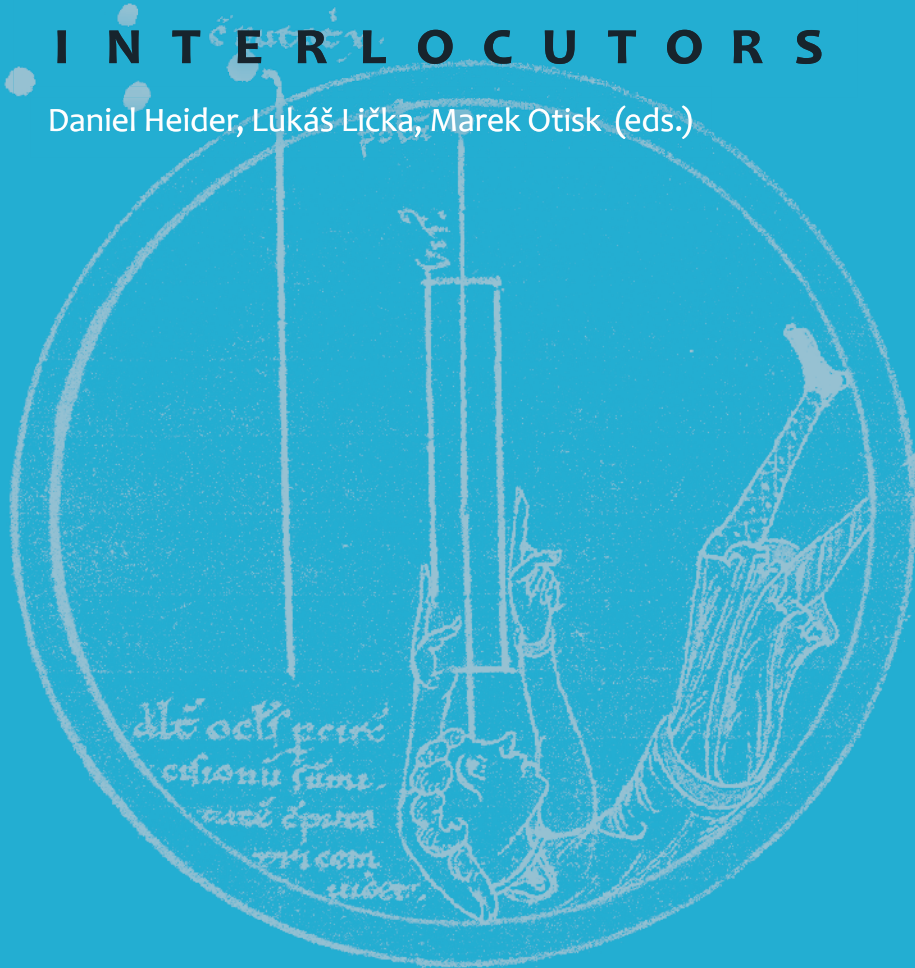


PERCEPTION IN
SCHOLASTICS
AND THEIR
INTERLOCUTORS

Daniel Heider, Lukáš Lička, Marek Otisk (eds.)



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Daniel Heider, Lukáš Lička, Marek Otisk (editors)

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Editorial

In his commentary on Plato's *Timaeus*, the 4th-century philosopher Chalcidius expands on the Platonic theme of praising the senses. In his view, the sense of sight is not merely useful, but even necessary for both theoretical and practical philosophy. By virtue of sight we can observe the heavens and stars, which stimulates us to search for a god (theology), try to understand the causes of temporal things (natural philosophy), and understand the origins of numbers and dimensions (mathematics) by counting the alternations of day and night, the months, and years. Observing the perfect motion of the stars, we can rectify the motions of our own souls and cultivate our passions and morals, which is one of the foundations of ethics, economics, and politics.¹ Although the sense of sight brings more evidence (since nothing is as certain as a thing seen with one's own eyes), the sense of hearing is broader in scope, since a voice we hear informs us not only about the things that are present, but also about the ones that are absent.² Nine centuries later, the medieval scholar Roger Bacon also appraised the sense of sight in the introduction to his *Perspectiva*. We perceive everything in the heavens and on earth through vision and only vision constitutes a true experience. Unlike the animals, which are concerned with things that can be tasted and touched, genuine human wisdom is based on visual perception. Hence, according to Bacon, the sense of sight actually contributes to the dignity of the human being.³

Despite these occasional *laudationes* of the senses, philosophers since antiquity seem to have focused more on the higher cognitive power of the human being – viz. the intellect – as being both more reliable and capable of reaching genuine knowledge, and more noble and similar to God's own cognitive equipment.

1 Chalcidius, *Timaeus a Calcidio translatus commentarioque instructus*. Ed. J. H. Waszink. London–Leiden, Brill 1975, pp. 269–270, § 264–265.

2 *Ibid.*, p. 272, § 267.

3 Roger Bacon, *Perspectiva* I, 1, 1. In: Lindberg, D. C., *Roger Bacon and the Origins of Perspectiva in the Middle Ages*. Oxford, Oxford University Press 1996, pp. 2–4.

Nevertheless, the inquiries of some historians of philosophy in recent decades have shown that philosophers between Plato and Kant were much more interested in the realm of the senses than one might expect.⁴ The present volume is intended as a partial contribution towards such historiographic endeavours.⁵ All topics under consideration here are related to sensory perception – or, in scholastic terminology, to operations of both the external and the internal sensory powers. Hence, not only the notion of sensory perception, its necessary components, its mechanism, and the role of more complex psychological phenomena (such as attention or perceptual judgement) are investigated here, but also the number and roles of the so-called internal senses, or the ability to grasp particulars which had traditionally been ascribed chiefly to the senses. Investigating these issues, the authors of the papers focus on several thinkers active between the 11th and 17th century, conceived broadly as scholastics (ecclesiastic teachers, university scholars, or lectors at *studia* of different religious orders, such as Anselm of Canterbury, Roger Bacon, Peter Olivi, John Duns Scotus, Peter Auriol, Francisco Suárez), or their interlocutors – whether authors who were read by scholastics and exerted influence on them (such as the Muslim scholar Alhacen), or some contemporaries active outside the universities who entered debate with the scholastics (e.g., Gemistos Plethon, Valeriano Magni, and others).

This volume aims to refute the disparaging image of scholastic philosophy as a rather homogeneous tradition of commentaries on Aristotle lacking in originality. Although Aristotelianism was, of course, a very important philosophical paradigm among the scholastics, their works also evince many features and tenets of Platonic or Augustinian origin. Several issues characteristic for Platonism and Augustinianism are discussed in this volume – for example, the role of attention in perception, the extramissionist theory of vision, the metaphysics of light, the illumination theory, the first-person perspective, and self-reflection. The topics investigated primarily in Aristotelianism include the ontology of sensibles, their causal efficacy, the role of the medium, and the distinction between the internal senses.

4 Cf. e.g. the pioneering study by K. H. Tachau – Tachau, K. H., *Vision and Certitude in the Age of Ockham. Optics, Epistemology and the Foundations of Semantics, 1250–1345*. Leiden, Brill 1988; or more recent collected volumes on theories of perception from ancient to early modern philosophy – Knuutila, S. – Kärkkäinen, P. (eds.), *Theories of Perception in Medieval and Early Modern Philosophy*. Dordrecht, Springer 2008; and Silva, J. F. – Yrjönsuuri, M. (eds.), *Active Perception in the History of Philosophy: From Plato to Modern Philosophy*. Dordrecht, Springer 2014.

5 The papers included in this volume have been selected from among the papers presented at the conference *Issues of Perception between Medieval and Early Modern Philosophy* held under the auspices of the project *Collective Identity in the Social Networks of Medieval Europe* (IRP 201548) at the University of Ostrava in October 2016. The edition of this special issue is also a result of the research funded by the Czech Science Foundation as the project GA ČR 14-37038G “Between Renaissance and Baroque: Philosophy and Knowledge in the Czech Lands within the Wider European Context”.

The earliest of the authors considered here is Anselm of Canterbury. In his paper “Proslogion 6: ...sentire non nisi cognoscere aut non nisi ad cognoscendum est...” **Marek Otisk** presents a conceptual analysis of the notion of sensory perception in Anselm’s philosophy and its role in his theology, anthropology and epistemology, showing that (and how) these issues of perception were treated in Western Europe before the famous Greek and Muslim psychological writings were translated into Latin and assimilated by Latin scholars.

The influences of one of these new sources translated from the Arabic are traced by **José Filipe Silva** in his “Perceptual Judgement in Late Medieval Perspectivist Psychology”. He ponders whether and how perception also includes the higher and more complex cognitive and evaluative processes. The focus of his paper on perceptual judgments is on the intellectual legacy of the famous Muslim scientist Ibn al-Haytham (known to the Latins as Alhacen) as developed by the so-called Latin perspectivists – Roger Bacon, John Peckham, and Blasius of Parma.

The famous Franciscan John Duns Scotus is discussed by two papers in this volume. Whereas in his paper “Scotus on Sense, Medium, and Sensible Object” **David González Ginocchio** offers an interpretation of the theory of sensation in Scotus’s early works, focusing on his less studied *Questiones super De anima*, **Lukáš Novák** in “More Aristotelian than Aristotle. Duns Scotus on Cognizing Singulars” questions the traditional conviction that singulars are grasped directly only by the senses, while universals are primarily understood by the intellect.

The paper “Attention, Perceptual Content, and Mirrors: Two Medieval Models of Active Perception in Peter Olivi and Peter Auriol” by **Lukáš Lička** considers two of Scotus’s Franciscan confrères – the elder Peter Olivi and the younger Peter Auriol – presenting their different accounts of the active character of perception. Olivi emphasizes attention as a condition of every perceptual act, modelling it – in a quasi-extramissionist manner – as a virtual ray; Auriol ascribes to the senses the ability not only to receive information, but also to process it and produce the perceptual content.

More than a century later, in the mid-15th century, Latin scholastics received new incentives from Greek scholars such as Plethon, Bessarion, and Scholarios. These impulses – particularly Plethon’s critique of the Aristotelian theory of vision from the position of a Platonic scholar – are investigated by **Apostolos N. Stavelas** in his paper “Plethon’s Critique of Aristotle’s Theory of Sense Perception in the Light of the 15th-Century Controversy on the Philosophy of Plato and Aristotle”.

Several Jesuit scholastics of the late 16th and early 17th century, both well versed in the medieval scholastic tradition and willing to contribute to this tradition with their own original insights, are investigated by **Daniel Heider**. In his “The Internal Sense(s) in Early Jesuit Scholasticism” he focuses on the internal senses and inquires how a topic popular throughout the Aristotelian tradition – viz. how many internal senses there are and what the criteria for distinguishing them are – was

dealt with by the early Jesuits Francisco de Toledo, Manuel de Góis (one of the so-called *Conimbricenses*), and Francisco Suárez.

Finally, **Tomáš Nejeschleba** in his paper “The Role of Senses and Sense Perception in Valeriano Magni’s Philosophy” presents the lesser known 17th-century Capuchin Valeriano Magni, who was born in Italy but lived in the Czech lands since childhood. In contrast to the Jesuit Aristotelian leanings, Magni’s theory of sensory cognition seems to be endowed with some features traditionally associated with Augustinianism – e.g. the metaphysics of light or the soul’s active processing of information received by the senses.

On behalf of the editors
Lukáš Lička

Proslogion 6: ... sentire non nisi cognoscere aut non nisi ad cognoscendum est...¹

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1. Introduction

In the sixth chapter of his probably most famous and most influential work, Anselm ponders whether it is possible for God to be capable of sensory perception. The question is motivated by the apparently obvious fact that God does not possess corporality, which is evidently necessary for sensory perception to occur, because the senses dwell in a body and cognize things of material nature.² It is the first controversial question Anselm asks in connection with the nature of God in *Proslogion* (later questions concern omnipotence, grace, justice,³ etc.).

Since Anselm asks the question about the possibility of sensory perception first, this study will focus on Anselm's interpretation of sensory perception as presented in his works written in Le Bec. Attention will be directed towards texts written in the second half of the 1070s, namely *Monologion* (i.e., *Exemplum meditandi de ratione fidei*) and *Proslogion* (i.e., *Fides quaerens intellectum*), including Anselm's response to the objections to some of his statements raised by the monk Gaunilo and the dialogue *De veritate*, presumably written by Anselm at the beginning of the 1080s.⁴

Even though the question concerning the nature of sensory perception is often examined in the context of human cognition of reality, Anselm's focal

1 The research and the paper are supported by the scientific grant solved at the University of Ostrava, No. SGS15/FF/2016-2017 "Reality and Actuality in the Middle Ages" (Realita a skutečnost ve středověku).

2 Anselmus, *Proslogion* 6. In: S. Anselmi Cantuariensis archiepiscopi Opera omnia. Vol. 1. Ed. F. S. Schmitt. Edinburgh 1946 (abbrev. *Prosl.*), p. 104.

3 *Ibid.*, 7–9, pp. 105–108.

4 For the dating of Anselm's works see e.g. Southern, R. W., *Saint Anselm. A Portrait in a Landscape*. Cambridge, Cambridge University Press 1990, p. xxvii; or Evans, G. R., *Anselm's life, works, and immediate influence*. In: Davies, B. – Leftow, B. (eds.), *The Cambridge Companion to Anselm*. Cambridge, Cambridge University Press 2004, pp. 11–14.

point is God, or more precisely the human potential to cognize God and to comprehend the human act of faith in God. This is evinced not only by the original titles of Anselm's texts mentioned above, but also by the so called "teaching dialogues" *De veritate*, *De libertate arbitrii* and *De casu diaboli*, whose aim was, according to the author, to provide a suitable instrument for studying the Scriptures.⁵

Although Anselm has been labelled as one of the most systematic and rational⁶ medieval thinkers, he was firmly set in the contemporary understanding of philosophical (rational) cognition as being fundamentally interconnected with religious (theological) experience, because the two are inseparable and relate to the same subject.⁷ Genuine philosophy is the actual religious path to God, the right authorities are the very same thing as certainty of reason.⁸ Anselm was not the only one who strove to connect rational truths with truths of the faith.⁹ He endorsed Augustine's tradition of understanding the philosophical endeavour and in the *Monologion* he explicitly appeals to the African saint and reassures his readers that everything he writes is in conformity with Augustine's statements.¹⁰

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- 5 Anselmus, *De veritate*, praef. In: S. *Anselmi Cantuariensis archiepiscopi Opera omnia*. Vol. 1, op. cit. (abbrev. *De ver.*), p. 173.
 - 6 Cf. for example McIntyre, J., *Premises and Conclusions in the System of St. Anselm's Theology*. In: Grammont, P. (ed.), *Spicilegium Beccense I. Congrès international du IX^e centenaire de l'arrivée d'Anselme au Bec*. Le Bec-Hellouin–Paris, J. Vrin 1959, pp. 95–101.
 - 7 Cf. the very interesting book Kobusch, T., *Christliche Philosophie. Die Entdeckung der Subjektivität*. Darmstadt, WBG 2006. It is customary to stress the interconnection of Anselm's efforts to use *sola ratio* in order to uncover religious and theological truths as *ratio fidei*. There are many works on this topic, see e.g. Visser, S. – Williams, T., *Anselm*. Oxford, Oxford University Press 2009, pp. 13–25; or Grzesik, T., *A New Look at the «ratio Anselmi» of the Proslgion*. In: Majeran, R. – Zieliński, E. I. (eds.), *Święty Anselm. Biskup i myśliciel*. Lublin, Wydawnictwo Katolickiego Uniwersytetu 1999, pp. 225–233, and others.
 - 8 Cf. for example Augustinus, *De vera religione* V, 8. Ed. K.-D. Daur. CCSL 32. Turnhout 1962, p. 193; Iohannes Scotus Erigena, *De divina praedestinatione liber* 1. Ed. G. Madec. CCCM 50. Turnhout 1978, p. 5; idem, *Periphyseon* I, 66. Ed. E. Jeauneau. CCCM 50. Turnhout 1996, p. 192; Anselmus, *De concordia praescientiae et praedestinationis et gratiae dei cum libero arbitrio* III, 6. In: S. *Anselmi Cantuariensis archiepiscopi Opera omnia*. Vol. 2. Ed. F. S. Schmitt, Edinburgh 1946, p. 272, and others. Cf. also Anselm's opinion of referring to the authorities, see e.g. Viola, C. E., *Authority and Reason in Saint Anselm's Life and Thought*. In: Luscombe, D. E. – Evans, G. R. (eds.), *Anselm: Aosta, Bec and Canterbury*. Sheffield, Academic Press 1996, pp. 172–208; or McCord Adams, M., *Anselm on Faith and Reason*. In: Davies, B. – Leftow, B. (eds.), *The Cambridge Companion to Anselm*, op. cit., pp. 39–52.
 - 9 Cf. for example Boethius, *Utrum Pater et Filius et Spiritus sanctus de divinitate substantialiter praedicentur*. In: idem, *Tractates. De Consolatione Philosophiae*. Ed. and transl. H. F. Stewart – E. K. Rand – S. J. Tester. Cambridge–London 1978, p. 35.
 - 10 Cf. Anselmus, *Monologion*, prolog. In: S. *Anselmi Cantuariensis archiepiscopi Opera omnia*. Vol. 1, op. cit. (abbrev. *Mon.*), p. 8. It is commonly held that this explicit reference to the conformity with the Church Fathers, the Scriptures, and especially with Augustine is one of the results of the apparently reserved reaction of Lanfranc to reading the *Monologion*. Anselm had been deeply interested in his opinion prior to publishing the text – cf. Anselmus, *Epistolarum liber*

The texts of the early Church Fathers undoubtedly had fundamental influence on Anselm, which is reflected not only by the Augustinian and Platonic background of his thought (albeit confronted with the Aristotelian legacy mediated especially by Boëthius), but also by his approach to questions regarding sensory perception. It may be noted in advance that the general setting of Anselm's contemplation is in principle a Platonic¹¹ approach to the status and importance of sensory perception, even though he deviates from it in certain respects.

This paper aims to interpret Anselm's occasional mentions of sensory perception in the listed works while respecting the line of thought presented by the author himself. First, the paper focuses on the question whether and how God possesses sensory perception (part 2), then on the ability of humans to cognize God by means of their senses (part 3), which is elaborated further by Anselm's interpretation of the nature of sensory perception and its truthfulness (part 4). Eventually (part 5), the paper proposes an explanation as to why Anselm paid but little attention to sensory perception and why he mostly dedicated his philosophical and intellectual efforts to different aspects of the cognitive process.

2. God and sensory perception (*Proslogion* 6)

Anselm solves the question whether sensory perception is possible in God (*quomodo sit sensibis*) by the same method as the one he employs for the other issues in the *Proslogion* – he presents contradictory statements, then shows one statement to be false and, by applying the law of excluded middle, confirms the other one. In this particular case, Anselm begins with the premise that God must possess all qualities that it is better to possess than not to possess, which had already been substantiated in detail in the *Monologion*.¹² In connection with sensory perception, Anselm presupposes in the *Proslogion* that “[...] since to be able to perceive [...] is better than not to be [...]”,¹³ God should be able to perceive.

primus 72, 77. In: *S. Anselmi Cantuariensis archiepiscopi Opera omnia*. Vol. 3. Ed. F. S. Schmitt, Edinburgh 1946, pp. 193–194, 199–200. For more details see for example Zanatta, F., L'autorità della ragione. Contributo all'interpretazione della lettera 77 di Anselmo d'Aosta a Lanfranco di Pavia. In: d'Onofrio, G. (ed.), *Lanfranco di Pavia e l'Europa del secolo XI*. Roma, Herder 1993, pp. 609–627.

11 Cf. Modrak, D. K., Perception and Judgment in the “*Theaetetus*”. *Phronesis. A Journal for Ancient Philosophy*, 26, 1981, No. 1, pp. 35–54.

12 Cf. for instance Anselmus, *Mon.* 16, p. 30–31.

13 Anselmus, *Prosl.* 6, p. 104: ... *cum melius sit esse sensibilem ... quam non esse...* (English translation by J. Hopkins and H. Richardson – cf. *Complete Philosophical and Theological Treatises*

Although we can definitely think about perception (not only in the case of God) in a more general manner than in the exclusive context of knowledge provided by sensory organs, Anselm, in this chapter, designates perception as sensory perception because he explicitly stresses that he is examining God's capacity of sensory perception (*sit esse sensibilem*) – similarly to the method he uses to deal with God's omnipotence or grace – i.e., Anselm is interested exclusively in knowledge provided by the senses (*secundum sensuum*). In respect to this delimitation, he holds that it is more appropriate that God possesses knowledge based on the senses.

On the other hand, it seems that sensory perception cannot be attributed to God because:

[...] how are You able to perceive if You are not something corporeal [...]? For if only corporeal things are able to perceive (inasmuch as the senses have to do with a body and are in a body), how are You able to perceive, since You are not something corporeal but are Supreme Spirit, which is better than what is corporeal?¹⁴

God is Supreme Spirit who is not connected to corporeal matter, whereas it seems that the senses always perceive only something corporeal and are inherently tied to a body. This implies that God cannot possess sensory perception, because His spiritual nature (much more perfect than a corporeal one) prevents Him from doing so. The fundamental contradiction then reads:

a) God possesses sensory perception, because it is better to be able to perceive by the senses than not to be and God possesses everything that it is better to possess than not to possess.

b) God does not possess sensory perception, because sensory perception is always tied to corporeal things and God is not corporeal.

