *Allgemeines Gelehrten-Lexicon*, 4 vols., Leipzig 1750–51, mentioned a certain Conrad Berg, who died in 1592, and his son Conrad Berg, who taught theology at Frankfurt and wrote an *Artificium aristotelico-lullio-rameum*, and *Themata theologica*. The latter died in 1642, which makes it improbable that he wrote a treatise on Descartes; cf. *Exercitationes*, 619–22.
38. The Scholastic view of the divine mind as containing the exemplars of creation was still a current view among 17th-century theologians; cf. H. Heppe & E. Bizer, *Die Dogmatik der evangelisch-reformierten Kirche*, Neukirchen 1958, p. 153–54.
39. See, among many other passages, *Conjunctio*, p. 230, and *Exercitatio* LV.1, p. 682, for the intimate connection between soul and body.
40. *Conjunctio* XIII.3, p. 218: "Quando igitur prorsus evidens est, corporeos organorum nostrorum motus, quotiescunque nostrum statum mentis nostrae, novas ei cogitationes inferendo (...)."; cf. XIII.4, and LIII.1.
41. *Theoria Corporum Viventium*, 195.
42. *Exercitatio* LXXIX.1, p. 731.
43. *Exercitatio* XCI.14, p. 753: "Cumque imago & similitudo Dei in Homine variis in rebus posita esse judicetur, atque, etiam in dominio in res terrenas quae circa nos: cur non etiam in eo collocatur, quod sicuti Deus se habet ad majorem mundum, ita se anima nostra quodammodo habeat ad minorem mundum, hoc est, ad corpusculum nostrum (...)."; Cf. *Conjunctio*, XLVIII.11, p. 253.
44. Notice, that in *Exercitatio* IV, p. 600, this definition is defended with quotes from Francis Bacon, Marsilio Ficino and Plato. Moreover, in contrast with Descartes, Clauberg attributed a (non-rational) soul also to the animals; cf. *Theoria Viventium Corporum*, 184.
45. Cf. *Theoria Corporum Viventium*, pp. 188–89; *Exercitatio* IV, p. 599–600; *Conjunctio*, 252.
46. *Conjunctio*, 230; *Exercitatio* XCI.7, p. 753; cf. *Defensio*, p. 1092. Also Descartes rejected this definition; cf. *Meditationes*, in *Oeuvres*, eds. Ch. Adam and P. Tannery, 12 vols., Paris 1982–87, VII, 80–81, 86. See also *Discours de la Méthode*, in AT VI, 59. Thomas ascribed this view to Plato; cf. *Summa contra Gentiles*, II, c. 57, 1327; cf. also Aristotle, *De anima*, 413a8–9: "It is also uncertain whether the soul as an actuality bears the same relation to the body as the sailor to the ship." The metaphor was also used by Plotinus, *Enneades*, IV.3.21; Ficino, *In Enneades*, VI.7.5.6, in *Opera*, 1788; and by Giordano Bruno, *De la causa, principio et uno*, 71; *Spaccio della bestia trionfante*, in *Dialoghi italiani*, ed. G. Aquilecchia, Firenze 1985³, 555–557; *De gli eroici furori*, in *Dialoghi italiani*, 1092; *Oratio valedictoria*, in *Opera*, vol. I.1, 14; *Lampas triginta statuarum*, in *Opera*, vol. III, 246 and 253.
47. *Conjunctio*, 273, and *Exercitatio* XCII, p. 754. See also *Theoria Corporum Viventium*, 195, and *Conjunctio*, 253–54.
48. *Theoria Corporum Viventium*, 195.

49. *Theoria Corporum Viventium*, 205, *Conjunctio*, 216-17, cf. 213: body and soul are connected through actions and passions.
50. *Conjunctio*, 230ff.
51. *Conjunctio*, 216, and 221-22. For a more complete list of the metaphors used by Clauberg, see Weier, "Der Okkasionalismus des Johannes Clauberg und sein Verhältnis zu Descartes, Geulincx, Malebranche", in *Studia cartesiana* 2(1981), 43-62, p. 48.
52. *Conjunctio*, XI.4, p. 217: "Itaque transeuntes tantummodo sunt actus, quibus corpus atque animus in Homine colligantur, dum aliquid fit ab anima quod terminatur ad corpus, aliquid item fit à corpore, quod ad animam terminatur." See also the next section on perception. See *Theoria Corporum Viventium*, 182 for the physiological aspects of the brain moving the body. For Clauberg's view of mental causation, see *Conjunctio*, XVI.5, p. 221: "Mens autem humana motuum in Homine corporeorum causa ejusmodi Physica non est, sed Moralis tantum (...)" cf. also pp. 217, 218, 225, and 272-73.
53. *Conjunctio*, 218.
54. For a brief outline of the Scholastic doctrine of objective being, see note 86.
55. *Conjunctio*, XIII.7, p. 219; cf. *idem*, LXVII.4.
56. Cf. *Conjunctio*, XIV.6, p. 219, and XV.9, p. 220; cf. 245-46. See also *Exercitatio* XCI.8-10, 16, p. 753.
57. I agree with the criterium formulated by R. Specht, *Commercium mentis et corporis. Über Kausalvorstellungen im Cartesianismus*, Stuttgart-Bad Cannstatt 1966, p. 4: an author endorses occasionalism when he argues for the thesis that secondary causes merely predispose, but do not cause both motions and thoughts.
58. For further discussion of Clauberg's occasionalism and his relation to Geulincx and Malebranche, among others, see A.G.A. Balz, "Clauberg and the development of occasionalism", in *Philosophical Review* 42(1933), 553-72 and 43(1934), 48-64; Viola, "Scolastica e cartesianesimo nel pensiero di J. Clauberg", 264-65; R. Specht, *Commercium mentis et corporis*, 108-117; W. Weier, "Der Okkasionalismus des Johannes Clauberg", cit.
59. *Theoria Corporum Viventium*, XXVII.650-652, p. 190. The background of these distinctions is in Descartes, *Les passions de l'ame*, book I, AT XI.
60. See *Conjunctio*, 225 and 228, and *Notae in Cartesii Principia*, p. 497: "At nobis liberum non est quascunque formare ideas, at sic eas formare debemus uti à natura docti sumus." Cf. *Exercitatio* LXXXVIII.4, p. 747.
61. *Theoria Corporum Viventium*, XXVII.663-65, p. 190: "Perceptiones nostrae vel animam pro causa habent: veluti cum percipis te velle, imaginari vel aliud quodcunque cogitare, vel pro causa habent corpus, unde diximus, quod anima saepe tales eas non faciat, quales sunt (Causam intellige, quae excitat vel occasionem dat.)"
62. *Theoria Corporum Viventium*, XXVII.677, p. 191.
63. *Theoria Corporum Viventium*, 202.
64. *Theoria Corporum Viventium*, XXXIII, p. 196. Cf. Descartes, *Meditationes*, in AT VII, pp. 436-37.
65. See *Exercitationes* LXXXIV-LXXXVIII. See also *Theoria Corporum Viventium*, XXI.478-481, pp. 182-83, for an analysis of the motion of the objects communicated to the nervous system.
66. For a minute analysis of Descartes' physiological program, see G. Hatfield, "Descartes' physiology and its relation to his psychology", in *The Cambridge Companion to Descartes*, ed. J. Cottingham, Cambridge 1992, 335-370, on pp. 340-46. Hatfield thinks that, considered from the standpoint of geometrical optics, Descartes' theory may be seen as a translation of previous optical doctrines in a mechanist idiom; cf. op. cit., pp. 351-52. Th.C. Meyering, *Historical Roots of Cognitive Science. The Rise of a Cognitive Theory of Perception from Antiquity to the Nineteenth Century*, Dordrecht 1989, ch. V, convincingly argues that the mathematization of physics and the mechanization of the worldview had gradually been prepared by the development of medieval optics rather than by that of terrestrial or celestial mechanics.

67. *Meditationes*, 29–34. See, for example, the definition of perception as “solius mentis inspectio” (p. 31); cf. also *Principia*, in AT VIII.1, 17, where perception is characterized as “operatio intellectus”. For general discussion, see M. Gueroult, *Descartes selon l'ordre des raisons*, 2 vols., Paris 1953, vol. I, 127–131, and 149; D.W. Hamlyn, *Sensation and Perception. A History of the Philosophy of Perception*, London 1961, p. 66. Valuable specific studies are: J.-M. Beyssade, “L'analyse du morceau de cire. Contribution à l'étude des ‘degrés du sens’ dans la Seconde Méditation de Descartes”, in *Sinnlichkeit und Verstand in der deutschen und französischen Philosophie von Descartes bis Hegel*, ed. H. Wagner, Bonn 1976, 9–25; J. Pacho, “Über einige erkenntnistheoretische Schwierigkeiten des Klassischen Rationalismus. Überlegungen anhand eines cartesianischen Beispiels”, in *Zeitschrift für philosophische Forschung* 38(1984), 561–581. See also: M. Cook, “Descartes alleged representationalism”, 188–89, in *History of Philosophy Quarterly* 4(1987), 179–195; D.M. Clarke, *Descartes' Philosophy of Science*, Manchester 1982, 32. In the context of the thought-experiment of the wax tablet, Descartes seems also to collapse simple apprehension and judgment; cf. in particular, *Meditationes*, 32. The view of judgement as not distinct from simple apprehension was already formulated in the 13th century by Bonaventura, and during the Renaissance by Cusanus, Zabarella and Piccolomini.