Anselm devises a general characteristic of sensory perception in order to reject one of the above options:

But if perceiving is only knowing or only for the sake of knowing (for anyone who perceives knows in accordance with the characteristic capabilities of the respective senses – e.g., colors [are

of Anselm of Canterbury. Transl. J. Hopkins – H. Richardson. Minneapolis, The Arthur J. Banning Press 2000, p. 96.)

14 Ibid.: ... *quomodo es sensibilis, si non es corpus...? Nam si sola corporea sunt sensibilia, quoniam sensus circa corpus et in corpore sunt: quomodo es sensibilis, cum non sis corpus sed summus spiritus, qui corpore melior est?* (English translation: op. cit., p. 96.)

known] through sight, flavors through taste), then whatever in some way knows is not unsuitably said in some way to perceive.¹⁵

Thus, sensory perception is (in the Platonic tradition) a specific kind of knowledge or something that eventually leads to knowledge. Perception differs from other kinds of knowledge, because it produces findings by means of sensations or the senses generally. Since perception is a kind of knowledge, it seems that a being endowed with cognitive abilities also has the ability to perceive.

Even though it is correctly supposed that sensory perception is related to something corporeal, this fact cannot be applied to God. God is truly Supreme Spirit who does not contain anything corporeal. Therefore, God cannot cognize by corporeal senses, but that does not mean that He possesses no sensory perception. On the contrary, His sensory perception is fundamentally different from the cognitive practices of other beings, humans included.¹⁶ By this argumentation, Anselm explicitly exposes the second statement as false.

Thereby, since it is clear that God either has sensory perception or He does not and Anselm has already given reasons why the latter alternative is not plausible, it must hold that God possesses sensory perception. It is beyond doubt that God knows everything and He has the best cognition. And since perception is nothing other than cognition, He must necessarily possess the most perfect mode of sensory perception, even though corporeality cannot be ascribed to Him:

Therefore, O Lord, even though You are not something corporeal, truly You are supremely able to perceive in the sense that You know supremely all things [...]¹⁷

According to this chapter of the *Proslogion* at least, it is possible to say that even though God does not possess corporeal senses, He is capable of supreme sensory perception (*summus sensibilis*).

15 Ibid., p. 105: *Sed si sentire non nisi cognoscere aut non nisi ad cognoscendum est – qui enim sentit cognoscit secundum sensuum proprietatem, ut per visum colores, per gustum sapes –: non inconvenienter dicitur aliquo modo sentire, quidquid aliquo modo cognoscit.* (English translation: op. cit., p. 96.)

16 Ibid.

17 Ibid.: *Ergo domine, quamvis non sis corpus, vere tamen eo modo summe sensibilis es, quo summe omnia cognoscis...* (English translation: op. cit., p. 96.)

3. Seeking God by means of sensory perception (*Proslogion* 17, *Ad Gaunilonem* 8)

In the *Proslogion*, Anselm arrived at the conclusion that God possesses sensory perception and His perception is supreme. The necessary condition of this conclusion is the assumption that the mode of God's sensory perception is completely incommensurable with the sensory perception we know in our corporeal world.

It raises the question whether humans, i.e., beings endowed with corporeal senses, can use sensory perception in their effort to find God. From a systematic point of view, it is possible to say that if such a possibility existed, at least two conditions would have to be satisfied:

1. God must be relevantly characterized by properties perceivable by the senses.
2. The human senses are (at least in some manner) able to cognize those properties or the data available to us by means of sensory perception can be of significant assistance to us in our search for God.

Anselm comments on the first condition in the seventeenth chapter of the *Proslogion*, where he laments over the darkness (*tenebrae*) and poverty (*miseria*) of his soul, which is unable to reach God because the Supreme Being remains hidden from us.¹⁸ One of the causes of this poverty is the fact that God is not only “[...] that than which a greater cannot be thought [...]”,¹⁹ according to the key wording from the famous *unum argumentum*, but he is something much more:

Therefore, O Lord, not only are You that than which a greater cannot be thought, but You are also something greater than can be thought. For since there can be thought to exist something of this kind, if You were not this [Being] then something greater than You could be thought – [a consequence] which is impossible.²⁰

Therefore, God is “something greater than can be thought”, He dwells in an unreachable light and even though He is ever-present, humans are not able to cognize Him.²¹ Anselm compares this to sunlight, which allows us to

¹⁸ *Ibid.*, 17, p. 113.

¹⁹ *Ibid.*, 2, p. 101: *... id quo maius cogitari nequit...* (English translation: *op. cit.*, p. 93.)

²⁰ *Ibid.*, 15, p. 112: *Ergo domine, non solum es quo maius cogitari nequit, sed es quiddam maius quam cogitari possit. Quoniam namque valet cogitari esse aliquid huiusmodi: si tu non es hoc ipsum, potest cogitari aliquid maius te; quod fieri nequit.* (English translation: *op. cit.*, p. 103.)

²¹ *Ibid.*, 16, p. 112–113.

cognize by sight, but a direct gaze into the Sun blinds us because our sight is not sufficient for such a strong glare and vivid gleam. We can make a similar statement about God that He is all around us, He even rests inside us, yet we are not able to perceive Him: “You are within me and round about me; and yet, I do not experience You.”²²

Thus, God is something that cannot be cognized by humans in their sinful state despite all effort. Anselm talks in this context about the sensible properties of God which we cannot register, but which are present in God and at the same time are given by God to the creation which we are able to perceive:

For it looks in all directions but does not see Your beauty. It listens but does not hear Your harmony. It fills its nostrils but does not smell Your fragrance. It tastes but does not savor Your succulence. It feels but does not detect Your softness. For in Your ineffable manner, O Lord God, You have these [features] within You; and You have bestowed them, in their own perceptible manner, upon the things created by You.²³

Humans do not see the beauty (*pulchritudo*) of God, they do not hear His harmony (*harmonia*), they do not smell His scent (*odor*), and they cannot cognize His perfect taste (*sapor*), nor can they perceive God’s smoothness (*lenitas*). Not only does Anselm connect all five senses with what can be found in God (but we are not able to find it because of our sinful nature), he also holds that these properties are possessed by God in some inexpressible manner and He granted the same properties to all the creation, which contains these properties in such manner that we can perceive them. While it would be possible to speculate about Anselm’s figural expressions in connection with predicating sensory qualities of God in this part of the *Proslogion*, it seems, nevertheless, that Anselm declares not only the presence of sensually perceivable qualities in God Himself, but also their direct correlation with the things we sensually perceive in the corporeal world around us.

It is beyond doubt that the sensually perceivable properties are present in God in an entirely different manner than we (as humans) are used to encountering in the ordinary sensually perceivable world. However, Anselm explicitly states here that God has placed the same (*ea*) properties (i.e., what is perceivable by sight, hearing, smell, taste and touch) which exist in God in

²² Ibid., p. 113: *Intra me et circa me es, et non te sentio.* (English translation: op. cit., p. 104.)

²³ Ibid., 17, p. 113: *Circumspicit enim, et non videt pulchritudinem tuam. Auscultat, et non audit harmoniam tuam. Olfacit, et non percipit odorem tuum. Gustat, et non cognoscit saporem tuum. Palpat, et non sentit lenitatem tuam. Habes enim haec, domine deus, in te tuo ineffabili modo, qui ea dedisti rebus a te creatis suo sensibili modo...* (English translation: op. cit., p. 104.)

a specific manner into the things He created. They are not diverse properties; they are the very same, although existing in a different way. Therefore, it can be inferred that Anselm would agree with the first of the conditions above concerning the necessity of sensory qualities in God (even though they are present in very specific manner). But would he agree that sensory perception can actively aid us in our search for God (i.e., the second condition above)?

It is often said that Anselm's rational search for God in the *Proslogion* is an ontological (*a priori*) argument, which begins with knowledge of the cause and deduces consequences from it (in this case it begins with conceptual knowledge of God, or existence of God in the human mind, from which His real existence should be inferred).²⁴ If this were the case, then the fundamental path to finding God would be completely independent from sensory perception and it would be necessary to state that the senses are not useful in searching for God.

However, Anselm speaks somewhat differently. Already in the *Monologion*, whose introductory chapters presented the verification procedures which should lead us to the necessity of God's existence, Anselm, while searching for God as the only good (*unum bonum*) which permits all other goods, directly appeals to the easiest (*promptissimus*) method, which begins with the world perceivable by the corporeal senses.

[...] although the good things whose very great variety we perceive by the bodily senses and distinguish by the mind's reason are so numerous, are we to believe that there is one thing through

24 Ch. Harthstone wrote that as a result of these few lines of the second chapter of the *Proslogion* Anselm has become a philosopher who is very modern to be discussed but is not usually studied – cf. Hartshorne, Ch., Introduction. In: Saint Anselm, *Basic Writings: Proslogium / Monologium / Gaunilon's In Behalf of the Fool / Cur Deus Homo*. Transl. S. W. Deane. La Salle, Open Court 1962, p. 1. There is an inexhaustible amount of literature concerning this topic, cf. for instance Logan, I., *Reading Anselm's Proslogion. The History of Anselm's Argument and its Significance Today*. Farnham, Ashgate 2009; Goebel, B., *Anselm's Elusive Argument: Ian Logan Reading the Proslogion. The Saint Anselm Journal*, Vol. 7, Fall 2009, No. 1. Available online: <http://www.anselm.edu/Documents/Institute%20for%20Saint%20Anselm%20Studies/Fall%202009/7.1Goebel.pdf> [retrieved 15 December 2016]; Brecher, R., *Anselm's Argument: The Logic of Divine Existence*. Brookfield, Gower 1985; Plantinga, A. (ed.), *The Ontological Argument from St. Anselm to Contemporary Philosophers*. New York, Doubleday 1965; Ricken, F. (ed.), *Klassische Gottesbeweise in der Sicht der gegenwärtigen Logik und Wissenschaftstheorie*. Stuttgart, Kohlhammer 1998; Tichý, P., *Existence and God. The Journal of Philosophy*, 68, 1979, pp. 403–420; Oppenheimer, P. E. – Zalta, E. N., *On the Logic of the Ontological Argument. Philosophical Perspectives*, 5, 1991, pp. 509–529; Anscombe, G. E. M., *Why Anselm's Proof in the Proslogion is not an Ontological Argument. Thoreau Quarterly*, 17, 1985, pp. 32–40; Hick, J. – McGill, A. (eds.), *The Many-Faced Argument. Studies on the Ontological Argument for the Existence of God*. Eugene, Wipf and Stock 2009, etc.

which all good things are good, or are some things good through something else?²⁵

In the *Proslogion* itself, Anselm first declares that the main difference between the paths to God in the *Monologion* and in the *Proslogion* is that the former contains a succession of arguments providing the insight of God's existence, while in the latter Anselm tries to introduce a single argument (*unum argumentum*) which is conclusive on its own and, in addition, could be used for the same purpose (i.e., to show God as *summum bonum*, etc.).²⁶ Anselm mentions no other substantial difference.

In the first chapter of the *Proslogion*, he examines the poverty of the sinful state of the human soul longing for God, who is unreachable in the present state.²⁷ Anselm explicitly states that the soul wishes to behold God, or to see His face.²⁸ Therefore, the soul, among other things, wishes to cognize God by means of sensory perception, even though it is apparently not possible to construe these words clearly as an actual craving to relate to God by the corporeal senses – one just needs to recall the abovementioned principal difference between the presence of perceivable properties in God and in the sensory qualities of the corporeal world.

But in the most famous second chapter of the *Proslogion*²⁹ Anselm also refers to sensory perception when he introduces the fool (*insipiens*) who said in his heart that there is no God.³⁰ However, even this fool must acknowledge that he has *id quo maius cogitari nequit* in his intellect, because it is mediated to him by sensory perception:

But surely when this very same Fool hears my words “something than which nothing greater can be thought”, he understands what he hears.³¹

25 Anselmus, *Mon.* 1, p. 14: *Cum tam innumerabilia bona sint, quorum tam multam diversitatem et sensibus corporeis experimur et ratione mentis discernimus: estne credendum esse unum aliquid, per quod unum sint bona quaecumque bona sunt, an sunt bona alia per aliud?* (English translation: op. cit., p. 7.)

26 Anselmus, *Prosl.* prooem, p. 93.

27 Cf. for example Losoncy, T. A., Chapter 1 of St. Anselm's *Proslogion*; Its Preliminaries to Proving God's Existence as Paradigmatic for Subsequent Proofs of God's Existence. In: Zumr, J. – Herold, V. (eds.), *The European Dimension of St. Anselm's Thinking*. Praha, Filosofický ústav AV ČR 1993, pp. 95–106.

28 Anselmus, *Prosl.* 1, pp. 99–100.

29 For a summary of its traditional interpretation see for example Visser, S. – Williams, T., *Anselm*, op. cit., p. 75–79.

30 Anselmus, *Prosl.* 2, p. 101. Cf. Ps 14,1; or Ps 53,1.

31 *Ibid.*: *Sed certe ipse idem insipiens, cum audit hoc ipsum quod dico: 'aliquid quo maius nihil cogitari potest', intelligit quod audit...* (English translation: op. cit., p. 93.)

If somebody is foolish enough not to believe in God (*id quo maius cogitari nequit*), i.e., he does not possess in his mind and in his intellect (*in intellectu*) the notion of His necessary existence, then he can gain the knowledge of something than which nothing greater can be thought by virtue of sensory perception (in this case hearing). It is highly probable that Anselm indeed used the example of auditory perception only as a literary expression of the presented thought and not as a direct reference to the importance (or even needfulness) of sensory perception. Nonetheless, even in this case he referred to the senses, which take credit for the fact that *id quo maius cogitari nequit* exists in our minds at least.

Precisely this statement, i.e., that every human being is by virtue of his intellect capable of grasping Anselm's description of the Supreme Being, was doubted by the monk Gaunilo in his polemic answer.³² And we can still ponder whether it is only a coincidence that the first known critic of Anselm's reasoning in favour of God's existence calls attention to the uncertainty of sensory (auditory) sensation, which would allow even a sensory illusion to be grasped by an intellect,³³ and then doubts in particular that we would even be able to rationally grasp what the Supreme is, because we cannot cognize it on the basis of a concrete entity, i.e., of similarity with a comparable entity, or on the basis of knowledge of species or genus, as neither of these methods brings us closer to God.³⁴

Anselm deals with this caveat in two ways:

1. An argument to persuade the fool who does not acknowledge the authority of the Scriptures.
2. Reference to the Scriptures.

In the first, even the fool can, on the basis of understanding what is less good (*minus bonum*), think of something that is more good (*maius bonum*), as on the basis of understanding something that has a beginning and an end (*initium et finis*) he can understand something that has a beginning but no end, but he can also use his knowledge of something that is even better (*melius*) than the latter, which is something that is completely without a beginning or an end.³⁵ Therefore:

32 Cf. for example Losoncy, T. A., The Anselm-Gaunilo Dispute about Man's Knowledge of God's Existence: An Examination. In: Van Fleteren, F. – Schnaubelt, J. C. (eds.), *Twenty-Five Years (1969–1994) of Anselm Studies*. Anselm Studies Vol. 3. Lewiston–Queenston–Lampeter, Edwin Mellen Press 1996, pp. 161–181.

33 Gaunilo, *Quid ad haec respondeat quidam pro insipiente* 2. In: *S. Anselmi Cantuariensis archiepiscopi Opera omnia*. Vol. 1, op. cit., pp. 125–126. For more details concerning sensory illusions and Anselm's interpretation of them, see section IV of this paper.

34 *Ibid.*, 4, pp. 126–127.

35 Anselmus, *Quid ad haec respondeat editor ipsius libelli* 8. In: *S. Anselmi Cantuariensis archiepiscopi Opera omnia*. Vol. 1, op. cit. (abbrev. *Ad Gaun.*), p. 137.

In this way, then, the Fool, who does not accept sacred authority [i.e., Scripture], can easily be refuted if he denies that on the basis of other things inferences can be made about that than which a greater cannot be thought.³⁶

The second method by which humans can acquire a notion of something than which nothing greater can be thought from something than which something greater can be thought (i.e., things in the surrounding sensually perceivable world), is addressed to those who acknowledge that the Scriptures contain Truth. For those people, it is enough just to remember the Epistle to the Romans, where Apostle Paul writes:

[...] the invisible things of God (including His eternal power and divinity), being understood through those things that have been made, are clearly seen from the mundane creation.³⁷

The authority of the Scripture urges us to examine the created world, explore local entities, viz. to sensually grasp the corporeal reality, compile it rationally and then try to search for the Being who created it. Anselm seems to have assumed that sensory experience is necessary even for his *unum argumentum* from the *Proslogion*, because without it Gaunilo's caveat would be relevant. However, reference to the sensually perceivable world, according to Anselm, refutes this objection.

4. The truth of sensory perception and sensory illusions (*De veritate* 6)

The highly specific role of sensory perception in seeking God and the truth is elaborated further in the dialogue *De veritate*. There Anselm presents not only his definition of truth,³⁸ but also develops his conception of two truths (*duae veritates*). On the one hand, there is a natural (*naturalis*) and necessary (*necessaria*) truth, which can be characterized as doing what ought to

36 Ibid.: *Sic itaque facile refelli potest insipiens qui sacram auctoritatem non recipit, si negat, quo maius cogitari non valet' ex aliis rebus conici posse.* (English translation: op. cit., p. 129.)

37 Ibid., p. 138: *... »invisibilia« dei »a creatura mundi per ea, quae facta sunt, intellecta conspiciuntur, sempiterna quoque eius virtus et divinitas«.* (English translation: op. cit., p. 129.) Cf. Rom 1,20.

38 Anselmus, *De ver.* 11, p. 191. For more details see for instance Enders, M. *Wahrheit und Notwendigkeit. Die Theorie der Wahrheit bei Anselm von Canterbury im Gesamtzusammenhang seines Denkens und unter besonderer Berücksichtigung seiner antiken Quellen (Aristoteles, Cicero, Augustinus, Boethius)*. Leiden–Boston–Köln, Brill 1999; Recktenwald, E., *Das id quo maius cogitari non potest als rectitudo: Anselms Gottesbeweis in Lichte von De veritate*. In: Van Fleteren, F. – Schnaubelt, J. C. (eds.), *Twenty-Five Years (1969–1994) of Anselm Studies*, op. cit., pp. 135–159, and others.

be done (*facit quod debet*). Thus, when something does exactly what it ought to do, i.e., it is in accord with its nature, then we say that the given thing is in accord with its being, therefore it is true. In this sense, a fire is true when it burns because a fire ought to burn according to its nature. It follows that if there is a fire, it must necessarily burn. Similar conclusions can be drawn about the truth of a will which wants, etc. On the other hand, Anselm reasons about a truth which is supposed to be of an accidental (*accidentalis*) nature and consists in that what is done is done in a proper manner (*recte utitur*). It is not enough for a will to want, it must also want that what it ought to want in the present situation. According to this second conception of truth, what Anselm regards as true in this context is caused by the direction (rightness) of the will.³⁹

An illustrative example, which is used to clarify the difference between the two truths in Anselm's dialogue, is the truth of an utterance. During the dialogue with the teacher, the pupil is reluctant to accept the thesis that even a statement claiming that something exists, even though it is not the case (e.g., *A dog is a winged fish*), can be understood as a true one. The teacher thus explains that every statement provided it expresses something, does what it ought to do because it is in its nature and it is, therefore, necessarily true, even though it does not express the truth. The pupil eventually accepts this explanation, saying: "Now for the first time I see the truth in a false statement."⁴⁰

Apart from this natural truth of utterances, which is comparable to the fact that fire, if it is a real fire, must always be warm, there is also a more common manner of how a statement is understood to be true. It occurs when an utterance is used in such a way that it not only does what it ought to do, but, more importantly, when it does so while proclaiming what it ought to proclaim, thus when it is used properly. Only then does the utterance fulfil the purpose for which it was given the power to express. In such case it holds that an utterance is true when it says what really is or when it denies what really is not. Similar conclusions can be made about e.g. the truth of thought, of willing, etc.⁴¹

However, if we focus on the truth of sensory perception, the situation is, according to Anselm, different. The senses provide solely such information about the sensually perceivable reality as they were allowed to pass on,

39 Cf. for instance Anselmus, *De ver.* 2, p. 179; or *ibid.*, 5, pp. 181–182.

40 *Ibid.*, 5, p. 183: *Nunc primum video in falsa oratione veritatem.* (English translation: *op. cit.*, p. 171.)