68. *Conjunctio*, 242.
69. Clauberg, *Exercitatio XIII*, p. 615. Descartes, *Meditationes*, 438. According to Descartes, single ideas are either authentic or not, rather than either true or false; cf. AT V, 152. The truth of an idea can be established only by comparing it with other ideas; this is the only reasonable interpretation of the abstraction of the intellect; cf. AT III, 474. For discussion, see A. Danto, “The representational character of ideas and the problem of the external world”, in *Descartes: Critical and Interpretive Essays*, ed. M. Hooker, Baltimore 1978, 287–97, on pp. 289, and 295–7.
70. *Conjunctio*, 242 and 256.
71. *Conjunctio*, 243: “Sensus sive sensualis perceptio fit per signa materialia, quae res quidem indicant, ut hederam suspensa monet vinum esse vendibile; sed eas non repraesentant instar imaginis. Nam ab illa impressione, quam objectum in organo corporeo facit, sensus caloris, soni, odoris & reliqui proximè pendent.” See also *Notae breves in Renati Des Cartes Principia Philosophiae*, p. 510: “Quod tolerandum est, ubi perceptio sive idea nostra distincta est, uti aliquo modo dico, me Petrum videre, ubi ipsius distinctam imaginem intueor. At si quis Petrum repraesentare vellet ligno quocunque alio, uti vinum vendibile per hederam suspensam repraesentatur, minus commodè diceret, se videre Petrum”; cf. p. 515. The example of the “suspensa hederam” was also used by Thomas Hobbes for arbitrary signs; cf. *De corpore*, II.2, in *Opera latina*, ed. W. Molesworth, London 1839–45, vol. I, 13: “Signorum autem alia naturalia sunt quorum exemplum est quod modo dixeramus; alia arbitraria, nimirum quae nostra voluntate adhibentur; qualia sunt, suspensa hederam, ad significandum vinum venale (...).”
72. *Theoria Corporum Viventium*, XXXIV.846, p. 197: “Tametsi verò sensus propriè dati non sunt ad naturam rerum intimam ejusque rationis investigandas, sive ad τὸ διότι; juvant tamen plurimum ad τὸ ὅτι inveniendum, suppeditando phaenomena & experimenta, de quibus philosophemur.” See also *Exercitatio LXXXIII*.19, p. 737.
73. *Conjunctio*, 243; cf. *Ontosophia*, XXI.336, p. 337: “Formale signum appellatur imago rei in mente vel omne signum, quod propriè repraesentat.”
74. See, for example, Eustachius of Saint-Paul, *Summa philosophiae quadripartita de rebus dialecticis, moralibus, physicis et metaphysicis*, Coloniae 1629 (first edition: Paris 1609), 218–219: “(...) signum aliquod formale rei sensibus objectae, sive qualitatem quamdam quae ab objecto immissa, & in sensu recepta vim habet ipsum objectum repraesentandi, licet ipsa sensu minime sit perceptibilis.” Notice that Clauberg still uses the traditional term species for mental representations; cf. *Notae in Cartesii Principia*, p. 510: “Rei species, &, ut percepti loquebantur melius, apparentiae”; cf. *Theoria Corporum Viventium*, 202. For discussion, see my *Species intelligibilis. From Perception to Knowledge*, vol. II, pp. 436–40.

75. See *Meditationes*, 181, and 387–88, for the “Replies to the Objections” by Hobbes (179–80) and Gassendi (284–85, 337). For discussion, see M. Cook, “Descartes’ alleged representationalism”, in *History of Philosophy Quarterly* 4(1987), 179–195; and M.J. Costa, “What Cartesian ideas are not”, in *Journal of the History of Philosophy* 21(1983), 537–550.
76. See *Conjunctio*, 217.
77. *Theoria Corporum Viventium*, XXXIII.808, p. 196; cf. also p. 184: the animal’s body is like an “automaton”. See also *Conjunctio*, 230 and 253, for the view of the body as instrument of the soul. For the metaphor of the blind man’s stick, see Descartes, *Dioptrique*, in AT VI, 84. For discussion of the context, see J.J. Macintosh, “Perception and imagination in Descartes, Boyle, and Hooke”, in *Canadian Journal of Philosophy* 13(1983), 327–52, on 349. The stick metaphor had already been used by Plotinus, *Enneades*, IV.5.4, for the intermediate light used by the eyes to touch things; for discussion, see E.K. Emilson, *Plotinus on Sense-Perception*, Cambridge 1988, 42–43, and for the systematic background of this view: *Timaeus*, 45d–e. For vision as touch, see also Augustine, *De quantitate animae*, XXIII, 43, 44. According to Leibniz, Descartes borrowed his stick metaphor from Simplicius; see Leibniz, *Philosophische Schriften*, ed. C.I. Gerhardt, Hildesheim 1965 (first edition: Berlin 1857–90), Band IV, 305; see also Petrus Gassendi, *Opera*, 6 vols., Lyon 1658, vol. II, 371A–B.
78. *Conjunctio*, XXIV.1–4, p. 228.
79. *Theoria Corporum Viventium*, XXXIV.846, p. 197; for the restricted value of pure sensation, cf. *Defensio* XXXII–IV and *Exercitatio* LXXXIII.2–3.
80. Cf. *Exercitatio* LXXXVII, p. 744.
81. *Theoria Corporum Viventium*, XXXIX.937, p. 202: “Etsi autem imaginatio initio non tam vivida & expressa esse soleat, quàm ipsae sensuum exteriorum perceptiones, repetitis tamen aliquoties externis impressionibus, accedente quoque interna meditatione, multum in nobis perficitur & confirmatur.”
82. *Exercitationes*, 619 and 623.
83. *Exercitationes*, 609 and 615.
84. *Exercitationes*, 613, and *passim*; see also Weier, *Die Stellung des Johannes Clauberg in der Philosophie*, 33.
85. *Exercitationes*, 617; cf. 607–9 (no 3, 8, 9, 15).
86. *Exercitationes*, 617. For the objective being of the ideas, see also *Exercitationes*, 607, 617–623, 626–28; *Ontosophia*, XXI.328–29, p. 336. In Scholastic cognitive psychology, “esse diminutum” or “obiectivum” was used to indicate the specific mode of being of cognitive objects in the intellect. The expression’s origin lies in early Arab-Latin translations of Aristotle’s *Metaphysics*. Since the beginning of the fourteenth century it was systematically used in a psychological context. The ‘subjective-objective’ distinction figured large in Renaissance disputes on the presence of species and cognitive contents in the intellectual soul. Scholastics used “esse obiectivum” to indicate an ontological aspect of the mental realm that sets it apart from physical reality. It indicated the ‘diminished’ reality of psychological items to which the ‘normal’ Aristotelian inherence of subject and accident did not apply. For a more detailed discussion, see my *Species intelligibilis. From Perception to Knowledge*, vol. I, Leiden 1994, ch. IV, § 1.5, and, for the notion in Descartes, *idem*, vol. II, ch. XI, § 1.2.2.
87. *Exercitationes*, 617–619.
88. Cf. *Theoria Corporum Viventium*, 202: sensory affections leave traces on the brain, which the “philosophers” called species or phantasms.
89. *Exercitationes*, 619–622.
90. *Conjunctio*, XVI.10, p. 221. The term “causa procatartica” has a Stoic and Galenic background. It played a central role in Van Helmont’s pathology: a “causa procatartica” may occasion a sickness. Also Heereboord used the term for occasional causes; see Specht, *Commercium mentis et corporis*, pp. 112–113, and 165–172. The term also occurs in Clauberg’s *Notae in Cartesii Principia*, p. 573.
91. For discussion, see my *Species intelligibilis. From Perception to Knowledge*, vol. I, ch. III, § 3.4.

92. Petrus Iohannis Olivi, 1248 Béziers – 1298 Narbonne; Franciscan philosopher and theologian, who wrote his commentary on the *Sentences* between 1281 and 1283. For bio-bibliographical information, cf. C. Partee, "Peter John Olivi: historical and doctrinal study", in *Franciscan Studies* 20(1960), 215–260.