41 Cf. *ibid.*, 2–5, pp. 177–183, for detailed analysis, see for instance Enders, M., *Wahrheit und Notwendigkeit*, pp. 115–196.

because they “[...] report what they are able to, since they have received thus to be able [...]”⁴²

In other words, there is always truth in the senses and sensory perception cannot transmit false data. However, this is contrary to the intuitive opinion that the senses deceive us. Anselm cites several traditionally presented sensory illusions, mostly optical ones (a straight stick submerged in water looks broken, reflections in mirrors, colour-changes of objects because of the surrounding environment – stained glass – through which we are looking at the object, etc.), but there is also a brief mention of an auditory illusion (confusion about recognizing a human voice).⁴³

However, the teacher in the dialogue develops the theory that these errors are not made by the external or corporeal senses (*sensus exterior*), as it would appear, but in the verdict we make concerning these sensory data, i.e., it is a judgement of our soul (*iudicio animae*), which originates from the so-called inner sense (*sensus interior*) processing our sensory data.⁴⁴ Anselm’s comparison of the different interpretations of an optical perception made by a boy (*puer*) and by an aged person (*senex*) serves as an illustrative example. Both are looking at the same dragon with the mouth open, both see the same object, but while the aged person knows that it is a statue, i.e., the sensory perception is processed in this way in his soul by the inner sense, the boy is not capable of a similar judgement and starts to be afraid, because the differentiation between the thing (a real dragon with the mouth open) and its imitation in the form of a statue does not happen in his mind. The two have the same perception, but it produces different things in their souls.⁴⁵

Anselm then deals in detail with illusory colours on objects in a similar fashion. It serves him as an instrument to express his extramission theory of sensory perception, whereby he subscribes to a broad theory regarding the activity of the sight in cognizing the surrounding world. This theory (frequent already in antiquity) has an important place in medieval thinking about the nature of sensory perception.⁴⁶

42 Anselmus, *De ver.* 6, p. 184: ... qui renuntiant quod possunt, quoniam ita posse acceperunt. (English translation: op. cit., p. 173.)

43 Ibid., pp. 183–184.

44 Cf. Augustinus, *De libero arbitrio* II, 3, 8. Ed. W. M. Green. CCSL 29. Turnhout 1970. Anselm does not elucidate further how this *sensus interior* is to be understood. It can be assumed that Augustine was his inspiration. Cf. for instance Evans, G. R., *Getting it Wrong: The Mediaeval Epistemology of Error*. Leiden, Brill 1998, pp. 48–51.

45 Anselmus, *De ver.* 6, p. 183.

46 See, for example, Smith, A. M., *From Sight to Light. The Passage from Ancient to Modern Optics*. Chicago–London, The University of Chicago Press 2015, pp. 29–31, 72–74 or 241. For Anselm’s possible source (Calcidius and his translation of Timaeus) cf. Somfai, A., The Eleventh-Century Shift in the Reception of Plato’s *Timaeus* and Calcidius’s *Commentary*. *Journal of the Warburg and Courtauld Institutes*, 65, 2002, p. 20.

For example, [this is the case] when sight passes through glass of its own color – i.e., glass which has no color admixed to its own – or when it passes through very clear water or through a crystal or through something having a similar color. But when sight passes through some other color (for example, through glass not of its own color [i.e., not of the natural color of glass] but to which another color is added), it receives the color which it first encounters. Thus, after sight has received one color, then depending upon the extent to which it has been modified by this color, it receives either partially or not at all whatever other color it encounters. Therefore, sight reports the color it has apprehended first, and reports it either by itself or in combination with the color it meets subsequently.⁴⁷

According to Anselm, there is a visual ray originating in the organ of sight, which passes through a medium (e.g. air, water, glass, etc.) until it collides with an object which it can capture. In the case of a colour and a transparent environment, the visual perception informs us about the particular colour of a given object (e.g. a yellow leaf). Provided that the environment is coloured to a different extent, the information given to us by the visual perception will be stained or tinted according to the intensity of that colour, e.g. the very same yellow leaf, viewed through a blue glass, appears to be green. If the intensity of the blue colour of the glass is even stronger, the very same yellow leaf may appear to be blue.

Therefore, according to Anselm, sensory perception has the character of extramission⁴⁸ and it seems that it relates to the corporeal world of individual things and informs us about them by means of affection.⁴⁹ When

47 *Ibid.*, p. 184: *Ut cum transit per vitrum sui coloris, id est cui nullus alius admixtus est color; aut per purissimam aquam aut per crystallum aut per aliquid similem habens colorem. Cum vero transit idem visus per alium colorem, ut per vitrum non sui coloris, sed cui alius color est additus: ipsum colorem qui prius occurrit accipit. Quapropter quoniam post unum acceptum colorem, secundum quod illo affectus est, alium quicumque occurrat aut nullatenus aut minus integre suscipit: ideo illum quem prius cepit, aut solum aut cum eo qui post occurrit renuntiat.* (English translation: *op. cit.*, p. 172.)

48 In the case of sight, Anselm states this openly also in the dialogue *On Freedom of Choice*, see Anselmus, *De libertate arbitrii* 7. In: *S. Anselmi Cantuariensis archiepiscopi Opera omnia*. Vol. 1, *op. cit.*, p. 218: *Vocamus enim visum ipsum instrumentum videndi, id est radium procedentem per oculos quo sentimus lucem et quae sunt in luce...* (English translation: *op. cit.*, p. 204: *For we call sight the instrument-for-seeing, i.e., the ray passing through the eyes, by which ray we perceive light and the objects which are in the light.*)

49 For more details see for example Külling, H., *Wahrheit als Richtigkeit. Eine Untersuchung zur Schrift De veritate von Anselm von Canterbury*. Bern, Lang 1984, pp. 142–145; or Enders, M., *Wahrheit und Notwendigkeit*, *op. cit.*, pp. 198–205.

so-called sensory illusions occur, it is not an error of the corporeal sense itself.⁵⁰ If a yellow leaf appears to be green when viewed through a blue glass, or if we are informed by a visual perception that we are behind a mirror rather than in front of it, or that a straight stick half-submerged in water is broken, then the perception does exactly what it ought to do (a yellow leaf viewed through a blue glass simply looks green, etc.) and it is, therefore, true.

There is no error, until the soul makes one when it is not able to acknowledge that the conditions accompanying sensory perceptions could influence (or substantially influence) the data given to us by the corporeal senses. Falsity cannot be ascribed to the corporeal senses, because:

[...] the inner sense imputes its own failure to the outer sense.
 [...] whatever the senses are seen to report, whether they do so as a result of their nature or of some other cause [for example, because of a tinted glass], they do what they ought. Therefore, they do what is right and true [...]⁵¹

Anselm presents sensory perception as a faculty which does that what it ought to do, does so truthfully and it is, therefore, always true. Anselm gives a similar answer to the caveat of monk Gaunilo mentioned above, viz. that if the author of the *Proslogion* refers to a sensory perception (hearing) while trying to alert to the obvious presence of *id quo maius cogitari nequit* in our intellect, then it means that our intellect also contains sensory illusions and the truth of our knowledge is not warranted. In his response, Anselm states that we indeed can have illusions in our mind, but the certainty that we are hearing somebody utter a falsehood is obvious. Therefore, we must always examine the sensual data in our mind in terms of what is true and what is not. And this is exactly what he does when he says that something than which nothing greater can be thought exists not only in a mind (e.g. as an illusion), but in reality as well.⁵²

Provided that sensory perception is considered to be always true, as it is by Anselm in *De veritate*, then this interpretation can also reveal the reason why Anselm stressed the importance of sensory perception as an initial step in his attempts to find God so much – because sensory perception is always true and it is therefore an excellent base for further search.

50 Cf. Smith, A. M., *From Sight to Light*, op. cit., pp. 236–237.

51 Anselmus, *De ver.* 6, p. 184–185: ...sensus interior culpam suam imputet sensui exteriori. ... quidquid renuntiare videantur, sive ex sui natura hoc faciant sive ex alia aliqua causa: hoc faciunt quod debent, et ideo rectitudinem et veritatem faciunt... (English translation: op. cit., p. 172.)

52 Anselmus, *Ad Gaun.* 6, p. 136.

5. Hierarchy and sensory perception (*Monologion* 31)

However, Anselm does not want to elaborate on the truthfulness of sensory perception in the dialogue *De veritate* any further, because it would not be useful for the goals he is pursuing:

I do not think that time need be spent in showing this [in any more detail], since for our purposes it would be more tedious than profitable.⁵³

Exactly at the moment when we would expect Anselm to expand his conception of sensory perception, he completely abandons the topic. It leaves us wondering why Anselm, provided he believed that the senses are fundamental in noetic processes as indicated above, did not devote more attention to this problem in his writings.

One possible answer is that it was due to the (not only) contemporary conception of a hierarchically organized reality, which was frequently expressed in the texts of patristic authors and primarily followed the legacy of Platonic thinking. Anselm addresses this topic in several places in various parts of his writings. Anselm's answer to Gaunilo (and the very formulation of the argument in the *Proslogion*) can serve as an example which implies that, based on the knowledge of something than which something greater can be thought, it is possible to infer something than which nothing greater can be thought, which is precisely something more than we are ever able to think.

Anselm describes this successive hierarchy clearly in the *Monologion*, Chapter 31, where he deals with the question how it is possible that the transient things of this world were created according to the immutable Word of God. This Word is the highest truth (*summa veritas*) and at the same time all the created things (*res*) are more perfect (*praestantior*) according to their resemblance to this Word. In this context, Anselm states:

For this reason, perhaps – or, rather, not perhaps but certainly – every intellect judges that natures which are in any way alive excel non-living [natures], and that sentient natures excel non-sentient [natures], and that rational natures excel nonrational [ones]. For since the Supreme Nature in its own unique way not

⁵³ Anselmus, *De ver.* 6, p. 184: *Quod ostendere quoniam laboriosum magis est quam fructuosum ad hoc quod intendimus, in hoc modo tempus insumendum non arbitror.* (English translation: op. cit., p. 173.)

only exists but also lives and perceives and reasons, clearly whatever existing thing in some respect lives is more like the Supreme Nature than what does not at all live. And what in any way (be it even by a bodily sense) recognizes an object [is] more [like the Supreme Nature] than what does not at all perceive. And what is rational [is] more [like the Supreme Nature] than what has no rational capacity. By a similar consideration it is clear that some natures exist more than others or less than others. [...] Therefore, it is clear that a living substance exists more than does a non-living one, that a sentient substance exists more than does a non-sentient one, and that a rational substance exists more than does a non-rational one. So without doubt every being exists more and is more excellent to the extent that it is more like that Being which exists supremely and is supremely excellent.⁵⁴

If we apply the concept of the two levels of truth from *De veritate* to the passage from the *Monologion*, then it follows that inanimate substances, as well as animated substances which are capable of sensory perception but do not possess rationality, possess only a natural and necessary truth. A fire, provided that it is a fire, burns, and a plant, provided that it lives according to its true nature, necessarily absorbs nutrients for its growth and, for example, produces seeds, and every animal as an animal is capable of using its senses to cognize the environment as it appears to it and can act according to this knowledge. The three listed levels are natural and necessarily true. The truth of human sensory perception also belongs to this sphere and, therefore, also possesses necessary truth.

However, there is an even higher level: rationality. Anselm postulates the second level of truth of the rational substances, because only with respect to them it is possible to say that the will, speech, and thought, etc. can do what they ought to do for that particular reason due to which they ought to do it. Since in a hierarchy it holds that a higher member stands for a higher perfec-

54 Anselmus, *Mon.* 31, pp. 49–50: *Hinc etenim fortasse, immo non fortasse sed pro certo, hinc omnis intellectus iudicat naturas quolibet modo viventes praestare non viventibus, sentientes non sentientibus, rationales irrationalibus. Quoniam enim summa natura suo quodam singulari modo non solum est, sed et vivit et sentit et rationalis est, liquet quoniam omnium quae sunt, id quod aliquomodo vivit, magis est illi simile quam id quod nullatenus vivit; et quod modo quolibet vel corporeo sensu cognoscit aliquid, magis quam quod nihil omnino sentit; et quod rationale est, magis quam quod rationis capax non est. Quoniam vero simili ratione quaedam naturae magis minusve sint quam aliae, perspicuum est. ... Patet igitur quia magis est vivens substantia quam non vivens, et sensibilis quam non sensibilis, et rationalis quam non rationalis. Non est itaque dubium quod omnis essentia eo ipso magis est et praestantior est, quo similior est illi essentiae, quae summe est et summe praestat.* (English translation: *op. cit.*, pp. 47–48.)

tion and is closer to God, it is not surprising that Anselm laid such emphasis on the rational context of his expositions.

6. Conclusion

This also explains the apparent discrepancy between the importance attributed by Anselm to sensory perception and the peripheral attention he paid to it. While he starts his seeking of God in the *Monologion* from the things of this world, which are good according to the data accessible to our senses, a similar initiatory step is missing in the *Proslogion*. This absence is explicitly amended when Anselm responds to Gaunilo's caveats, because our pursuit of knowledge begins precisely with sensory perception. Anselm focuses on the rational arguments, because rationality is closest to God in the hierarchy of the Creation and the intellect tries hard to comprehend (not only) the most perfect thing in reality and through this it simultaneously approaches this supreme entity according to its capabilities. But the human intellect requires necessarily true and indisputable input for its pursuit and this input is provided by sensory perception. This might be a reason why Anselm regarded sensory perception as a kind of knowledge (or at least as leading to a knowledge) which is always true, i.e., the senses provide us with information about the corporeal reality in the manner as the reality appears to the senses, but at the same time open the way for rationality, which occupies a higher position in the hierarchy.

ABSTRACT

This paper aims to analyse and evaluate the character and role of sense perception in the works of Anselm of Canterbury written during the relatively short period of the 1070s and 1080s, namely the *Monologion*, the *Proslogion* (including the responses to the objections raised by monk Gaunilo), and *De veritate*. First, attention is devoted to sense perception in God – whether God possesses this kind of knowledge and whether God can be said to have sensually perceivable characteristics. The subsequent parts examine sense perception in the context of human knowledge on two levels: 1. human sensory knowledge and its role in understanding God (i.e., whether the senses are useful in any way in the struggle to find God) and 2. sensory knowledge and its truthfulness (including sensory illusions). Lastly, an attempt is made to explain why Anselm paid such little attention to sensory perception, even though it seems, according to the analysed texts, that the senses played an important and irreplaceable role in his noetic endeavour.

Keywords: Anselm of Canterbury, senses, truth, God

Perceptual Judgement in Late Medieval Perspectivist Psychology¹

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1. Introduction

Among the many issues of contention in contemporary debates on the philosophy of the mind and epistemology is the question of whether perception is permeated or penetrated by cognition, that is to say, whether the way we perceive the world is determined by the way we take (or expect or desire) the world to be. As a result, it has become a matter of increasing interest whether we can find historical antecedents to this debate, even if qualified by necessarily different conceptual frameworks. Scholars have noted in particular the influence of one particular author, Alhacen (al-Haytham, 965–1040), and his treatise on optics called in Latin *De aspectibus*, which initiated the tradition of geometrical optics.² In what follows I wish to examine his contribution and the contribution of (a selection) of later *perspectivi* on the role of perceptual judgements in visual perception, and argue that we find in this tradition of geometrical optics the same wavering between taking high level perceptual tasks as falling within a sensory level or module (and thus encapsulated

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- 1 I have greatly benefited from comments and suggestions concerning versions of this paper from audiences in Tours (France), Lecce (Italy), Ostrava (Czech Republic), Helsinki (Finland), Dublin (Ireland), and Glasgow (Scotland). The author would like to acknowledge the funding from the European Research Council under the ERC grant agreement n. 637747 for the project *Rationality in Perception: Transformations of Mind and Cognition 1250–1550*. Many thanks also to the editors of this journal, as well as to the two anonymous referees for their useful comments.
 - 2 The most important literature on the topic includes Sabra, A. I., *Sensation and Inference in Alhacen's Theory of Visual Perception*. In: Machamer, P. K. – Turnbull, R. G., *Studies in Perception. Interrelations in the History of Philosophy and Science*. Columbus, Ohio State University Press 1978, pp. 160–185; Sabra, A. I., *The Optics of Ibn Al-Haytham. Books I–III: On Direct Vision*. London, Warburg Institute 1989 (2 vols.); Lindberg, D. C., *Theories of Vision. From Al-Kindi to Kepler*. Chicago, The University of Chicago Press 1976; Federici Vescovini, G., *Le Teorie della luce e della visione ottica dal IX al XV Secolo*. Perugia, Morlacchi Editore 2003; Smith, A. M., *From Sight to Light. The Passage from Ancient to Modern Optics*. Chicago, The University of Chicago Press 2005.

from cognitive influences) and the existence of high level cognitive effects on low level sensory operations. The aim of my paper is not to show the dependency of the contemporary debate on the medieval one, but rather to show the range of conceptual possibilities utilized when addressing the same sort of phenomena by historical sources. Although one can find in the literature detailed attempts to systematize the model and influence of perspectivist optics, some difficulties remain concerning the exact nature of this process, as has been recently noted:

As A. Mark Smith presents it [Alhacen's theory], the physical representation at the surface of the eye becomes the visual representation *in* the eye, which in turn becomes perceptual and finally conceptual in the ventricles of the brain. This process is a series of inferences or quasi-inferences, its precise status, and the degree of intellectual or conscious involvement in it, seems to me unclear.³

The aim of this paper is to help in clarifying this aspect of the theory. The difficulties arise mostly due to the fact that Alhacen has an instrumental approach to faculty psychology, in the sense that he is interested in providing an account of visual perception in terms of *functions and mechanisms*, rather than in terms of *faculties*. In that sense, he causes a problem to his medieval interpreters who operate (and try to understand him) under the framework of Avicennian faculty psychology.⁴ The focus of my paper is therefore more on clarifying the nature of the functions that make perceptual experience possible according to authors in this tradition and less on how this fits that Avicennian framework.⁵

According to the general model of perspectivist optics, there are many ways to talk about vision, but only one that is properly scientific. The operation of sight is liable to a description on the basis of the model of mathematics, of which the science of geometry is a species. Vision is explained on the basis of radiant lines flowing from each point of the object, which are endowed with causal and representative power of the thing from which they radiate. In what follows, I will not focus on the details of this geometrical

3 Ott, W., *Descartes, Malebranche, and the Crisis of Perception*. Cambridge, Cambridge University Press 2012, p. 28.

4 Tachau, K. H., *Vision and Certitude in the Age of Ockham: Optics, Epistemology and the Foundations of Semantics 1250–1345*. Leiden, Brill 1988, 9, makes exactly the same point.

5 To attempt this, as suggested by one of the referees, would be a completely different project, although this is already partially done in some of the literature on the topic (see footnote number 2 above).

model but rather take for granted that, whatever its precise form, it successfully provides an accurate account of how the eyes receive a point-to-point representation of the object seen. For Alhacen, this mode of transmission is not enough to explain how vision produces knowledge; instead, he claims that the result of a perfectly operating visual system needs to be *certified* or *certain* vision (*visus certificatus*), and for that to occur a more complex psychological picture needs to be presented.

2. Setting the stage

A primary concern of late medieval philosophy is how things are made available to perceivers in such a way that they are perceived in an accurate manner. Because things cannot be themselves immediately present to the senses, one needs to posit some form of representation that makes things available. Two issues follow from this: the first concerns the nature of these representations, in terms of their power to represent (what they represent), and the second their ontological status in the medium and in the senses, i.e., the kind of existence or being they have. Connected to this latter aspect, one must inquire what their causal role is, if any, *qua* material objects with respect to perceivers. The underlying assumption is that the way we perceive things and their properties in the world is related to the way these things are (metaphysically) constituted. That means that things are made available to us via a restricted range of properties to each sense modality, and that they must *click* – that is, there must be a correspondence between the kind of property, and its range of intensity, and the capacity to take in that property: too strong a light destroys the sense organ that is able to perceive light (or colour as the effect of light); too dim a light (or light at the wrong end of the spectrum) cannot be perceived.⁶ From this description it seems that a subject endowed with specific cognitive abilities becomes acquainted with certain objective features or properties of things that are causally efficacious with respect to her perceptual apparatus.

A question follows about whether this is sufficient to explain how we come to have an internal representation that corresponds with the external thing it represents. As we will see from the explanatory model under consideration, that is not the case; rather, what a perceptual representation succeeds in representing depends on what powers are involved in the

6 See, e.g., Blasius of Parma, *Quaestiones super Perspectiva Communi*. Ed. G. F. Vescovini – J. Biard. Paris, Librairie Philosophique J. Vrin 2009, p. 217: “Hanc conclusionem probavit unum argumentum de visione respectu cuius visibile erat quodammodo disproportionatum organo, sicut est lucidum intense et intense album.”

processing of the incoming sensory information. That is to say, if one holds an account of perception that involves the active production of representations of external things, is it possible to keep a modular view of the human soul in place to the extent that is often assumed to be the case? The answer to that question very much depends on the nature of those processing powers.

The question here is that philosophy is only foundational to the extent that it is able to provide an account of the acquisition of knowledge that survives the test of counter-examples, such as those related to sensory illusion in the case of sense perception. Although this is not the focus of the present text, it is found in the texts of the authors under examination; for instance, the third book of Alhacen's *De aspectibus* is devoted to explaining the different kinds of errors that occur in the different types of visual perception, which allows him to reflect on the objects proper to each modality as well as on the conditions that must be met for perception to take place. As a result, some late medieval authors seem to have become aware of the limitations of an account of cognition that allow us, as finite beings, to build accurate representations of the external world and its objects on the basis of (the processing of) incoming sensory information by our sensory faculties. And the problem seems not to be, as they tend to identify it, in the incoming information, but rather in the strictures of faculty psychology to cope with what is required of them: to build a complex representation from very sketchy and partial objects proper to each sense modality. Perspectivist optics tries to address these concerns by strengthening the process of producing and certifying the final product, the image of the external thing acquired by visual perception, by rational-like processes – namely by judgment and inference.⁷

3. Alhacen (c. 965–1040)

Elements of these two aspects under which perception and perceptual processes came to be understood in the medieval period are best represented by Alhacen, who claims that for any instance of direct visual perception to take place certain conditions must be met:⁸

7 It is interesting to note that even in a key work on medieval epistemology, such as Tachau, *Vision and Certitude*, that inference appears only twice associated with sensation, once about Roger Bacon and once about William of Ockham.

8 Alhacen, *De aspectibus*. In: *Alhacen's Theory of Visual Perception*. Ed. and transl. A. Mark Smith. Philadelphia, American Philosophical Society 2001, III.3; see also II.4.6. On these requirements or conditions (as well as on Alhacen's theory of visual perception) see Lindberg, D. C., *Alhazen's Theory of Vision and Its Reception in the West, Isis* 58, 1967, No. 3, pp. 321–341.

1. The medium between object and sense must be continuously transparent and there must be light
2. The object must be opaque (i.e., solid)
3. The object must be of an appropriate (/sufficient) size
4. The object must be at a distance and facing (*oppositus*) the organ of sight
5. The forms of light and colour are issued forth from every point of the visible thing in all directions (colour as the result of the action of light)⁹
6. These forms propagate through the medium by imaginary radiated straight lines
7. These light rays must reach towards the centre of the eye and be perpendicular (*perpendiculares*) to the surface of the eye – only such a ray that is received at a right angle is further processed, whilst all others rays (*lineas declinantes*) are dismissed (refracted, thus weakened, and thus not “appropriately” detected by the automated processing mechanism); they contribute to the final image only in an indirect way.¹⁰
8. Any ray coming from a point on the object is received at one point on the surface of the eye only – so that there is a one-to-one correspondence between one point on the object’s surface and one point on the eye’s surface (II.3.47; III.7.13). At the same time, this allows for different things that are present at the same time in the visual field to be properly distinguished.

In this model of the transmission of visual rays, “vision occurs through a[n imaginary] pyramidal

figure with its base on the visible object, apex in the eye, and an axis running through the centre” (e.g., I.6.28). The visual information of these patterns of light and colour are transmitted to the

9 Alhacen, *De aspectibus*, I.6.12. Alhacen defends an intra-mission theory of visual perception, that is to say that the rays come to the eyes from the object; he argues at length against the extra-mission theories of vision (according to which visual rays issue from the eyes) in *De aspectibus*, I.6.51–58. Thank you to one of the anonymous referees for insisting that I make this point clearer.

10 “Et erit ista forma perveniens ad istam partem glacialis ordinata in ea secundum lineas super quas pervenit ad ipsam que sunt perpendiculares ad ipsam et concurrentes apud centrum visus sicut ordinatio partium superficiei rei vise”, Alhacen, *De aspectibus*, I.6.29. See also I.6.55–56, where he argues against the extramission theory of vision (i.e., the view according to which rays are issued from the eye to the visible object).

faculty designated as the “last sensor” or the “ultimate sentient power” (*ultimum sentiens*, I.6.75; II.2.4).

This mode of transmission of colour (and light) in non-intermingling straight lines, and the punctiform analysis of vision it supports, is not however a sufficient account of perception. Instead, Alhacen insists that the perception of an external thing – the form of a visible object – must include the discrimination of twenty further visual intentions (II.3.44): distance, spatial disposition, corporeity, shape, size, continuity, discontinuity, number, motion, rest, transparency, opacity, darkness, roughness, smoothness, shadow, beauty, ugliness, similarity, and difference, in addition to the above-mentioned light and colour. There are actually more, but those, he claims, can be subsumed under one of these twenty-two: think of an arrangement (of parts), which falls under spatial disposition; or weeping, which requires shape (of a face) and motion (of the tears). From this list one should conclude, as pointed out by A. I. Sabra (“Sensation and Inference”, 169) and Mark Smith (*Alhacen’s Theory of Visual Perception*, lxxxvii), that the form of the visible thing comprehends the two levels of explanation; that is, it includes not only the thing’s sensible properties like colour or light, but also properties or *intentiones* such as belonging to a kind (e.g., II.4.2). In a later remark, Alhacen points out that the form reaching the eye possesses all these kinds of properties, but that the processing of the different kinds takes place in different levels of the system (II.3.26) – not only different powers but powers of a different *kind*.

Whereas light and colour are received and processed by the visual power, the processing of these intentions requires the postulation of further cognitive powers. Perception in this fuller sense entails the capacity to compare forms to one another and to arrive at a judgement on that comparison together “with the sensation of the form that is seen” (II.3.16). In one clarifying example, Alhacen notes our capacity to perceive not only two individuals, but also *that two individuals are similar*. But the perception of “the similarity of the two individuals on the basis of the similarity of the two forms reaching from the form [of each of those individuals] to the eye” (II.3.3, p. 429) cannot be accomplished by sight *on its own*. Furthermore, we are also able to perceive the difference between two individual things, for example in the case of two shades of green (II.3.8). Now, similarity (or difference) is not a property of either of the things, but supervenes as it were in them – in the agreement (or disagreement) in some respects between the two: the “differentiation between two greens is not the actual sensation of green” (II.3.9, p. 430). But this is still perception by sight; or, better, it is a case of seeing (“it occurs in sight”) while not being “the sensation

of colour”.¹¹ For this extra element or level, we need to bring in a different cognitive power that takes this similarity (or difference) that supervenes as it were on colour, rather than colour itself, as its object. Moreover, this “supervening” is not something unique about colour, but can be ascribed to any visual property (II.3.12). In the case of transparency (*diafonitas*), this visual property can only be perceived by comparison (*per comparationem*) and discrimination (*per distinctionem*). According to Alhacen, such an operation is accomplished by what he calls the power of discrimination, the *virtus distinctiva* (II.3.17). The important and original claim is that any instance of visual experience consists of both the perception of the form that is seen and the further act of discrimination, which is the perceptual judgement (II.3.16), e.g., of comparison. A basic distinction is then at play between:

- (i) perception at first sight (*comprehensio solo sensu*)
- (ii) perception by judgment (*comprehensio per distinctionem/cognitionem/scientiam*, II.3.14)

The distinction is between the perception of something based only on its immediate properties – colour and light in the case of vision, and on other visual properties that constitute the object perceived,¹² for instance intensity. According to the psycho-physiological account Alhacen presents later in the work (e.g., II.3.46), the sensitive power (*virtus sensitiva*) senses the sensible form everywhere in the body of the visual spirit, spread from the surface of the eyes to the common nerve where the final sensor (*ultimum sentiens*) is located. When that *ultimum sentiens* senses the sensible form, the power of discrimination or discriminative faculty (*virtus distinctiva*) discerns the visual properties that are in it (*intentiones que sunt in forma*). Although often these two powers – sensitive and discriminative – operate in tandem, it seems to me that they are distinct in being; thus, the operation of differentiation belongs to the power of discrimination only.¹³ For instance, whereas

11 He is clear that “sight perceives similarity”, II.3.4, 430. It requires comparison, meaning that it cannot be a simple brute sensation, but it is still sight operating in cooperation with the distinctive power. On Alhacen’s theory, see Smith, A. M., What is the History of Medieval Optics Really About? *Proceedings of the American Philosophical Society*, 148, 2004, No. 2, pp. 180–194; Smith, A. M., Getting the Big Picture in Perspectivist Optics, *Isis*, 72, 1981, pp. 568–589; Smith, A. M., *From Sight to Light. The Passage from Ancient to Modern Optics*, op. cit.

12 “...an evaluation of all the characteristics of a form”, II.3.22, 432.

13 “Distinctio autem non est nisi virtutis distinctivae, non sensitivae”, II.3.48, 114. According to Smith (op. cit. note 42, p. 538): “The *virtus distinctiva* (‘faculty of discrimination’) does not represent a discrete faculty as, for instance, does the imagination. Rather, it designates a peculiar capacity possessed by the final sensor. As such, it serves as an active complement to the more passive sensitive faculty (*virtus sensitiva*).” For him, discrimination is a function of the final sensor, which is a sense faculty. I wonder if this is right, especially in face of the passage just quoted.

the sense perceives light and colour together, the power of discrimination perceives that the colour of the object, which is constant, is distinct from the light that shines upon it, which varies (II.3.48; see more on this below).

There is another function of the faculty of discrimination that resonates to a contemporary mind: it can recognize the perceived object without having to go through all its characteristics, provided it has previously encountered that thing (II.3.18). This means that sight is able to check any incoming sensory information against previously attained knowledge in order to identify the thing seen while it is seen. Alhacen therefore introduces yet another level:¹⁴

(iii) perception by means of reasoning (*comprehensio per argumentationem/sillogismum*)

According to this last type, perception in the robust sense, i.e., as the perception of all properties/*intentiones* constituting the sensible form, must include what has often been called (unconscious) sensory inference, because the perception of some of those properties is dependent on previously acquired knowledge and presupposes a process akin to reasoning (III.4.2): the immediate grasping of a conclusion that follows from the premises without knowing the relation of entailment between premises and conclusion.¹⁵ Alhacen notes that, even though structurally it operates in a quasi-

Smith refers however to a different passage: II.3.46; it seems to me that Alhacen does here is to use 'virtute' to characterize the sensitive power, the *ultimum sentiens*, and the power of discrimination. Perhaps my reading is influenced by an Aristotelian framework in which a power is defined by having a proper operation and proper objects. This is certainly the case with the power of discrimination: the objects are the *intentiones* or visual properties and the operations are to distinguish, to recognize, to categorize, to identify, to produce perceptual judgments. In II.3.47, it seems that Alhacen is stating the principle of division of labour between the two sensory powers: the sensitive power senses light and colour, whereas the power of discrimination discriminates all the other visual properties or intentions. If this reading were right, visual perception is the joint effort of these two complementary powers. Having said this, I do not claim that the text allows for a *definite* choice between these two readings. To make matters worse, at one point Alhacen states (II.4.2) that the power distinguishing between the different properties (intentions) that constitute the sensible form is the imagination.

14 II.3.25, 433; III.4.1: only as the result of the effort of the three types of perception are the totality of all visual intentions perceived. The “/” in the (Latin) designation of the types of perception is intended to cover the different terms that Alhacen uses in different parts of the work, not always consistently.

15 It is important to note that the two first modes of perception are cumulative, that is to say, perception by means of recognition depends on perception by judgment, but not all cases of perception by judgment entail perception by means of recognition. If the object is not familiar to us, it is “perceived only after a scrutiny of all the characteristics” it possesses (II.3.22, 432). (Alhacen makes this point even clearer when dealing with perceptual error: he notes that there can be perceptual errors of inference with regard to all twenty-two sensibles: III.7.1.) If the ob-

rational way, such perception does not qualify as cognition in the full rational sense, because it is not linguistic (it does not make use of words, II.3.27-31).

Once the form of the object is acquired, this form is stored in the power of imagination, for future use.¹⁶ With repeated encounters with numerous individuals of the same kind, the soul builds a general representation, for instance of a human being, but this form does not have the kind of properties a proper universal concept would have.¹⁷ Interestingly, Alhacen does not conceive of memories as single wholes, in isolation, but rather as networks of associated memories: when remembering a person, one remembers also his/her face, the place of the encounter, etc. (II.4.12). Once it possesses these forms in its imagination and encounters similar instances of the same kind, or the same individual, the soul performs what Alhacen calls the second type of perceptual intuition, which is perceptual intuition with previous knowledge (II.4.18). In these cases, Alhacen describes how cognition or perception takes place when the form which is being perceived is compared with the form which is stored in the imagination,¹⁸ namely to its similarity to a general or an individual form already acquired. If it “fits”/corresponds to the universal form, the cognitive power of discrimination identifies the kind to which the individual now perceived belongs, whereas if it bears correspondence with an individual form, it recognizes the individual thing. (Of course, the recognition of the kind is prior to the recognition of the particular form, so the former always takes place in the perception of the latter, but not vice-versa, II.4.19.) But the process is often swifter, because the power of discrimination is able to recognize an individual or a kind on the basis of distinctive or salient features (*per signa*), i.e., properties such as a flat nose or having the shape of a human being (an upright position), that are to some extent proper to that individual or that kind (II.4.21).

It is through this type of perception that one perceives what kind of thing the thing perceived is (e.g., a human being), in which it resembles a form

ject is familiar, we quickly identify it by virtue of its most defining features (II.3.23–4, 432–433). On the role of inference, see Hatfield, G., *Perception and Cognition. Essays in the Philosophy of Psychology*. Oxford, Clarendon Press 2009, ch. 4.

16 II.4.11–12. See also II.3.48, where Alhacen states that any sensible property perceived by the power of discrimination “becomes ensconced in the soul”, available for future use.

17 *De aspectibus* II.4.12. It remains a possibility that this view influenced Roger Bacon (see below) in his account of induction. On this, see Antolic-Pier, P. A., Roger Bacon on Experiment, Induction and Intellect. In: *Interpreting Aristotle’s Posterior Analytics in Late Antiquity and Beyond*. Eds. F. A. J. De Haas et al. Leiden, Brill 2011, pp. 73–97, especially pp. 94–95. In a sense, this would strengthen the claim for the sensory (rather than strictly rational) nature of the process.

18 “...ex comprehensione assimilationis forme rei vise alicui formarum quiescentium in anima fixarum in ymaginatione”, II.4.17, 226–227.

of abstraction (II.3.21). Moreover, it is also in this way that one perceives (as in recognizing) individuals (e.g., as Socrates):

sight includes many things seen by cognition, and cognizes a man as a man and a horse as a horse and Socrates as Socrates (II.3.10)

Recognition operates just like other cases of perceptual judgment, but in this case the terms of the judgment are not simultaneously perceived forms of things but one incoming form and one existing in memory. Let us take the simple case of colour. When I perceive for the first time the colour “red”, I simply perceive it as a colour and compare it with the other colours I know from experience that resemble it (II.3.55); when afterwards I perceive “red” again, that is after I have acquired the capacity to recognize it, I perceive it immediately as being “the colour red” (II.3.49). In other words, before one knows what a thing (“red”) is, one perceives the difference between that thing and other things, i.e., the difference between “red” and “blue”; once the knowledge of “red” has been acquired, one begins to immediately see “red” (*quod est color*, insofar as it is colour, an instance of perception at first sight) followed by the recognition of “red” as the kind of colour it is (*cuiusmodi sit color* or the quiddity of the colour red) – as the perception of red precedes the perception of what kind of colour it is (II.3.53). In II.3.23, Alhacen gives another example, that of perceiving a word, “Lord/Master” (DOMINUS): if one knows the word from having seen it before, one does not have to differentiate between its composing letters, but rather is able to perceive it as a whole and immediately.¹⁹

All this is done in an amazingly short time, especially in the case of perception at first sight (II.3.62). In the case of perception by judgement and reasoning, which are slower than perception at first sight, the process is faster if the objects are familiar (“frequently perceived”, II.3.30; II.3.41) to the perceiver. In this case, the perceiver has a form retained in his/her memory to which it has access, and that can be applied to the identification of the thing present to the senses, rather than having to go through the process of discriminating all the intentions that constitute the object’s sensible form. As Alhacen makes clear, this is possible due to the way these properties are made available and the “familiarity” of the power of discrimination with them.²⁰ But this comes at a cost, as it means that it can make

¹⁹ On this reading, see Smith, A. M., *From Sight to Light. The Passage from Ancient to Modern Optics*, op. cit., pp. 191–192. See also Sabra, A. I., *Sensation and Inference in Alhacen’s Theory of Visual Perception*, op. cit., p. 175–176. The example is intended to illustrate the perception of the letters/word as a visual object(s), not the grasping of its meaning.

²⁰ “per consuetudinem virtutis distinctivae ad istas intentiones”, II.3.26.

mistakes, as recognition is a step removed from the actual seeing of the visual form, and is dependent on a complex combinatory process (III.6). Perception of a kind takes less time to be effected than perception of an individual, but it is also less determinate: the general form is enough to perceive the thing by perceiving the forms that are proper to that kind, but not those that are proper to the individual alone (III.4.23).

In II.3.29-30, he explains this difference in terms of the perceptual nature of the process, that is, as being about the visual properties of things – or properties of things that are made available via visual experience. He then connects this with the immediate grasping that takes place when the soul is in contact with evident premises (II.3.31), such as first principles. But in II.3.35 Alhacen goes one step further, and explains that when the intellect has gone through a certain syllogism of universal premises a number of times, its conclusion gets certified and thus becomes evident. From that moment onwards, if I understand him correctly, this can be used by the power of discrimination to adjudicate the perceptual input without having to undergo the reasoning process itself. It is not only that it possesses the premise for its use, but that it naturally operates under the assumption of the truth of the premise. This is somewhat similar to the way universals in the soul are there ready to be used when encountering things via sense experience, but their process of discovery remains hidden from a current perceptual experience.²¹

There seems to be a division of labour and fair use of resources in that the power of discrimination makes use of what it takes from the intellect as evident premises, which constitutes the basis for its perceptual judgment. If this reading is right, the suggestion then is that we are able to perceive and judge that something is such and so without having access to what justifies it being so. The perceptual system – senses plus power of discrimination – receives incoming sensory information that is processed on the basis of some existing knowledge, the truth of which is secured by a higher cognitive power. One example of this is how the soul is able to perceive the colour of an object it now sees as distinct from the light that at different moments shines on it; this is possible because the power of discrimination judges the coloured object on the assumption (i.e., on the basis of background knowledge) that “the light in every form that is a mixture of light and colour is distinct from the colour in that form” (II.3.48). That is not to say that the soul does not have in an absolute sense access to such knowledge – “how it perceives what it perceives” (II.3.37) – but simply that this is a time

21 II.3.42. See Sabra, A. I., *Sensation and Inference in Alhacen's Theory of Visual Perception*, op. cit., pp. 174–175, who emphasizes the empirical and sensory character of this universal form.

consuming and resource intensive process (of which we are aware when it is difficult)²² that it is not required for normal instances of perception (otherwise, if it were so required it would slow down visual processing).

Maybe this last sentence has too much of a contemporary undertone to it that does not make sense to the medieval source; instead, it would be more accurate to say that a sensory power is not able to process that sort of conceptual resources, despite its operations being functionally defined by them. That this is the case seems apparent from the example Alhacen provides in II.3.38, of the child to whom a choice between two apples is given. Although the child is able to compare the forms of the two objects and opt for one of them, the most beautiful (*pulcrius*), the child uses the premises “the most beautiful is the better one” and “the better is more worthy of being chosen” without being aware that it is using them, as Alhacen explicitly remarks.²³ But to not know that one is using it in the description of the action does not mean that the premise had no role to play in the decision itself; on the contrary, the premise is what explains that the child decided the way it did. It seems clear, at least in the case of (adult) human beings, that one can have access, upon reflection, to such a premise and its use, which means also to the process by means of which its truth is asserted. It is clear that this power of discrimination has a sensitive nature, rather than a rational one, even though it has rational-like operations. I therefore side with Sabra (“Sensation and Inference”, 182, n. 34) against other interpreters, such as Mark Smith and, as we shall see below, Roger Bacon, who take Alhacen to be attributing the power of discrimination to reason.

But there is another aspect of what is accessible to the system, which is about what the system needs to have available, as coming from the external world. Earlier in this paper, I noted a basic distinction between the form of the visible thing as constituted by a number of properties and intentions. In chapter 4, Alhacen points out that what determines which of these properties needs to be processed depends on the level of attunement of the system to a certain thing; if a thing is well-known by the perceiver, some salient properties are enough for its identification and recognition. If, however, that is not the case, and the thing is unknown, the perceptual system – sensory

22 “Quando vero non utitur difficultate et cognitione, non percipit quod arguit”, II.3.38, 108.

23 See also II.3.42, 438: “Comprehenduntur ergo iste intentiones sine aliqua argumentatione iteranda quam primo fecit, et sine ratione per quam comprehensa fuit veritas illius intentionis, et sine comprehensione qualitatis comprehensionis ipsius apud comprehensionem, et sine comprehensione qualitatis cognitionis apud comprehensionem”. This interpretation would explain why Bacon, as a careful reader of Alhacen despite having his own agenda, talks of the rational soul using the cogitative power (which Bacon identifies with the discriminative power) “as its own special instrument”, *Perspectiva* (for full reference, see below), pars 5, dist. 1, cap. 4.

power plus last sensor plus power of discrimination – must act on the entire spectrum of sensory information in order to unveil all of its intentions or sensible properties. Alhacen calls this perceptual intuition (*per intuitionem*) or “visual scrutiny” (II.4.2-3). Perceptual intuition is therefore the perception of the form of the visible thing with all its properties that includes discrimination and inference. In order to do so, i.e., to get a better hold of the object, the sensitive power will move the organ of sense to see the object from other viewpoints (II.4.7-8). This scanning process is automatically initiated as the result of the way the visual system is built (*natus est visus*). As Alhacen remarkably notes:

The eye, moreover, is naturally disposed to scan [objects for the sake of] visual scrutiny and to cause the visual axis to pass over all parts of the visible object. Thus, when the faculty of discrimination seeks to scrutinize the visible object, the visual axis will move over all parts of the object (II.4.8, 514).