93. *Quaestiones in secundum librum Sententiarum*, ed. B. Jansen, 3 vols, Quaracchi 1926, vol. III, q. 74, 119; cf. Henry of Ghent, *Quodlibetum* V. q. 14, in *Quodlibeta*, Venetiis 1613, 260va for the same view.
94. *In II sent.*, q. 72, vol. III, p. 35: "Nam actus et aspectus cognitivus figuratur in obiecto et intentionaliter habet ipsum intra se imbibitur; propter quod actus cognitivus vocatur apprehensio et apprehensiva tentio obiecti."
95. *In II Sent.*, q. 72, vol. III, 10: "Secundo est praenotandum quod licet obiectum, pro quanto solum terminat aspectum virtutis cognitivae et suae actualis cognitionis, non habeat simpliciter et proprie rationem efficientis, quia formalis terminatio praedicti aspectus non est aliqua essentia realiter differens ab ipsu aspectu et saltem non est influxa veleducta ab obiecto, in quantum est solum terminus ipsius aspectus et actus cognitivus." See *In II Sent.*, q. 72, vol. III, 35–36, and q. 58, vol. II, 415–16, where Olivi employed a variation of the light metaphor to explain this 'terminative' causality. Sunlight takes the shape of triangularity or roundness when shining in a triangular or spherical vase. The vase itself does not effectively produce the shape of the light, but only 'terminatively', that is, without the "terminus" such a shape could not have been produced. For discussion, see: Z. Kuksewicz, "Criticisms of Aristotelian psychology and the Augustinian-Aristotelian synthesis", in *Cambridge History of Later Mediaeval Philosophy*, Cambridge 1982, 623–28, on p. 626; K. Tachau, *Vision and Certitude in the Age of Ockham. Optics, Epistemology and the Foundations of Semantics 1250–1345*, Leiden 1988, 40f, and especially by W. Hoeres, "Der Begriff der Intentionalität bei Olivi", in *Scholastik* 36(1961), 23–48.
96. *In II Sent.*, q. 50, in vol. II, 52f; q. 73, vol. III, 66.
97. *In II Sent.*, q. 72, 30–31, and q. 58, vol. II, 416. The idea of a *colligantia* between body and soul was anticipated by Jean de la Rochelle, *Summa de anima*, ed. T. Domenichelli, Prato 1882, 194; cf. J. Rohmer, "La théorie de l'abstraction dans l'école Franciscaine d'Alexandre à Jean Peckam", in *Archives d'histoire doctrinale et littéraire du Moyen Age* 3(1928), 105–184, on p. 125.
98. *Conjunctio*, IX.14, p. 216.
99. Godefroidus de Fontibus, ca. 1250–1306/1309; master in the theological faculty from 1285 to 1298–99 and again ca. 1303–1304. For his doctrinal position and his disagreements with Thomists such as Thomas Sutton, see J. Hoffmans, "Le table des divergences et innovations doctrinales de Godfroid de Fontaines", in *Revue néoscholastique de philosophie* 36(1934), 412–436.
100. Cf. *Quodlibetum* V, eds. M. de Wulf & J. Hoffmans, Louvain 1914, q. 10, 38: "Hoc autem fit quodam contactu spirituali et virtuali luminis intellectus agentis, nam supponendum est quod haec est natura intellectus agentis quod sua applicatione ad obiectum singulare vel phantasma quodammodo contingat illud sua virtute solum quantum ad id quod pertinet dicto modo ad eius quidditatem substantialem". Cf. J.F. Wippel, "The role of the phantasm in Godfrey of Fontaines' theory of intellection", in *L'homme et son univers au Moyen Age*, ed. Ch. Wenin, Louvain-la-Neuve 1986, 573–582, on pp. 576–78.
101. *Quodlibetum* V, 40.
102. *Exercitatio*, XIII.4, p. 615: "A Dei bonitate alienum, nullas omnino scintillas luminis in mente humana relinquere, omnia tenebras facere. Atqui simplices rerum perceptiones se habent ut primae scintillae, quibus omne cogitationis nostrae lumen suscitatur, quibus omnia nostra iudicia, discursus, investigationes, argumentationes, memoria primò & maximè nituntur." In the Middle Ages, Meister Eckhart and Heymeric de Campo had speculated on the existence of a divine spark in the soul; this spark was identified with a superior cognitive faculty, however.