As the object is best seen standing directly opposite the perceiver, and the part of the object that “virtually extends its ray” to the centre of the eye is better seen, the power of discrimination aiming to collect all the properties goes hand in hand with the eyes’ natural disposition to scan the different parts of the object, to collect precisely those aspects or viewpoints or perspectives.²⁴ The natural disposition of sight to visually scan the object for a complete scrutiny – *ad motum intuitionis* – means that this action is determined by how the visual system operates so as to naturally accommodate the inevitable perspectival nature of individual visual experience. I do not think one should make too much of this, but equally one should not make too little. The actions of looking at different sides of the perceived object are thus determined by how the visual system is wired and the (background) information available to the power of discrimination. It is not the case that *I desire to see the object from a different perspective*, but that *the presence of the object in my visual range*, to which I am paying attention, *requires my action* if I am to become fully acquainted with it.

The final aspect I would like to focus on is the perception of distance, one of the twenty-two visual intentions. According to Alhacen, distance cannot be accounted for by perception at first sight only; instead, the visual system proceeds (automatically) by noting (i) that there is an effect in the sense organ (eyes) that is caused by something external; next, (ii) that

²⁴ II.4.7–10. On this fine point, see Sabra, A. I., *Sensation and Inference in Alhacen’s Theory of Visual Perception*, op. cit., pp. 170–171.

something causing an effect in the eye is not (/cannot be) placed directly on the eye; finally, (iii) the faculty of discrimination perceives that there is a distance between the thing and the eye. Alhacen notes that there is a difference between perceiving *that* there is a distance and perceiving *the magnitude* of that distance (II.3.74). If it is the case that there is a continuous ordered series of objects in the visual field, the discriminative power is able to perceive the size of the objects, the magnitude of the distance between the objects, and between the objects and the eye. But this is possible only if the discriminative power already knows the size of (at least) one of the objects currently present in the visual field, which it can use as its measure (II.3.81). Perception of distance is therefore an illustrative example of how background knowledge and inferential mechanisms are essential to current episodes of visual perception.

It is worth remarking, by way of a conclusion for this section of the paper, that in a sense this model constitutes a departure from traditional accounts of perception, because it does not make perception depend only on incoming information, even though it goes to great lengths in describing how exactly this information is made available. In the words of Sabra:

Seeing an object is not the result of a mere imprinting on the mind (brain) of a form emanating from the object. It is an inference from the material received from the object as sensation (“Sensation and Inference”, 174).

For Alhacen, to judge that *x* (standing for the object of the visual experience) is *y* (standing for a sensible property) is part of what it is to be perceptually aware of *x*. To get acquainted with an object on the basis of its sensible form is to be acquainted with those properties that constitute it, some of which we perceive by the sense of sight alone, others by means of perceptual judgement and others still by means of reasoning-*like* and inferential processes. But they are all perceptions broadly conceived, meaning that they result from the operations of a sensory rather than a rational power. Finally, this allows also for a conclusion concerning the active nature of the perceptual process (II.3.71): if it were passive, it would simply be perception at first sight, just receiving the impressions of light and colour. As we can conclude from Alhacen’s arguments, it is not. Perception of the object’s visual form (the assemblage of its properties or intentions) is the result of complex and complementary levels of psychological functions, including discrimination, recognition, and inference.

Next, I will examine whether this model is found in later authors. What I want to emphasize is how this shows the early recognition of this model

by some authors, which one needs as a complement to the general account of how, from the perception of accidental features of things such as those that are the objects of the proper senses, we come to provide an account of how particular objects, as the individuals they are and as belonging to a kind, are cognized. In case the object is known in advance by the perceiver, the content of the visual experience is not fully determined by what is received from the object. By focusing on the familiarity of objects to the perceiver, i.e., the background knowledge perceivers have of the world, Alhacen and authors of his perspectivist model of perception note that something very important was missing from other models of perception: despite being able to build an internal but accurate image of the object present to the senses, I am aware of nothing if I am not aware of *how that object relates to me*. As often is the case with tracing the evolution of historical ideas, the developments are neither linear nor continuous.

4. Roger Bacon (1214–1292)

Alhacen's theory was further developed by Roger Bacon. Bacon's contribution to medieval theories of cognition cannot be overestimated, despite the lack of in-depth studies.²⁵ I would, however, in this section like to concentrate on two aspects of his theory that directly concern the focus of this paper: what the species represent, and the contribution of the internal processing faculties to the causal nature of the species.

In a definition that would impact the late medieval philosophy of perception, Bacon takes species to be the first effect of any naturally acting thing.²⁶ In other words, that is what things in the world do: they generate species. A species is a power or force (*virtus*) that elicits an action and that action is cognitive in the case that the recipient is a cognitive subject; but as an effect it lacks in being with respect to the generating thing:²⁷

25 The best study continues to be Tachau, K. H., *Vision and Certitude in the Age of Ockham: Optics, Epistemology and the Foundations of Semantics 1250–1345*, op. cit., pp. 3–26; see also Smith, A. M., *From Sight to Light. The Passage from Ancient to Modern Optics*, op. cit., ch. 6. However, these studies examine Bacon's view as part of a bigger project; it is significant that, to my knowledge, there isn't a single book-length study of Bacon's theory of perception and cognition.

26 "Species autem non sumitur hic pro quinto universali apud Porphyrium, sed transmittitur hoc nomen ad designandum primum effectum cuiuslibet agentis naturaliter", Roger Bacon, *De multiplicatione specierum*. In: *Roger Bacon's Philosophy of Nature*. Ed. and trans. D. C. Lindberg. Oxford, Clarendon Press 1983 (hereafter, Dms) I.1, p. 2.

27 This is why some call it "intention", precisely to denote its weak being and its nature of likeness rather than real thing: "Intentio vocatur in usu vulgi naturalium propter debilitatem sui esse respectu rei, dicentis quod non est vere res sed magis intentio rei, id est similitudo", Dms I.1, p. 4.

colour, odour, flavour, and the like cannot exist in air and simple bodies according to complete being, but according to incomplete being (Dms I.1, p. 17).

Species are of the same specific nature, but their being is (exceedingly) incomplete, which means that they represent but are not things like those which generated them; they exist in something else, first of all in the corporeal medium (Dms III.1, p. 180). Species do not have the power to change the specific nature of the receiver – if of a perceptive kind – into a thing of the nature the species represents, except in the cognitive sense of becoming like or being assimilated to (Dms I.1, p. 12). In such a being, this effect does not cause a change that is destructive to the receiving senses, because species are received according to the Aristotelian *dictum* in the manner of the recipient, and what characterizes the senses is their potentiality to perceive (Dms III.2, p. 188). An essential part of this account is to argue that it is not one and the same species moving throughout the medium, but rather that:

the active substance of the agent [touches] the substance of the recipient without intermediary [and alters], by its active [power], the first part of the recipient it touches.²⁸

In other words, this is not a case of the local motion of one and the same species throughout the medium, but rather a case of the agent generating the species by bringing forth an effect out of the active potentiality of the matter of the recipient: “a continuous generation of a new thing” (III.1, p. 183). Notwithstanding the potentiality-actualizing nature of this successive multiplication,²⁹ Bacon emphasizes the connection between the causal and representational nature of the species, whose role is, by being received into the senses, to present that which it is the representation of. In order to do so, he says, the species must be a likeness of the generating thing that

28 *De multiplicatione specierum* I.3, 53. On the same point, see also Roger Bacon, *Perspectiva*. In: *Roger Bacon and the Origins of Perspectiva in the Middle Ages*. Ed. and trans. D. C. Lindberg. Oxford, Clarendon Press 1996 (hereafter *Perspectiva*) pars I, dist. 9, cap. 4, p. 141.

29 A “virtually infinite multiplication of species in radiant fashion”, as he calls it (Dms II.1, p. 91). From the point of first contact between agent and recipient, the species are diffused in all directions; and this happens in all points of the whole surface of the agent (II.9, p. 165). The linear and radiant nature of this multiplication follows the same explanatory principles described by Alhacen. Contrary to Alhacen, Bacon thinks that species are issued also by the visual power, that is, that there is extramission in addition to intramission. These species play the role of preparing and assisting the medium in the reception of the species (from the object) and help them to be received by the sense. On this, see *Perspectiva*, pars I, dist. 7, cap. 2–4.

agrees with it in definition and nature.³⁰ In other words, the species of colour is colour.³¹ On the other hand, the sense organ – in this case the eye – need not have a nature similar to the species (of colour) it receives (see Dms I.1, p. 10; *Perspectiva* I.10.2, p. 150).

Things in the world show great power, one is led to conclude, but Bacon must cope with an evident problem, which is the need to accommodate the representational and causal power of the species with their origin from a created thing with a limited power. As we just saw, Bacon does this by claiming that species have a weaker form of being than the hylemorphic substances they purport to represent. As a result, species as natural effects lose some of their causal force over distance, thus explaining the experiential evidence that objects very far from the perceiver are seen in a more faded manner. To argue otherwise would be to claim that an effect would be superior to its cause, a finite material thing with limited acting power.³² Therefore, Bacon strongly argues against those of his contemporaries who maintain that:

species have spiritual existence in the medium and in the senses. And they impute this opinion to Aristotle and to Averroes in [their respective] *Books on the Soul*, book 2. And since, [according to them,] species have spiritual rather than material being, species do not obey the laws of material forms (...) This is a very serious error, for it contains many elements that are false and absurd.³³

If the species are of the same nature as the generating thing, species of corporeal things must be corporeal;³⁴ in other words, they are corporeal forms that do not have dimensions of their own but of the subject in

30 “species sit similis agenti et generanti eam in essentia et diffinitione (...) Propter quod oportet ponere quod virtus seu species facta ab agente sit consimilis agenti natura et diffinitione et in essentia specifica et operatione”, Dms I.1, p. 6; see also *Perspectiva* I.6.3, p. 80: “species est eiusdem nature cuius est agens eam. (...) Ergo relinquitur quod species albedinis, que est eius similitudo, erit individuum in specie albedinis praedicamentali.”

31 “Quapropter species coloris est color, et species lucis est lux, et sic de omnibus”, Dms I.1, p. 10.

32 See, e.g., Dms III.2, p. 190: “Item propter nobilitatem generantis respectu generati, sequeretur quod aliquid *corporale* daret esse spirituale specie; sed non potest hoc dici”, reading “spiritual” for “corporale” as in manuscript O (see the critical apparatus).

33 *Perspectiva* I.6.3, p. 83. See also the extensive analysis in Dms III.2. Here he identifies this reading as being based on a “faulty translation of the works of Averroes, Avicenna, and Aristotle” (III.2, p. 193).

34 “quare oportet quod esse specie sit *corporale*”, Dms III.2, p. 190. See also *Perspectiva* I.6.3, p. 82: “Dico igitur quod species habent esse materiale et naturale in medio et in sensu”. See further arguments against the immateriality of species in *Perspectiva* I.6.4. Bacon notes that he uses *corporale* and *materiale* interchangeably.

which they come to inhere (Dms III.1, p. 184; P I.9.4, p. 140). For Bacon, it is certainly not the case that species have a spiritual (in the sense of immaterial) mode of existence; by “spiritual” Aristotle and Averroes simply mean not visible or insensible, as what is really spiritual cannot be known via the senses.³⁵ The spirituality of the species would not explain how we are able to perceive different parts of objects as distinct and to perceive accurately different colours of the same object or objects of different colours (Dms III.3); what explains this is the way these species are received and the information processed by the perceptual powers. But having solved one problem, Bacon still needs to address a major difficulty in his account (as in any theory of perception that makes use of representational devices), that is, how do species represent? Namely, how do they represent accidental features of things, but are also the basis for universal knowledge via the intellectual process of abstraction?

Bacon answers this by arguing for the species’ power in representing both the substance and the accidental features of the generating individual thing. But what does Bacon mean by the assertion that aspects such as the substantial nature of a thing are among the *sensible* properties of things? Bacon starts by reminding the reader that (i) all things have one defining or determining form that explains what the thing is and that applies both to homogeneous or heterogeneous things (that is, things that are constituted by parts of the same nature or of a different nature); in addition, that (ii) things can have different accidental forms (such as sensible qualities) inhering in different parts, and they will figure in the description of the thing because each point issues forth a representation of itself.³⁶ Therefore, everything that is able to act acts on its surrounding matter, generating species out of the potentiality of that matter which represent its nature (e.g., lucid) and a property (e.g., red),³⁷ whether this nature is the same in the whole object or different (see, e.g., II.9, p. 164). According to Bacon, then, both the substance and accidents of an individual thing issue species, and the relation between these two aspects of species should be understood in the same terms as between substance and accidents in the extra-mental world, that is:

as substance is to accident, so is the species of substance to the species of accident. Therefore, just as there can be no accident without substance, so there can be no species of accident without the species of substance (Dms I.2, 25).

35 Dms III.2, p. 192; P I.6.4, p. 88. See footnote 30 above.

36 Dms II.9, ed. Lindberg, p. 165.

37 Cf. *Perspectiva* I.1.4, p. 12–14.

The point is that one cannot receive the species of a sensible quality that inheres in a given substance without also receiving the species of the substance that the quality qualifies. For instance, in Bacon's own example the substance of fire is issued together with heat.³⁸ Bacon makes it clear that the species of substance does not represent only the form, but the composite. Therefore, the unpacking of the species of a corporeal substance leads to the cognition of the whole generating composite, not only the form. The matter represented in the species of the composite is not the matter that is proper to that particular, but that is proper to the kind of thing that particular instantiates; in other words, the specific matter that enters into the definition of the thing (Dms I.2, pp. 28–32). As the species represent both substance *and* accidental features of the object, all that is required is for the perceiver to be endowed with the kind of cognitive abilities that are able to process the incoming stimuli in a way that respects their relation in the object. An important point to make is that these are described as sensory or sensory-based modes of cognition, although this does not mean that these are equally sensed by the external senses or even the common sense (I.2, p. 24).

The way to proceed is to claim that these two aspects are not received and processed by the same cognitive powers. Quite the opposite, in fact: whereas the sensible quality – say, “redness” – is perceived by the external sense of sight, other properties, such as the so-called intentions like the hostility perceived by the sheep when perceiving a wolf, are the objects of the other sensory powers; in this case, of the estimative. Likewise, substance (*substantia*) and substantial nature (*natura substantialis*) are perceived by the estimative or cogitative power, high-order perceptual faculties.³⁹ Other properties, such as being a man and being Peter, the Parisian, despite also being *sensibilia per accidens*, are cognized by a *non-sensory* cognitive power altogether (*Perspectiva* I.10.1, pp. 146–148). What matters, from a systemic point of view, is that by working in tandem, these powers of the human soul unpack the species of the substance, thus leading to the cognition of the whole

38 Matthew of Acquasparta seems to make a reference to such theory in his *Quaestiones de cognitione*. Quaracchi, Florence, 1957, q. 3, 13, p. 270, attributing it to Hugh of St. Victor. More recently, Christopher Martin has made the suggestion that Bacon's target may have been Richard Rufus of Cornwall (in his talk *Spiritual Being and the Powers of Perception: The First Latin Commentators on De Anima II*, Helsinki, November 4, 2016).

39 *Perspectiva* I.1.4, pp. 12–15. Bacon describes the cogitative power as “the mistress of the sensitive faculties” (which exist for the sake of the cogitative power) and as united with the intellect in human beings, standing in the place of reason in the case of non-human animals (*idem*). The cogitative “uses all the other powers as its instrument” and in turn is used by reason as its instrument (*Perspectiva* I.1.4, pp. 16–17). Bacon notes the absence of such power from Aristotle's philosophical psychology and explains it away by saying that Aristotle was dealing with a narrow understanding of sensation as including only the five external senses and the common sense (see Dms I.2, p. 26).

generating composite, not only the form or a particular property. Although Bacon's view must be understood in the context of an ongoing developing tradition that owes much to some authors, such as Avicenna, Bacon's theory highlights an important insight in Alhacen's work: that perception in the full sense must include the form of the thing, meaning all the properties of that thing that are relevant for us to isolate it from other things being perceived, and thus that it cannot be limited to the perception of the traditional Aristotelian proper and common sensibles (see, e.g., *Perspectiva* I.10.3, p. 158). This is only possible, however, if we look at perception not only from the point of view of what perceivers receive from the things, but also and especially from the point of view of the role played in the perceptual process by high-order cognitive powers, sensory or otherwise.

Contributing to this viewpoint is the reduction of the traditional distinction between sensibles *per se*, common sensibles, and sensibles *per accidens*, into sensibles *per se* and sensibles *per accidens*, because:

the discriminative (that is, the cogitative) faculty, which exists in the middle cell of the brain, judges concerning these sensibles, proper as well as common, by means of the common sense and the particular senses (...) and because the same cogitative power judges concerning sensibles *per accidens* by means of the estimative power and the memory rather than the common sense and the particular senses; thus common sensibles and proper sensibles are called 'sensibles *per se*' because they are apprehended by means of sense rather than through the estimative faculty (Dms I.2, pp. 37–39).

Bacon explores this idea further in his treatise on *Perspective*. In this work, the common sensibles are now assimilated into the twenty-two *per se* visible sensibles that we have found in Alhacen.⁴⁰ In fact, however, there is an internal distinction between nine proper sensibles (two from sight and seven from the other sense modalities)⁴¹ and the remaining twenty common sensibles, thus called because they can be perceived by more than one sense

40 "And in *On the Soul*, book 2, and the beginning of *On Sense and Sensibles*, Aristotle employs some of the common sensibles, such as size, shape, motion, rest, and number, as examples. And not only these, but all of the aforementioned, are common sensibles, although vulgar natural philosophers [*vulgus naturalium*] do not consider this, since they have not investigated the science of *perspectiva*. For the common sensibles are not so called because they are perceived by the common sense, but because they are commonly discerned by all or several of the particular senses", *Perspectiva*, I.1.4, pp. 11–13.

41 See the full list in *Perspectiva* I.1.3, p. 8.

modality, and by the powers of common sense and imagination (*Perspectiva* I.10.1, p. 147). In addition to these sensibles perceived by the sense modalities, we should add the sensibles *per accidens*, which are so called because they are not perceived by the external senses or the common sense, but by *other powers* of the sensory soul (*ab aliis virtutibus anime sensitive*), the internal faculties of the estimative, the cogitative, and the memory.⁴² These include the Avicennian intentions, such as the already mentioned hostility the sheep perceives in the wolf. These intentions are representative of the “substantial nature of things” (*nature substantiales rerum*),⁴³ and as such are productive of a change of state in the perceiver, be it fear or flight; in other words, they represent the substantial nature of things *as* useful or harmful. Bacon notes that the terms used to designate the higher modes of perception seem to imply that for Alhacen the discriminative power is a rational power (*Perspectiva* II.3.9, p. 246); a few pages later, however, he blames this on the faulty translation of his work, noting that all these three modes of vision are sensory, that is, performed by faculties of the sensitive soul. Some of the operations performed by all non-human animals are rational-like but not rational; rather, they are performed by a sort of natural instinct.

Finally, there are other properties of things, such as where *x* was born, who his father is, etc., which “coexist with color, shape, and the other visible [properties]” (*idem*), but cannot be apprehended by sensory powers. This leads Bacon to develop three levels or modalities of sensory-based cognition:

since vision is threefold, namely, by sense alone, by *knowledge* [*scientia*], and by reasoning, similarly it is necessary for man to have threefold vision. For by sense alone we perceive few things and imperfectly, as, for example, light and color, and we have this perception weakly, namely, whether these objects of vision exist or which they are; but by memory we perceive of what kind and quality they are, whether the light is that of the sun or of the moon, whether the color is white or black. But by reasoning we perceive all that pertains to light and color in accordance with all of the twenty common sensibles. Therefore, the first kind

42 On the internal senses in Bacon, please see Wood, R., *Imagination and Experience in the Sensory Soul and Beyond: Richard Rufus, Roger Bacon and Their Contemporaries*. In: Lagerlund, H. (ed.), *Forming the Mind: Essays on the Internal Senses and the Mind/Body Problem from Avicenna to the Medical Enlightenment*. Dordrecht, Springer 2007, pp. 27–57. On the cognitive powers of non-human animals, see Oelze, A., *Theories of Animal Rationality in the Middle Ages* (forthcoming, Brill). Of course, in another sense some of these sensibles are accidental to other sense modalities, such as warmth is accidental to sight; but that is another issue.

43 *Perspectiva* I.10.1, p. 149; and I.1.4, p. 12. See also Dms I.2, p. 40.

of perception is weak, the second is more perfect, and the third is the most perfect.⁴⁴

Bacon makes a very clear point here with this hierarchy of visions of cognition by “sense alone”, (*solo sensu*), “cognition by means of prior knowledge”, and “[cognition] by means of syllogism”,⁴⁵ roughly corresponding to Alhacen’s model. In the first, we perceive the primary objects of sight, light and colour, whereas in the second, we perceive, with the help of the memory, the quality but also the kind to which a thing belongs, such as whether this is the light of moonlight. The second, “cognition by means of prior knowledge”, is described as:

the ability to distinguish universals from one another and from particulars, and particulars from each other by comparison of a thing seen to the same thing previously seen, recollecting that it was previously seen and known to the observer (*Perspectiva* I.10.3, p. 157).

The focus of this type of cognition is on the difference (and similarity) between things previously seen, which means that the difference itself is perceived – by the sense power – but needs to be certified by a higher perceptual power.⁴⁶ The example he provides is the colour of the light coming from the moon at different times of the day, and according to varying circumstances of the medium. Once this knowledge is acquired, we gain the capacity to recognize an instance of it whenever it occurs, which makes the process faster, while remaining largely not accessible to voluntary control. Before being in possession of that knowledge, “we did not perceive whether [that light] was the light of the sun or of the moon” (*Perspectiva* I.10.3, p. 155). Once we possess it, we perceive that light as being that of this or that star, as the continuation of the text shows, in other words we judge (and recognize) that this is (or is not) of that kind: this as a man and this particular man. The connection with Alhacen’s second type of vision, dependent on pre-existing knowledge, is clear and explicitly stated by Bacon.

Finally, as in Alhacen, the third kind of vision takes place by a process similar to reasoning,⁴⁷ but without entailing deliberation, a fact he attributes

44 Roger Bacon, *Perspectiva*, transl. Burke as *Optical Science in The Opus Majus of Roger Bacon*, Vol. II. New York, Russell & Russell 1962, p. 579.

45 “... auctores perspective vocant argumentum et sillogismum”, *Perspectiva* II.3.9, p. 253.

46 “Et ideo visus percipit hanc diversitatem, sed non potest solus sensus hoc certificare”, *Perspectiva* II.3, p. 204. This kind of perception is common to humans and non-rational animals.

47 “... est quasi quoddam genus arguendo”, *Perspectiva* I.10.3, p. 156.

to it being an innate capacity of human (and nonhuman) beings. The full certification of the twenty common sensibles depends on this kind of cognition. Among the cases included in the third type of cognition is that of perception of distance,⁴⁸ which is not perceived as such but as the result of a process of inference from the angle of the visual rays from distinct bodies present in the visual field – entailed by the continuous sequence of bodies and the perceiver's prior adjudication of the size of those objects. In Bacon's own words:

Distance is grasped, therefore, when a sequence of bodies is arranged continuously between the eye and the object, provided that the distance is moderate and that the eye will have inspected those bodies and certified their magnitudes (*Perspectiva* II.3, p. 210).

Errors in this type of cognition are frequent, he points out, due to the “excessive remoteness of the object from the eye”.

5. John Pecham (1230–1292)

In a similar vein, and at roughly the same time, John Pecham subscribed to Alhacen's theory in his treatise *Perspectiva communis*, both in terms of the principles of geometric optics and his psychological account.⁴⁹ In propositions 47 to 54 he lists the conditions under which visual perception needs to occur, similar in nature to Alhacen (see section 1), and in proposition number 55 he lists the twenty-two visual intentions found in Alhacen.

However, in what follows I will briefly concentrate on two aspects of his account: first, the adoption of the principle of certification of the object by means of the turning of the eye around the object (I.38, p. 122), which contrasts *bare perception* with *discriminative perception*, with the former meaning the perception of light and colour (I.61) by sight alone (but not the essence of light and colour), and the latter the perception of all other intentions requiring the intervention of a higher cognitive power – the *virtute*

48 For a more detailed account of reasoning in animals according to Bacon, see Hackett, J., *Animal and Human Knowledge in the Perspectiva: (Opus Maius, part five) of Roger Bacon*. In: López-Farjeat, L. X. – Telkamp, J. A. (eds.), *Philosophical Psychology in Arabic Thought and the Latin Aristotelianism of the 13th Century*. Paris, J. Vrin 2013, pp. 223–241; and Oelze, A., *Theories of Animal Rationality in the Later Middle Ages*, PhD Dissertation, Berlin 2016.

49 Pecham, J., *Perspectiva communis*. In: *John Pecham and the Science of Optics*. Ed. D. C. Lindberg. Madison, Milwaukee, The University of Wisconsin Press 1970.

distinctiva – and background knowledge (I.56, p. 136).⁵⁰ Pecham presents two examples of this latter kind: the identification of (the relation of) similarity between two individuals or two colours, and the recognition of things as familiar. Now, recognition presupposes the existence of universals that serve as the background against which the individuals perceived, whose species are retained in memory, are contrasted. This recognition is accomplished as it were by reasoning – *quasi per ratiocinationem* (I.56, p. 136). Pecham makes it clear that the discriminative power operates in a rational-like manner, being endowed with this natural aptitude (*aptitudo*) to perform comparison and adjudication without possessing propositional knowledge. The idea, already found in Alhacen and in Bacon, is that in doing so the animal soul does not perform a strictly discursive procedure of ordering propositions, but instead “the discriminative faculty was designed to inform without difficulty an aptitude that is naturally operative” (I.57, p. 145). In other words, that is the way the system naturally operates, without requiring any form of deliberation in normal functional conditions. The power of discrimination operates imperceptibly in perception, in cooperation with the sense power.

One example of this, and just like in Alhacen and Bacon, is how perceivers can have no direct perception of distance and size, but only via the mediation of inferential reasoning.⁵¹ The perception of the quantity of distance is dependent on the knowledge of the size of objects located in the visual field and standing between the perceiver and the object the distance to which is to be estimated.⁵² Without this knowledge, the distance cannot be asserted with any degree of certainty; thus, it is on the basis of what one already knows that the estimation of the distance to a given object can be achieved. That leads to the question how size is perceived. Pecham notes that the size of the angle of the object in the eye is not sufficient; instead, the base of the radiant pyramid must be compared with the angle’s size and length, so as to

50 Pecham differentiates between the senses of certification implied in vision, which include the certification of distance, of size (of the object perceived), and of shape. Shape is perceived as the result of the perception of the order of the parts of the object (I.71, p. 145). Light acts on the surface of bodies and is reflected from it in the form of rays – “the species of a visible object fashioned into a straight line by extension” (I.27, p. 109) – forming a radiant pyramid that is perpendicular to the centre of the eye and that manifests the object in the appropriate order (II.2, p. 158). In Pecham’s own words, “the entire ray is the likeness of something else” (I.67, p. 143). Pecham is more forthcoming to the supporting role of oblique rays coming into the eye, complementing the picture resulting from perpendicular ones (I.42, p. 125). The lengths of the rays are perceived by the eye together with the part of the ray that conveys the qualities of the visible object.

51 [On the perception of distance:] “*Distantia siquidem visibilis visu non comprehenditur, sed ratiocinatione colligitur, docente hac phylosophia sic*”, *Perspectiva communis*, I.63, p. 140.

52 “*Dico igitur quod comprehensio quantitatis distantie accipitur a quantitate corporum interiacentium*”, *Perspectiva communis*, I.63, p. 140.

account for distance.⁵³ As in Alhacen, the perception of distance and size in this inferential way results in a learned ability that is then put into practice whenever we encounter objects in our visual field.

Pecham's treatment of visual perception may not be cursory but, from the point of view of examining the psychological aspects, it is superficial. This is most likely explainable by the textbook nature of the account in reproducing the main aspects of Alhacen's account rather than contesting them, but there is something striking: whereas in other works Pecham is adamant in insisting that the soul cannot behave in a passive way, but brings about its own representations following an affection of the sense organs, in this treatise on *Perspectiva* he avoids any such account.⁵⁴

6. Blasius of Parma (1345–1416)

My final example is Blasius of Parma, who, in his *Questiones super Perspectiva Communi*, defines vision as being caused by the power of sight with the concurrence of the object.⁵⁵

The subject of this act of visual perception is the soul, which Blasius equates with its sensitive and intellective components as the agent sense (I.2.2, p. 78). The object concurs by means of a varying intensity of the active qualities it issues forth, in the form of rays of light (I.6.2, p. 117). These active qualities as rays are the species, and their function is to be representative of the thing of which they are the species.⁵⁶ The presence of the species received in the sense organs acts as a disposition for the reception of the power's operation (I.14.1, p. 202), but is not enough to cause a visual perception. The object should be said to concur to the production of the act of seeing as the *causa sine qua non*, but that it is not as such primarily the cause of seeing (*non causat visionem*). Instead, this role belongs to the soul (I.10.3, p. 162):

It is truer to say that the soul causes vision or intellection than [to say that it is] the object.⁵⁷

53 *Perspectiva communis*, I.74, p. 147. See *De aspectibus* II.3.143: "Quantitates ergo visibilium non comprehenduntur nisi per distinctionem et comparisonem."

54 On Pecham's activity of the soul in perception, see Silva, J. F., *Medieval Theories of Active Perception: An Overview*. In: Silva, J. F. – Yrjönsuuri, M. (eds.), *Active Perception in the History of Philosophy*. Dordrecht, Springer 2014, pp. 117–146, at pp. 126–128.

55 "visio est quedam cognitio causata a potentia viva in oculo, obiecto concurrente", Blasius of Parma, *Questiones super Perspectiva Communi*. Ed. G. F. Vescovini – J. Biard. Paris, Librairie Philosophique J. Vrin 2009, p. 71.

56 "evidens est quod species est representativa eius cuius est species", *Questiones* I.2.1, p. 77.

57 "Et cum dicitur similiter de visibili quod 'visibile si ponatur iuxta oculum non causat visionem', respondetur quod obiectum secundum rei veritatem nec in parte propinqua nec in remota cau-

If the reception of the species were sufficient on its own for seeing, the more the species would efficaciously act on the senses, the better we would see. But this is simply not the case: we only see when the visual power (or, the faculty of sight) directs its attention to the object via the reception of the species. If the object making itself present is not moderate (i.e., proportional) and the power of sight is not attending, there is no visual experience (I.6.2, p. 117). Blasius makes it clear that without the soul's turning/attending to the object being presented, there is no perception and no understanding.⁵⁸ The soul is the cause of vision.⁵⁹ Concurrent to this internal principle of causation is the object, which has the primary external causal role, rather than the species it generates.⁶⁰

An important feature of this account is that the species can have different modes of being, with greater or lesser intensity. In I.14.1, Blasius gives the example of the persistence of the species in the eyes, when closed after being exposed to bright sunlight; in this case, he advocates, the species realize their tendency to nonbeing, progressively losing their intensity by going from white to reddish to violet (*alurgum*) (I.14.1, p. 203). The point is worth emphasizing: vision comes in degrees, thus meaning that from the outset our acts of visual perception are limited to a range of actual but changing qualities; in other words, our perceptions are restricted to partial knowledge rather than a complete one, which is the case with intellectual cognition.⁶¹ Perception is not an all or nothing affair, but a perspectival one.

The focus then shifts to the nature of the species and the qualities that generate them. Blasius proposes that a colour, white, must be an active quality because it is able to generate a species of itself, but not so active that it is able to act on the surrounding matter in such a way that this matter takes the form of this quality. The example he supplies is clear enough: if white inhering in a wall was so active, then if one were to place one's hand on the wall, the hand would acquire the quality of whiteness (i.e., would be made white: *albifieri*). The same reasoning should be applied to the medium sepa-

sat visionem licet concurrat cum causa ut velim dicere quod est causa sine qua non. [...] *Et ideo est tutius dicere animam causare visionem vel intellectionem quam obiectum*", *Questiones* I.10.3, p. 162.

58 "ubi anima non advertat, non causatur visio nec intellection", *Questiones* I.10.3, p. 162. See I.14.1, p. 204 on the non-voluntariness.

59 "obiectum non est illud quod causat visionem in oculo, nec species diffuse ab ipso et multiplicate in oculum, sed est anima visive", *Questiones* I.12.3, p. 190.

60 *Questiones* I.6.2, p. 118. It is important to note, however, that colour is not per se the efficient cause of visual perception, because all natural actions require efficient causation from celestial bodies, as a form of "flux" (*Questiones* I.15.2, p. 219).

61 "Patet etiam quod nulli dubium quod visio est qualitas gradualis, modo sicut non contingit aliquam qualitatem gradualem simul totam deperdi, sic non contingit totam adquiri. Et ita putandum est de notitia intellectuali", *Questiones* I.14.1, p. 203.

rating the object from the perceiver. The way out is to claim that the species of white generated by the whiteness in the object has an imperfect mode of being, that is not able to produce the normal sort of alteration – when the matter in which the qualitative form is received takes in the quality – but one in which the receiving thing is perfected (I.6.2, p. 119). (This clearly echoes Bacon’s weak being of the species examined in Section 4.)

The soul is perfected by sensation,⁶² and sensation is only painful (*dolorosa*) when the object is disproportionate to the organ, as in the case of a too intense light (I.15.2, p. 217). Thus, visual perception *qua* visual perception is not painful, but only insofar as it is realized in a badly disposed sense organ. This being-perfected remains problematic in a number of ways: it is easy to understand what it means in respect to the soul being actualized in its natural inclination for knowledge (I.15.2, p. 218); however, it is less clear what it means in the case of the medium, or the hand on the wall, to use Blasius’s own example. One option is to restrict this sort of perfective alteration (*alteratione perfectiva*) to cognitive states.

The issue of whether or not the species mix in the intervening (between object and perceiver) medium is central to adjudicating between its material or immaterial nature, because no two material entities can occupy the same point in space. In his reply to this question, Blasius starts by noting the distinction between intellectual species, sensible species, and species in the medium. Sensible species are those which are received in the sense organs, and that contribute to cause sensation (of the object they represent).⁶³ What this causation amounts to is further specified in questions 15 and 16 of his commentary. The focus of Blasius’s account is on the quantitative dimensions (*quantum sit*) of the thing perceived (I.16.2, p. 225). This cannot be achieved simply by the visual power (*potentia visiva*) in isolation from the internal cognitive powers;⁶⁴ rather, it depends on them, and on the capacity for inference and relating (the quantity of) objects.⁶⁵ That is why there is, to Blasius, more to visual perception than meets the eye, namely that it can be understood on three levels:⁶⁶

62 *Questiones* I.15.2, p. 217. See also I.15.2, p. 218: “omnis visio ut cognitio est perfectio ipsius anime et corporis”. In the case of cognitive acts that depend on bodily organs, this perfection is more properly said to be of the composite.

63 “Quedam sunt species que dicuntur sensibiles, aut quia recipiuntur in organo sensus, aut quia causant sensationem de obiecto”, *Questiones* I.6.1, p. 114.

64 “ad iudicandum quantum sit hoc vel illud, potentia visiva non sufficit”, *Questiones* I.16.2, p. 225.

65 “Nunc superest loqui de potentia visiva regulata per superiorem virtutem”, *Questiones* I.16.2, p. 225.

66 “Tertia evidētia: tripliciter contingit nos habere cognitionem rei quante. Uno modo solo visu concurrente et hoc scientur per quantitatem anguli ut videbitur in questione vel secundum quod plus vel minus informabitur de humore glaciali. Secundo modo possumus cognoscere rem

- (1) the first is the result of the power of sight only (*solo visu*), thus the quantification of the angle that reaches the glacial humour in the surface of the eye;
- (2) the second is the quantity of the thing itself, which requires the intervention of the distinctive power (*virtute distinctiva concurrente*) in addition to sight. The distinctive power adjudicates the size of the thing from the relation between the angles of the visual rays and the distance;
- (3) the third is the quantity of the thing from the point of view of the proportions of the body on the basis of lines, diameter and such – this is the result of an intellectual operation (*per visum intellectu concurrente*).

Anything that can be apprehended by the visual power is able to generate rays that touch the eye at straight angles, and on the basis of these angles the distinctive power is able to judge the size of the object.⁶⁷ Blasius insists on the distinction between the power of sight (*potentia visiva*), as one of the five external senses, and the common sense, as the internal vision (*visus interior*). Blasius renders the common sense as the power of discrimination (*virtus distinctiva*), which distinguishes between the objects of the different sense modalities and perceives the object as well as the distance to the object; and, on the basis of this, it perceives the object, the size of the rays, and that different objects are at different distances from the perceiver (I.16.3, p. 230).

One of the points in contention between Blasius and what he calls “all Perspectivists” (*omnes Perspectivi*) – by which he probably means the Euclidean tradition – is the perception of the size and distance of an object, that is, whether this can be known only on the basis of the angles of the rays coming from the object that constitute the sides of the visual pyramid, the base of which is the object and the axis the middle of the eye.⁶⁸ Blasius

quanta sit per visum, virtute distinctiva concurrente, et hoc fit per angulos relatos ad distantiam secundum quod apparebit. Tertium modo possumus apprehendere rem quanta sit per visum intellectu concurrente, et hoc per modo investigamus quantitatem et proportiones corporum per lineas, per diametra et per alia ut dicitur”, *Questiones* I.16.1, p. 224.

67 “...res, quantumcumque magna, tantum informat de humore glaciali quantum est illud quod intercipitur inter latera pyramidis concurrentia ad angulum rectum in oculo. Et precipue tantum et non plus potest informare res quantumcumque parva, postquam talis res, quantumcumque parva, potest subtendi angulo recto in oculo”, *Questiones* I.16.1, p. 224.

68 “In oppositum sunt communiter omnes *Perspectivi*, dicentes pro principio que sub maiori angulo videntur, maiora apparent, et que sub minori, minora”, *Questiones* I.16, p. 223. On this identification and Blasius’s reply, see Rignani, O., Baigio Pelacani e il senso agente. In: Vescovini, G. F. – Sorge, V. – Vinti, C. (eds.), *Corpo e Anima, Sensi Interni e Intelletto dai Secoli XIII-XIV ai Post-Cartesiani e Spinoziani*. Turhout, Brepols 2005, pp. 247–266, at p. 264; see also Vescovini,

strongly argues against this and claims that the size of an object as perceived cannot simply be proportional to the size of the angles received in the eye.⁶⁹ Perception of size must be the result of a judgment that includes knowing the quantity of the distance,⁷⁰ but this requires a capacity for inference and the visual power is not capable of it as such.⁷¹ Thus, when visually perceiving an object, the intellect concurs with the incoming species, registers the size of the angle, and judges the length of the rays, allowing the perceiver to know the distance to the object being perceived. This intellectual judgment concurrent with the processing of sensory information has an effect in the content of the perceptual experience; for instance, we are able to perceive how far two cities are from each other.⁷² No object is so large or so small that the distance to the perceiver and to other objects in the visual field cannot be ascertained.⁷³

We are now able to understand what Blasius means when he says that visual perception is the cognition of a visible thing,⁷⁴ i.e., that “to see is to know” (*videre est cognoscere*, I.16.2, p. 225). Visual perception (*visio*) includes three levels of processing the incoming sensory information: first, the simple reception of the species of the visible thing in the sense organ; second,

G. F., *Astrologia e Scienza. La crisi dell'aristotelismo sul cadere del Trecento e Biagio Pelacani da Parma*. Firenze, Nuovedizioni 1979, pp. 150–151. Blasius denies this: “*a videtur sub maiori angulo quam b, igitur a videtur esse maius quam b. Patet, quia visus non apprehendit distantiam seu longitudinem radorum ut postea patefiat. Et per hoc non refert obiecta ad distantiam. (...) argumentum non valet (...)* Intellectus enim iudicat et deprehendit Solem esse maiorem Terra, et tamen sub minori angulo videtur Sol quam Terra”, *Questiones* I.16.2, p. 229. (He develops the argument further in article 3 of this question.) On this debate and Blasius’s position, see G. F. Vescovini and J. Biard in their “Introduction” to Blaise de Parme, *Questiones*.

69 “quantitas anguli, sub quo res videtur, non sufficit pro quantitate rei visibilis deprehendenda”, I.16.2, p. 225. See also I.16, p. 221: “ergo proportio visibilium non insequitur proportionem angulorum”, I.16, p. 221; repeated in I.16, p. 222, in I.16.2, p. 225, and in I.16.4, p. 232. Blasius himself notes that this is Alhacen’s own view: “Idem voluit Magister in hac prima parte *Perspective* in hac forma: ‘angulum sub quo res videtur, non sufficere pro quantitate rei visibilis capienda’”, I.16, p. 223.

70 *Questiones* I.16.4, p. 232. On this same point, see Alhacen, *De aspectibus* II.3.73-6. Thank you to one anonymous referee for insisting that I make this point clearer.

71 “cum potentia viva non sit virtus illative”, *Questiones* I.16.2, p. 225.

72 “visus intellectuali iudicio concurrente, potest longitudinem radorum comprehendere, idest distantiam in qua vel per quam visibile ab oculo distat. De quo post hoc erit questio generalis. Sed quod propositio sit vera, patet, quoniam visus, mediante claro intellectu, deprehendit quantum est inter unam civitatem et aliam, et similiter quantum est a centro mundi ad centrum solis existentis in auge aut in oppositione augis aut in locis intermediis”, *Questiones* I.16.2, p. 226.

73 “Quarta conclusio: omni quantitate data, quantumque magna vel parva, potest visus mediante claro intellectu per angulos cum relatione unius obiecti, vel plurium, ad distantias, quanta sit, calculare”, *Questiones* I.16.2, p. 227. Error in this is mostly due to refracted rays: *radius frangi vel flecti* (*Questiones* I.16.3, p. 230).