103. *Exercitatio* XVII.3, p. 623; cf. VI.9, p. 606: the mind is not the sufficient cause of its concept or ideas.

104. *Exercitatio* VII.9–17, 608–609; XVI–XVII, 622–23; cf. *Ontosophia*, XXIII.344, p. 339, regarding the relation between “exemplar & imago”.
105. Cf. *Exercitatio* XIX.5, p. 628: “(...) lumine naturali perspicuum esse ideas (ectypas scilicet seu consequentes) in mente nostra esse veluti quasdam imagines, quae possunt quidem facile deficere à perfectione rerum à quibus sunt desumptae (...)”
106. See *De anima*, in *Opera omnia*, t. III, Paris 1856, l. IV, c. 2, no 11, 719.
107. Suarez’s affinity with the Simplician Averroist Marcantonio Genua (1491–1563) was already noticed by E. Kessler, “The intellectual soul”, in *Cambridge History of Renaissance Philosophy*, Cambridge 1988, 485–534, on p. 515.
108. See my *Species intelligibilis. From Perception to Knowledge*, vol. II, ch. VI, § 1.3, ch. VIII, § 1.2 and 1.6, and ch. X, § 1.6.
109. J. Ludwig, *Das akausale Zusammenwirken (sympathia) der Seelenvermögen in der Erkenntnislehre des Suarez*, München 1929, 56–57, speaks of a preliminary presence of the species in the mind, but the text he refers to is about angels; cf. *De anima*, IV, c. 8, no 13, p. 745.
110. *De anima*, IV, c. 8, 745a.
111. *De anima*, IV, c. 7, 740a: “Hinc ergo oritur inter potentias has tam naturalis concomitantia quae essentialis non est, sed ex actuali operatione proveniens (...)” Cf. the affinity with the notion of “colligantia” in Jean de la Rochelle and Olivi, mentioned earlier.
112. *Dioptrique*, in AT VI 114. For the historical background of Descartes’ views of occasional causes, see R. Specht, *Commercium mentis et corporis*. 22–42.
113. See Weier, *Die Stellung des Johannes Clauberg in der Philosophie*, 21 and 130, on the anti-psychologism of Clauberg.
114. For the view of the sensible bodies as “causae exemplares” of cognition, see also *Exercitationes* VI.10, p. 606; VII.2.8.9 p. 607–8; VII.13, p. 609: “Sic nulla in mente nostra repraesentatio sive imago sive vicariatus esse potest, nisi intuitu alicujus principalis sive exemplaris sive repraesentati.”; XVI.6.21.28, p. 620–21; XVII.1, p. 623. For the dependence of perceptual knowledge on the external world in general, see *Exercitationes*, p. 736f; see also *Notae in Cartesii Principia*, 498.
115. See Thomas Aquinas, *De veritate*, q. 11, a. 1 ad resp.: “praexistunt in nobis quaedam scientiarum semina”. These seeds (the first principles) become actual knowledge in virtue of abstracted intelligible species.
116. See, for example, AT III, 665, and *Discours de la Méthode*, 64, where Descartes claimed that, respectively, primitive notions and “semences de Veritez” are present in the soul; cf. AT X, 373, where he spoke about “semina iacta” in mind.
117. In his exposition of Descartes’s philosophy, Clauberg seemed to endorse a representational view of perception; cf. *Notae breves in Principia Philosophiae*, 510: “Qui autem sensu externo & visu praecipue aliquid percipit, considerat illam perceptionem tanquam ideam, id est, repraesentamen rei extra nos positae in cogitatione. Et quamvis sensu perceptio proxime tantum terminetur ad illam ideam sive speciem, ut vulgo loquuntur, nihilominus per metonymiam signi pro signato, dicimus nos rem percipere.” For the use of the term “repraesentamen”, cf. *idem*, pp. 496–97, and 500. See also *Epistola ad Vinum doctum (...)*, 1239, where Clauberg endorsed Descartes’ view that all we perceive are ideas. J.W. Yolton interprets the Cartesian idea as a sign or semantic response; cf. “Perceptual cognition with Descartes”, in *Studia Cartesiana* 2(1981), 63–82 and *Perceptual Acquaintance from Descartes to Reid*, Oxford 1984, ch. I. He emphasizes the fact that the relation between mind and world is not causal, as in Scholastic psychology, but signficatory; cf. “Perceptual cognition with Descartes”, pp. 72–73.