74 “Nunc pono conclusiones, presupposito primo quod visio sit cognitio rei visibilis quod omnes audaciter concedunt”, *Questiones* I.14.1, p. 202.

the general cognition of the object, which entails perceptual judgement; third, the intellect operating on the sensory information and inferentially coming to know what the object is, where it is, its size, shape and proportion between its parts (I.15.1, p. 216). The different types of seeing take place at different paces: the first takes place immediately; the second in an imperceptible (*imperceptibile*) amount of time; the third, which entails the turning of the eyes around the axis in order to fully perceive the totality of the object, requires local motion and therefore time (I.14.1, pp. 201–202). Moreover, it presupposes the other types of vision, direct and judgmental, which means that it is overall slower than they are. Perception in this full sense entails the possibility of error, of course, but Blasius does not see this as a problem in itself; rather, it simply confirms that in all levels of the cognition of natural things our knowledge can never be as complete as we would wish.⁷⁵

The conflation between these different levels of visual perception taking place concurrently could be problematic, if they were to correspond to two epistemic subjects; however, Blasius is adamant in asserting that the visual power, the discriminative faculty, and intellect are not really distinct but are rather constitutive of one and the same soul. In fact, Blasius seems to take these as aspects or functions of one and the same power, which is to be identified immediately with the soul.⁷⁶ Visual perception is therefore a full scale, intertwined sensory and intellectual process,⁷⁷ rather than a strictly modular one.

7. Conclusion

Perception is about getting a picture of the world. The problem is *how* we get that picture and of *what* that picture is, that is to say, which features of the world constitute the content of our perceptual experience. Visual perception is as much about the *act* of “to see” as about *what* I see. But *to see* is a verb, meaning that it has a subject: subjects, at least in the medieval conceptual

75 “...et consequenter causabitur error in intellectu de rebus naturalibus. Ad istud respondetur quod hoc argumentum concludit tantum quod numquam de re naturali per visum et consequenter per intellectum homo habet tantam evidentiam quanta haberi potest; et hoc est verum. Et sequitur corollarium ex hoc in hac forma quod nulla humana cognitio videtur omnem gradum erroris excludere”, *Questiones* I.6.2, p. 120. In addition, the intellect can override the knowledge acquired via the senses, for instance as it corrects the size of the Earth (smaller) relative to the Sun (bigger) on the basis of mathematics (I.14.3, p. 212).

76 “Sed tunc ad argumenta in oppositum, cum dictum fuit quod potentia visiva apprehendit longitudinem radiorum, dicitur quod potentia distinctiva bene hoc facit, que secundum rei veritatem non distinguitur realiter a potentia visiva, cum in corpore humano non sit nisi unica anima”, *Questiones* I.16.3, p. 230. On this identification, see Vescovini, G. F., *Astrologia e Scienza*, op. cit., p. 139.

77 On this see Rignani, O., *Baigio Pelacani e il senso agente*, op. cit., pp. 250–251.

framework, logical or otherwise, can be either *that about which something is said*, that undergoing the experience – the one to which an experience happens; or *that which does something*, and in this interpretation the subject is the agent. There are, however, many ways to be an agent, and many actions constituting a perceptual experience.

In the tradition of reflecting on visual perception examined in this paper, and apart from a number of technical details, it seems clear that perception is understood as a more complex process than the simple reception of sensible species generated and flowing from the objects they represent. That the model of transmission advocated is that of geometrical optics is relevant to explaining how the final image is achieved with accuracy in retaining the correspondence between thing and internal image; but it is irrelevant to explaining how we actually see things the way we do: things we recognize or identify as being this or that table, dog, etc. To have that information accessible to us, we need the active perceptual faculties of the soul, which process the sensory information received through the senses in a way that is not simply dependent or operative on what we receive from the senses. In some cases, however, it also includes the interference of intellectual capacities operating on the incoming sensory information, and thus having a role to play in establishing the content of that particular experience. This means that the clear-cut distinction between senses and intellect, as well as the understanding of the process of cognition as sequential – first senses, then intellect – in a largely modular and contained way needs to be problematized. The model of perspectivist optics briefly examined in this paper shows a more robust account of the interaction between senses and intellect than one is often lead to believe is the case for medieval theories of perception. There is a longer story to tell about this interpretative model than what I have presented here; however, this is not the place to tell it.

ABSTRACT

By the end of the thirteenth century several models of visual perception were available in the Latin West, differing according to their influences – Aristotelian, Augustinian, Avicennian – and their interpretations. One such model was that of perspectivist optics, as espoused by Alhacen and popularized by Roger Bacon. While the general structure of this theory is well-known, until recently scholars have paid less attention to the issue of discrimination – distinction, comparison, judgment – by a higher cognitive faculty (the *virtus distinctiva*) of incoming sensory information. In my paper, I specifically examine what role this discriminative faculty, as proposed by Alhacen, plays in the works of later *perspectivi* such as Roger Bacon, John Pecham, and Blasius of Parma, proceeding from the assumption that the best way to understanding the in-

fluence of any given theory is by understanding the authors influenced by it. My focus is on two aspects of this power: what exactly its functions are, and whether its nature is rational or sensory. Building on this last aspect, I consider whether this nature is better suited for passive or active accounts of perception.

Keywords: perception, optics, judgment, reason, inference, recognition

Scotus on Sense, Medium, and Sensible Object¹

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1. Introduction

As the specialized literature has made clear, Duns Scotus's philosophy of sensible perception falls well within the common background of the Aristotelian tradition of the Middle Ages. As an Aristotelian, he "is interesting, then, not because he offers any startlingly new ideas about cognition, but because he gives a careful and penetrating analysis of the field as it stood at the end of the thirteenth century."² I concur that on the whole this statement is true, and Scotus's theory of cognition falls within the basic tenets of 13th-century philosophy. Moreover, his theory of perception does not stand out for providing radical new paradigms in a special way: Scotus himself apparently did not bother to finish a revision of his questions on Aristotle's *De anima*, and certainly made no move to see them published.

I will argue that we can accept this and still find material worth of attention in Scotus's theory of perception, not just to discuss his position regarding sensory cognition in his time, but also as a heuristic entry-point into his later psychological and metaphysical theses. Elsewhere³ I have argued in this vein that these questiones anticipate a general direction of Scotus's psychology wherein the nobility of the powers of the soul depends on the proportion each one has with its proper object and act, and its dependency on the object's medium, which in turn sets the stage for differentiating between

1 This study is a result of the research funded by the Czech Science Foundation as the project GA ČR 14-37038G "Between Renaissance and Baroque: Philosophy and Knowledge in the Czech Lands within the Wider European Context".

2 Pasnau, R., Cognition. In: Williams, T. (ed.), *The Cambridge Companion to Duns Scotus*. Cambridge, Cambridge University Press 2003, p. 285.

3 See my *Proporción y mediación en las cuestiones sobre el De anima de Duns Escoto: prolegómenos a una teoría de la acción escotista*, in: González Ayesta, C. – Lecón, M. (eds.), *Causalidad, determinismo y libertad. De Duns Escoto a la escolástica barroca*. Pamplona, Eunsa 2014, pp. 43–65.

a faculty's actualization (its passing from first to second perfection, in Aristotelian terms) and its specification (namely, the content cognized by its act).⁴ In general, we may say that the least perfect external senses possess an organic unity with their objects and acts and depend in different ways on their physical medium ('different ways' which, in turn, serve as a fixture to distinguish between them). The superior senses, such as the sight, maintain a material proportionality with their objects but depend less on the medium. The intellect, meanwhile, holds no proportionality with its object, whose (intentional) being is different from the (real) being it represents, and yet indirectly depends on the sensible object in the formation of its species. Finally, the will holds no proportionality with its object and thus may be described as a free potency, as opposed to the natural (cognitive) powers.

In this paper I will examine in more detail Scotus's doctrine of perception with a view on the perfection of the faculties according to his philosophy. I will proceed in three steps. First (section 2), I will paint a general picture of the *Quaestiones* on the *De anima* and the possibilities and difficulties their study faces, especially against the broader scope of Scotus's metaphysics. I will secondly (section 3) enunciate some of the main theses about the senses held by Scotus in these *quaestiones*, and, finally, (section 4) I will evaluate them by following Scotus's exposition on the order and hierarchy of the senses. In the concluding section (5) I will make a brief reference to Scotus's theory of the will to show the metaphysical relevance of this reading.

2. A note on the text

Why focus on the *Questions super secundum et tertium De anima*? One must keep in mind, before all else, that scholars were not certain of their authenticity until very recently, and their critical edition was only published in 2006.⁵ Richard Cross may be quoted here at some length to summarize the point:

The authenticity of the work has long been contested. The editors of the modern critical edition argue strongly for its authenticity, though it would be hard to describe their arguments as abso-

4 I believe this is a fundamental distinction when dealing with the relation between intellect and will and Scotus's voluntarism and essentialism.

5 Quotations from Scotus's questions on the *De anima* are taken from Bazán, C. – Emery, K. – Green, R. – Noone, T. – Plevano, R. – Traver, A. (eds.), *Opera philosophica*. St. Bonaventure, N.Y., The Franciscan Institute 2006. I will abbreviate citations by indicating the question and paragraph number, e.g. "q. 1.1" stands for first paragraph of the first question. The translations are mine, but I wish to thank Světlá Hanke Jarošová for her comments and corrections.

lutely decisive. But more recently Stephen Dumont has told me, in conversation, about connections between the Reportario and the De anima questions that the editors of the forthcoming critical edition have noted ... It is worth noting too Dumont's opinion, again communicated to me in conversation, that the De anima questions, since they use material integral to the Lectura, probably date from around the time of that work – i.e. 1298-99.⁶

Surely studying such a text seems interesting on its own, but Cross himself recognizes that “much of the discussion of sensation ... has no parallel elsewhere in Scotus's works.”

To the difficult history of its transmission and interpretation, we must add the text's own difficulties.⁷ Additionally, while these *quaestiones* have been subjected to several critical studies, many analyses focus primarily on the questions regarding intellectual cognition.⁸ This is understandable, since

6 Cross, R., *Duns Scotus's Theory of Cognition*. Oxford–New York, Oxford University Press 2014, p. 2, note.

7 “Since the *Quaestiones de anima* is largely devoid of the additional matter and *cedulae* found in his other works, we have concluded that the *Quaestiones* represent a lecture course that Scotus taught probably only once, as a student-teacher while probably enrolled in the theological faculty at Oxford, and one that he never revised or otherwise authorized for publication” (*Quaestiones super secundum et tertium de anima*, Introduction, p. 85*). For the difficult transmission history of the *Quaestiones* see Introduction, pp. 95* ff. For the question of their authenticity, consult the corresponding section § 3 of the Introduction, pp. 121* ff.

8 Tobias Hoffman's *Duns Scotus Bibliography from 1950 to the present* (May, 2016⁹) garners several studies dealing with the *Quaestiones super secundum et tertium De anima*; most focusing on intellectual knowledge: Druart, Th.-A., Avicenna's Metaphysics and Duns Scotus' *Quaestiones super secundum et tertium De anima*. In: López-Farjeat, L. X. – Tellkamp, J. A. (eds.), *Philosophical Psychology in Arabic Thought and the Latin Aristotelianism of the 13th Century*. Paris, Vrin 2013, pp. 185–204; Hoffmann, T., The *Quaestiones De anima* and the Genesis of Duns Scotus' Doctrine of Univocity of Being. In: Counet, J.-M. – Friedman, R., *Medieval Perspectives on Aristotle's De anima*. Leuven, Peeters 2013, pp. 101–120; Noone, T., L'univocité dans les *Quaestiones super libros de anima*. In: Boulnois, O. – Karger, E. – Solère, J. L. – Sondag, G. (eds.), *Duns Scot à Paris, 1302–2002. Actes du colloque de Paris, 2–4 septembre 2002*. Turnhout, Brepols 2004, pp. 255–271; Noone, T., Scotus on Intellect, Intelligible Species, and Imagination and Scotus's 'Quaestiones super libros De Anima': A Comparison with His Oxford Theological Commentaries. In: Cândida, M. – Pacheco, M. C. – Meirinhos, J. F. (eds.), *Intellect et imagination dans la philosophie médiévale / Intellect and Imagination in Medieval Philosophy / Intellecto e imaginação na Filosofia Medieval. Actes du XIe Congrès International de Philosophie Médiévale de la Société Internationale pour l'Étude de la Philosophie Médiévale (S.I.E.P.M.)*. Porto, du 26 au 31 août 2002. Turnhout, Brepols 2006, vol. 3, pp. 1493–1506; Tropia, A., McCaghwell's Reading of Scotus's De Anima (1639): A Case of Plagiarism? *The Modern Schoolman*, 89, 2012, No. 1–2, pp. 95–116; Whitworth, A. F., Attending to Presence: A Study of John Duns Scotus' Account of Sense Cognition. Ph.D. dissertation. Marquette University 2010; McAleer, G., Duns Scotus and Giles of Rome on whether Sensations Are Intentional. In: Ingham, M. B. – Bychkov, O. V. (eds.), *John Duns Scotus, Philosopher: Proceedings of “The Quadruple Congress” on John Duns Scotus, Archa Verbi: Yearbook for the Study of Medieval Theology – Subsidia 3*. Münster, Aschendorff – St. Bonaventure, N.Y., Franciscan Institute Publications 2010, pp. 111–118. Richard Cross's ch. 1,

the doubts regarding their authenticity were also held by Ephrem Longpré, general editor of the Scotistic Commission,

on the grounds that the doctrine of some of the questions (e.g., qq. 15, 17-18), i.e. concerning the hylemorphic composition of spiritual substances, the reality of intelligible species, the mind's need to have recourse to phantasms in every act of cognition, flatly contradicts Scotus' teaching in his surely authentic, mature writings.⁹

Charles Balić concluded that a new edition was necessary, and so did the editors in the first volume of the *Opera omnia*.¹⁰

Regarding the layout of the text, the *quaestiones* are not a literal commentary on Aristotle, but rather a series of questions and problems, dealing with sensibility, intellection, and willing. It is a work of his youth and some of Scotus's positions here are tentative. Furthermore, this material was not distributed for copying or studying until after Scotus's death.

Even a cursory reading will acknowledge that Scotus is not a natural philosopher, and his interest in physics seems to be always driven towards other philosophical or theological points. Thus, his discussions on perception do not delve here into e.g. optics or physiology, but are rather dialectic in nature, and concern the differing opinions of Aristotle and other authors – mainly Avicenna, Averroes, Aquinas, Giles of Rome, Henry of Ghent, and Peter John Olivi. As the authors of the critical edition observe, the number of sources and range of discussions increase dramatically once he reaches the doctrines of the intellect and the will in q. 11.

One of the main features pervading Scotus's exposition is the idea of the adequate object of a sense and its causal power. I believe this to be one of the most fruitful treatments to get out the questions, since, as I said above, it helps us to acknowledge the difference between a faculty's actualization (its passing from potency to act) and its specification (the actual content of the cognitive act). His discussions of co-causes and the different ways in which a potency can be reduced to an act may well be read from this angle. The discussions on co-causality are of course quite relevant in Scotus's epistemology, wherein the object and the faculty contribute to the formation

"Sensation", of his *Duns Scotus's Theory of Cognition* may well be one of the most focused studies on the matter of this paper (particularly section 2, on the mechanisms of sensation, and 4, on the species).

9 *Introduction*, p. 121*.

10 Cf. Balić, C., *De critica textuali Scholasticorum scriptis accomodata*. *Antonianum*, 25, 1945, p. 287, n. 2.

of immanent actions; they are also relevant to distinguishing these immanent acts from physical or natural actions, a central topic in discussions about sensory perception. And, in a more general sense, causal questions also help set the stage for Scotus's treatment of the will. While I will not survey his views on the will in this brief treatise, it should be noted that for Scotus the will is a wholly free faculty, and thus his view of cognitive co-causality and the relation between a faculty's dependency on its object and the latter's medium are, I believe, central to approach it.

This is the background against which I read this early work. Even if the distinction between natural and free faculties is not yet here as explicit as in his mature works, I believe it is still noticeable in the sense that the author strives to highlight the relations of dependency/independence of a faculty on its object, its medium, possible co-causes, etc. In my view, this may serve as the directing principle in his treatment of the senses, as I shall try to show in what follows.

3. Basic theses on the senses

Scotus's exposition begins with the sense of touch, examining the notions of organ, act, and medium. It then opens the consideration to the other senses, finally turning into a study of their hierarchy and perfection, as I will point out in section 4. I will broadly follow Scotus's exposition, highlighting his main theses rather than follow each of his arguments.

a) First thesis: senses are grounded in organs

The first thesis is that senses are grounded in organs. This is a common point in the Aristotelian systematization of psychology, and it provides the basic framework for Scotus's arguments. Indeed, the relation of the faculty with an organ is what constitutes the animal form of the soul, and at the same time provides a key criterion to deal with the notion of affection or *immunitatio*, which is necessary to distinguish between real forms, the objects of cognitive acts, and the media in which these objects are given.¹¹

The basic exposition of this first thesis is interwoven with the account, in the first *quaestio*, on whether there are multiple senses of touch, since it is

11 For the difference between real and intentional being in Scotus the reader may refer to (among many other studies): King, P., *Duns Scotus on Mental Content*. In: Boulnois, O. – Karger, E. – Solère, J.-L. – Sondag, G. (eds.), *Duns Scot à Paris*, op. cit., pp. 65–88, esp. § 2. King soundly quotes Reportatio IA, d. 27, q. 2, “sed nulla productio intentionalis est esse obiectum, nisi prius sit aliqua forma producta realiter aliqua productione reali in qua est obiectum productionis intentionalis; de hoc dictum est supra in isto libro d. 3.”

not clear that touch has a specific object like the other senses. The common opinion (viz. Aquinas) is that faculties are distinguished by their acts and objects,¹² and thus Scotus's main starting point here is that *sensus ille est unus cuius organum est unum, quia sensus fundatur in organo* (q. 1.2). The problem is that there appears to be not *one* proportionate object for the organ – nor even one contrariety – and thus we may wonder whether there are five or eight exterior senses, following the different pairs of contrary objects that seem to fall under its act, as pointed out by Aristotle.¹³ These pairs of contraries are warmth and coldness, humidity and dryness, hardness and softness, roughness and smoothness. Now, in general, “every potency is one with regards to the one genus which is univocally predicated of all objects that can be known by such a potency” (q. 1.8), as is the case for example of black and white in sight, etc. In the case of touch, its associated qualities do not seem to have only one genus from which they can all be univocally predicated.

One could argue that “*sensus tactus est unius contrarietatis; ergo est unus*” (q. 1.5), in the sense that four of the possible sensibles of the sense of touch are passive qualities, and four are active qualities. But Scotus wonders in q. 1.13 whether this is a logical or a real univocal distinction. In a purely logical sense, all the qualities of touch “*convenient in uno conceptu qualitatis*”. However, taking univocity not logically but within the natural realm, a sense may have different indivisible species as its object, as long as they belong to the same natural genus. A logical form of univocity, such as the distinction between active and passive qualities, is not enough of a contrariety to ground a sense, because we need a natural genus of qualities (cf. q. 1.20). The possible solution here, for Scotus, is to acknowledge a *metaphysical* sense of univocity, *secundum quam aliqua uniuntur in genere propinquo*, and in this sense Averroes would be right in claiming that the real sense of univocity concerns the *specie specialissima*.

Since a single logical contrariety cannot be admitted as the object, Scotus feels obliged to admit that there are two formal senses of touch. Indeed, the sense of touch has different genera of qualities, so that even if it is in reality one subject, it is formally *two senses*, “but not as different or divided as if there were two things”,¹⁴ an opinion shared by Aquinas and others.¹⁵

12 Cf. Thomas Aquinas, *De veritate* q. 10 a. 1 ad 1um; *Summa theologiae* I q. 77 a. 3.

13 Cf. *De anima* II, 22, Bk 422b17-27.

14 *Quaestiones super secundum et tertium De anima* q. 1, 9: “*non tamen ita diversi vel divisi sicut alii ab invicem.*”

15 Cf. Thomas Aquinas, *In de anima* II, lect. 22: “*formaliter loquendo et secundum rationem, sensus tactus non est unus sed plures; subiecto autem est unus.*”

The unity of the sense is out of question, since whether its organ is the flesh or the nerves, at least it seems clear that when it feels one contrariety, it also feels the other one. Moreover, the only possibility for there to be different senses of touch would be to be so either in species or in number (q. 1.3). They can't be different in number, for they are *in eodem subiecto*. On the other hand, one of them would be redundant (*superflueret*) if it could feel what the other feels (*a quacumque igitur contrarietate vel sensibili immutaretur unus tactus, et alius*). But can it be that there are two senses that differ in species? It seems hard to admit, for things of different species are not equal (*nec esse possunt secundum aliquos*), so one sense would be more perfect than the other, a possibility that seems false, "because touch at the same time perfectly feels one contrariety as much as the other (q. 1.3)."

In the end, Scotus will admit that the organ of touch is a mixed body (nervous flesh) that has unity by means of a dominant perfection.¹⁶ He provides two proofs (q. 1.10): first, one and the same faculty cannot have at the same time *duos perfectissimos actus* (Scotus notes here that we cannot even concede this of the intellect), because just one act, if truly "most perfect", would totally adequate the virtue of its potency to itself. If touch can feel simultaneously that water is cold and wet, it cannot be with the same act; rather, if *per impossibile vel potentiam divinam* the coldness of water were removed, we would still feel its wetness, there being thus two acts. He concludes that "regarding different formal objects, there is no one act" (q. 1.11): there cannot be one act, because the sense receives two species (wetness, coldness), and "the species in the organ is the principle of the act, either formally or as an inclination" (q. 1.12). Moreover, each sense must have one determinate genus, as we can infer from each particular sense and from the logical thesis that an object must correspond to its faculty (q. 1.13),

16 For his specific sources: cf. Aristotle, *De partibus animalium* II, 1, Bk 647a15; Freeland, C., Aristotle on the Sense of Touch. In: Nussbaum, M. C. – Rorty, A. (eds.), *Essays on Aristotle's de Anima*. Oxford, Oxford University Press 1992, pp. 227–248. Avicenna also holds that the faculty of touch is distributed over the whole body, nerves perceive objects opposed to them in quality, and we may probably speak not of one faculty but four (which distinguish hot-cold, dry-moist, hard-soft, and rough-smooth), "but their coexistence in the same organ gives the false impression that they are essentially one" (in Rahman, F., *Avicenna's Psychology. An English Translation of Kitāb al-Nafāt*. London, Oxford University Press 1952, p. 27). Peter John Olivi, in his *In II Sent q. 61* (in: Jansen, B. (ed.), *Quaestiones in secundum librum sententiarum*, vol. 3. Quaracchi, Collegium S. Bonaventurae 1926), adds another pair: heavy-light, and considers pleasure-pain. According to Olivi, the wide variety of things we can feel with the sense of touch all relate to "what constitutes our own well-being" (cf. Yrjönsuuri, M., *Perceiving One's Body*. In: Knuuttila, S. – Kärrkäinen, P. (ed.), *Theories of Perception in Medieval and Early Modern Philosophy*. Dordrecht, Springer 2008, pp. 101–116). Averroes considers the pair heavy-light to fall within the domain of substance. Cf. Averroes, *Long Commentary on Aristotle's De anima*. Ed. R. Taylor. New Haven, Yale University Press 2009, Book II, § 109, p. 229.

“But the sense of touch does not correspond to one physical genus, for it would refer to only one contrariety, as the Philosopher made clear.”¹⁷ A genus can only have one contrariety; if there are more, they must then belong to a different genus, which suggests that the difference in touch is formal, or in Aquinas’s words: *formaliter loquendo* and *secundum rationem*.

b) Second thesis: active qualities are grounded upon passive qualities (as the form in matter), and their *real* correspondence makes the distinction of the senses possible.

According to Scotus, the formally distinct senses of touch are not numerically distinct, and yet are formally different. To justify this, he appeals to a series of sub-theses: (i) cognitive faculties correspond to their objects, (ii) the real relation between active and passive qualities corresponds to the formal relation between the different objects of touch¹⁸; (iii) more specifically, active qualities are grounded (*fundatur*) upon passive qualities, just as form is grounded in matter, because “*qualitates activae consequuntur compositum ratione formae, et passivae ratione materiae*” (q. 1.15). What this means is that if an organ can discern different active qualities not reducible to one natural contrariety, such an organ, while being materially one, may be formally more than one. And if some active quality is built upon a passive quality but the organ cannot discern it, then a different sense can also be built upon the first one and discern the new active quality. This allows us, e.g., to distinguish, in the first case, the formally different senses of touch, and, in the second one, between touch and taste.

Concerning touch, Scotus has said that its organ is not one formally but only materially (q. 1.17); thus, in the nerve there is a capacity that discerns between wetness and dryness, and another that discerns between coldness and warmth. These qualities, however, relate to each other, and thus they have usually been considered to belong to one sense (even if this is only true

17 See Physics I (trans. R. P. Hardie and R. K. Gaye, in: *The Works of Aristotle*. Ed. W. D. Ross. Oxford, Clarendon Press 1930, 6, 189b14), where, discussing the principles of motion, and whether there can be two contraries, two pairs of contraries, or three contraries, Aristotle writes: “Moreover, it is impossible that there should be more than one primary contrariety. For substance is a single genus of being, so that the principles can differ only as prior and posterior, not in genus; in a single genus there is always a single contrariety, all the other contraries in it being held to be reducible to one. It is clear then that the number of elements is neither one nor more than two or three; but whether two or three is, as I said, a question of considerable difficulty.”

18 See q. 1.15: “Sicut igitur se habent ad invicem obiecta sensus tactus, quae sunt qualitates activae et passivae, ita et potentiae tactivae. Modo ita est quod qualitates activae fundantur in passivis et se invicem concomitantur.”

when we consider the material organ of touch). When a different level of qualities is encountered, then a new organ is found (namely, taste), which is not distinct in the same sense as these qualities *se invicem concomitantur*, but rather, it is different *as taste*, so that a certain secondary quality (*tanquam qualitas secunda*) is the object, while still grounded in touch, following the Aristotelian *dictum* that “*gustabile est quoddam tangibile*” (422a8).

This means that the organ of taste is based on really distinct qualities from those sensed by touch. Thus, the difference between the sensible organs may be found not in the real distinctions between their objects, i.e., the study of natural qualities can serve for psychological analysis. It cannot be denied that the active qualities of taste are built upon the qualities of touch, for in the tongue we have different qualities for the senses of touch and taste, as per Scotus: “*et sic humor et potus per aliam qualitatem et aliam est gustabilis et tangibilis*” (q. 1.17). Touch, Scotus holds, is therefore the “most common of the senses and the grounding of the others, just as the vegetative soul makes a body animated, not in the sense that it is more perfect, just as taste is not the most perfect of the senses” (q. 1.19). Indeed, just as having more than one senses of touch does not multiply the animal soul into different levels or degrees, for they are grounded conjointly (“*in quocumque animali reperitur unus, reperitur alius, et in quacumque parte organi*”, q. 1.19), having five or six senses does not multiply the degrees of life or the five genera of faculties (vegetative, sensible, appetitive, motive, intelligible; cf. q. 1.16).

Comprehensibly, Scotus will admit in the end that between the two formally different senses of touch, “one is more perfect than the other, for it senses a more perfect contrariety, namely warmth and coldness” (q. 1.18). It is true that the sense of touch feels its different objects equally, but what Scotus claims this means is that it feels an equality of proportion (*aequalitatem proportionis*), not of conformity or perfection (*adaequationis et perfectionis*). Thus, being affected by wetness and dryness is more perfect than being affected by wetness and dryness. In an analogous way, both an eagle and an owl are perfectly disposed towards their natural objects, but “in absolute terms one is more perfect than the other” (q. 1.18). This will serve as the base to an important thesis later: a sense corresponds perfectly to its adequate object, but this perfection is relative to the faculty-object relation, and is not absolute, or rather is absolute only in the measure of the faculty’s proportionate correspondence towards its own act. This means that the consideration of how sense and object correspond is not simply the same as the consideration of the perfection of a faculty. I believe the reason for this ultimately rests on the degree of its dependence and proportion to matter: the more perfect a faculty is, the less it is depends on the material quali-

ties preceding its object. (The most perfect faculty, then, is the will, whose actualization is absolute *ex se*.)

c) Third thesis on the sense's dependency on matter

In question 2, Scotus aims to declare more carefully what the proper organ of touch is. Aristotle seems to favour the idea of flesh as the organ of touch in *De partibus animalium* II.8, but in Scotus's times the consensus seems to have been that flesh is an instrument or medium, with the nerves being the real organ of the sense of touch ("or something else in their place similarly coextensive throughout the body," q. 2.6). (Scotus excuses Aristotle, noting that the discrepancies in *De anima* II and in *De partibus animalium* are due either to Aristotle not having sufficiently studied the flesh and the nerves, or to him speaking imprecisely, as when he explains the place of the pupil in seeing.)¹⁹ The reason why nerves and not flesh are the best candidate for being the organ of touch is that the organ of an external sense should connect directly with the organ of the common sense, which Scotus allows to be "in cerebri vel in corde" (q. 2.7). Indeed, the common sense must be able to judge on the object of the external senses. Scotus admits of the possibility of nerves and veins being rooted in the heart, according to the Aristotelian opinion, or in the brain, "secundum medicos".

The ultimate reason for dismissing the flesh as the organ of touch appears in q. 2.8, where Scotus distinguishes between natural and animal virtues, i.e., natural properties and senses, which are the virtues or powers of the animal soul. Natural virtues are grounded in the flesh, which is a mixed body, but proper sensible objects lie in the animal virtues, which in turn are grounded in the veins and nerves (materially disposed to house the senses). Scotus correspondingly points out a difference between pure and nervous flesh: while pure flesh is merely a medium of touch, nervous flesh is properly the organ of touch, "for close to or next to each part of the flesh the nerves coextend throughout the body like a net. [...] It is through these nerves that the power of touch derives from the brain or the heart to all the

19 Averroes offers a similar view (*Long Commentary on Aristotle's De anima*, op. cit., § 108, p. 229): "Yet that account is contrary to the account in the book *On animals*; but nevertheless perhaps that account was in accord with what was apparent in that context, namely, what he knew about the parts of animals at that time, for then he still did not know about nerves and he said that the organ of that sense is the flesh. That account provides [the view that] the organs belong to those animals which are able to sense touch inside the flesh and this is consonant with that appeared afterwards through anatomy, namely, that the nerves have a passage for touch and motion. What, therefore, Aristotle knew by argument afterwards became apparent by sense."

body” (q. 2.9).²⁰ As sensible qualities can be felt throughout the body, the sense of touch must be coextensive with flesh, and this can only happen if the sense is in potency to receive sensible qualities – otherwise, a senseless portion of the flesh would quickly corrupt when hosting these active qualities. The sense of touch extends so that the flesh won’t be corrupted by the power of the sensible qualities, to preserve the convenience of animal life and to flee from noxious qualities.

The contiguous relation between flesh and nerves is decisive, since it helps us localize the medium in sensible knowledge. Is it necessary for touch to have an extrinsic medium? According to Scotus, it is not: first, because the medium must be deprived of the sensible objects of which it is a medium; but water and air are not deprived of sensible qualities. Secondly, if a sensible quality can be felt without a medium, the latter is not required (this is the case for example when we feel the cold air in winter). Thirdly, per Aristotle’s definition of *contiguous* things, touch and what is felt by touch are contiguous in place, and therefore there is no extrinsic medium. Fourthly, if there were an extrinsic medium, it would be affected before touch, and yet touch is not affected after the medium, but simultaneously with it.

Scotus picks up an important objection from Averroes, namely, that an animal cannot feel the medium surrounding it because such a place “is not a contrary, but conforms to what is in it” (q. 3.5). As every sensitive impression naturally requires an opposite,²¹ it is only natural that we are unable to feel our medium (viz. fish do not feel through water). Scotus, however, disagrees with Averroes: our sense of touch is in a real potency to reduce the tangible qualities to its act. A mixture is not necessary, for generation can occur without mixture in simple bodies (like water and air), and thus we are capable of feeling simple qualities, and not only mixed ones. Indeed, Scotus’s will point out that we can feel water and air as objects, and not as media.

The medium is related to the perfection of the sense, as we shall see in the next section.

For now it will suffice to say that touch is limited by its contiguous position to its object. Indeed, touch can feel accidental qualities “that are inherent or adherent to it, i.e., not existing in their own subject but in something else

20 In theory, wherever the sense of touch is, the organ should also be. But this is not the case e.g. in the head. Scotus answers that “it is not necessary that there be nerves in every part of the flesh; rather it is sufficient that they be close or next to it in a real or in a formal sense, and thus in every part in a virtual sense, for the power of the nerve existing next to any part can feel the tangible object. And to the improbation I say that in the brains there are cartilages instead of nerves” (q. 2.13), a fact taken from Avicenna.

21 Averroes, *Long Commentary on Aristotle’s De anima*, op. cit., § 115, p. 237: “it was already explained that the sensible is a contrary before the affection.”

next to it” (q. 3.13). Inherent qualities are felt without an extrinsic medium, like abscess pain. Adherent qualities, on the one hand, can be felt immediately without a medium, and on the other hand by a medium which is adherent but immediately tangible, as qualities that exist in fluids such as air or water, which we can feel without another mediating body. So, in response to Averroes, Scotus claims that in order for a medium to be felt as such, it must be deprived of tangible qualities “in every sense or according to its own excelling attributes” (q. 3.16). If the medium has a quality in an excelling fashion, we will feel it more than another, and even be impeded from feeling other qualities. And even if it were deprived of tangible qualities in every sense, we could only feel adherent objects that are immediately tangible. In sum, touch faces its medium as an object; only a higher sensible faculty directed towards a secondary quality built upon the qualities of touch can face its medium as deprived of the opportune qualities, so that the medium can act as such. This suggests a way to order senses and objects according to their perfection, which I will examine in the following section.

4. Hierarchy and perfection

Every sense has a proper formal object or quality that it can reduce to its own act, and is materially grounded in a corporeal organ (as, analogously, form in matter), and thus faculties are distinguished by their proper objects. Scotus follows these basic tenets while always stressing with great care the difference between the physical and the intentional planes,²² i.e., the physical or natural impression in the organ and the proper cognitive act.

Scotus clarifies the natural/intentional distinction by studying the role of the medium in the different senses. What happens when the medium, rather than the organ, is affected first? Scotus studiously separates two different but related distinctions. The first one pertains to the possible meanings of “affection” and has to do with the difference between the natural and the intentional planes. The second one refers to the ways in which the medium can be ‘active’ before the sense. Regarding this second question, Scotus employs it to ‘classify’ the senses in q. 3.18, wherein he states that “something can be said to be *prius* with regards to causality, temporality or location”. In light of these possibilities, vision can be said to be immutated by a medium which has been affected earlier with regards to place and causality, but not temporally, for vision is instantaneous. Hearing’s medium is affected earlier regarding causality, location, and time, as is the case with

22 Cf. Whitworth, A. F., *Attending to Presence: A Study of John Duns Scotus’s Account of Sense Cognition*, op. cit., pp. 166–169.

smell and taste. How do we distinguish the latter? In the case of taste, the affection of the extrinsic medium (saliva) is the cause of the organ's affection: the organ and the saliva are affected at the same time. In touch, the external medium is affected earlier in terms of location, but not in terms of time or causality (for the *clypeus* and *clypeatus* beat at the same time, but it is not the beat of the *clypeus* that makes the *clypeatus* beat). Air and water, as they exist *in re*, do not affect touch, but they do insofar as they are objects: for touch, the extrinsic medium is *accidentaliter* a requisite, as the animal cannot live without it. Touch is inseparable from the contiguous medium, while the rest of the senses gradually detach themselves from the contiguity with their object. This gradual detachment, in turn, marks their order of perfection.

Going back now to the first distinction, namely between the natural and the intentional *immutatio* of the organ, Scotus distinguishes two ways in which a passive subject can receive a form.²³ In one way,

according to the way of being in the agent, and this happens when the passive subject is predisposed to the way in which the form is in the agent, or to the way in which the matter of the agent is disposed to it: this is the case of natural actions, in which the agent and the passive subject communicate in matter. Sometimes the passive subject is not so predisposed, and thus receives without matter, not because it receives the form without matter in itself, or because it existed previously without matter, but rather because it receives the form without a preceding disposition towards matter (as opposed to the other way in which the passive subject receives the real form [...]). And this is the way in this case [sensation], because the sense is not predisposed to receive the species or form of the sensible object as prime matter is, and thus receives its species as a certain absolute quality. It thus follows that the sense faculty, without the essence of the soul, can feel, because when a total cause is given, its effect is also given (q. 5.8).

In other words, a sensible faculty receives the form of its object according to its disposition towards that form. This disposition corresponds to the properties of an object, so that a more perfect sense is predisposed to more perfect, secondary qualities grounded upon the first qualities of that object.

²³ For the original basis of these two kinds of *immutatio* in Aristotle's *De anima*, see his discussion on the senses of alteration in II, 5, 417a31 ff and 417b2 ff; cf. also Sisko, J. E., *Material Alteration and Cognitive Activity in Aristotle's De anima*. *Phronesis*, 41, 1996, No. 2, pp. 138–157.

The properties of the object affect the sense in two different ways: through a natural *immutatio*, through which “the sense is affected by the sensible in accordance with itself or its own being by which it exists *in re* (for example, in the way the sense of touch experiences warmth or another sense is altered in some way or moves according to place). The other one is a spiritual alteration [*immutatio animalis*], by which it is affected intentionally or spiritually by the sensible object” (q. 4.11).²⁴ In other words, “natural changes involve the recipient of the form becoming an instance of it; spiritual or animal ones do not.”²⁵

Vision is a special sense because it is affected “*spiritualiter tantum*”, while at the other end of the scale touch is affected both naturally and intentionally.²⁶ Touch’s organ is a mixed body, and its medium is flesh, which is naturally passive against the active tangible qualities. Still, in the sensible act of touch there is also an intentional affection, “for, if it were affected only naturally by reason of its being a natural mixed body, it wouldn’t feel tangible qualities, as is the case of wood or a stone, which are naturally affected” (q. 4.11). Indeed, and the whole natural-intentional distinction builds up to this thesis, “what constitutes a sense is the intentional affection”.²⁷

By combining these two distinctions, we obtain the final classification provided by Scotus:

From the diversity of the affections in the organ by the object and its conformation we can have the difference in the senses. Sometimes a sense is affected only intentionally, sometimes also

24 R. Cross acknowledges this difference when he asserts that the role of the species in medio is not strictly causal but precedes, nevertheless, the spiritual immutation (the proper act of perception). See Cross, R., *Duns Scotus’s Theory of Cognition*, op. cit., pp. 22 ff.

25 *Ibid.*, p. 34.

26 Scotus’s text reads here: “Tactus autem utramque immutatione immutatur realiter et naturaliter”. The editors suggest “naturaliter” should be read as “intentionally” or “spiritually”, where *naturally* here would mean in accordance with the nature of the sense. Helpfully, they add that it is hard to say whether “naturaliter” is here written because of an inadequate understanding of the text, a problem with the scribe, or perhaps “ex lapsu ipsius Scoti”.

27 Scotus adds here a theological reason for this. According to him and other scholastics, after the general resurrection of the bodies, sensible acts will be intentional only. In the present state, an intentional affection is caused by a natural one (cf. q. 4.12), but in the hereafter, natural bodies will not be capable of change in their natural qualities (“the damned, after the resurrection, will have the sense of touch and all senses in act, and yet will not be naturally affected”). Natural affection is possible for inanimate beings, and intentional affection is possible for the damned, but our present state requires both. Cf. q.4.13: “While an animal affection in the organ of touch or in another organ does elicit sensation, a natural affection does not, for a natural affection in the organ does not elicit sensation (it actually impedes it). The reason is that if without a natural affection it is possible to have an intentional one, the sensible object will be even more felt, as in the case of the damned. On the other hand, a natural affection in the flesh, which is a medium, will elicit sensation, by causing a similar affection in the organ, not by itself.”

naturally. If it happens in the first way, it is vision; if it happens in the second way, it can either be a natural change on the side of the object, or of the organ. If it is on the part of the object, either the affection happened through local motion, and this is hearing, which is affected by sound that multiplies itself in the air over to the hearing through local movement; or it happens through an alteration, and this is smell, which feels the odour proceeding from odorous things according to their being altered by heat [...] (There is no proper sense in the case of something affected by a motion in quantity, for quantity is a common sensible, not a proper one, and thus it should not be assigned to a proper sense.) If the affection is natural and on the part of the organ, we have taste and touch. They are different, because the organ of touch is affected by heat and the sensible quality that is its immediate object, or can only be immediately affected by them. Taste, however, cannot be immediately affected by flavour, which is its object, save by a humour next to the tongue. (q. 6.9)

The doctrinal undercurrent regarding the perfection of the senses should understand them, thus, as gradually becoming removed from the natural affection. In the case of touch, the reception is grounded in the contiguity between sense and object. The more perfect senses are grounded upon touch, but they can separate themselves more clearly from natural actions, giving way to a reception according to the medium. Vision, in turn, can receive its object through a purely intentional medium, lumen, defined by Scotus as a purely intentional quality. In the case of light, contiguity must be abandoned, if we are to see at all. For

in one sense, namely vision, there is a special cause, because a sensible put over the sense is not felt, as ‘colour cannot be seen without *lumine*’, and thus it must be seen by an illuminated medium. If colour were to be put on the organ of vision, it would obscure it, and thus it wouldn’t be able to see (q. 4.10).

In conclusion, Scotus thus holds that sensible acts require a natural *immunitatio*, even if only *in statu isto*. This controversial thesis is meant to highlight the fact that being naturally affected is a necessary co-cause of sensation, but it is by no means the formal *ratio* of sensation.²⁸

28 “Two partial causes concur towards the act of feeling on the part of man, namely, the sensible potency and the organ, and thus both are required and one is not enough for sensation, and

This in turn prepares the way for the proper perfection of the spiritual faculties: if a growing perfection allows sensation to depend less on natural causation, the intellect forms a present object spared of all media, as it only needs a certain *specification* from the object of the internal senses to determine itself towards its act; his actualization is, however, completely removed from the senses and sensible objects.²⁹ The will, on its part, is a faculty that determines itself, and can even determine itself to an object opposite to the one to which it has determined itself in this specific instant of time,³⁰ i.e., it can will the contrary of an object specified by the intellect. Even regarding its specification, the will is completely free.

Scotus adds a few pointers on the movement of the intellect and the will in q. 11. His principal thesis here is that it is improper to qualify the actions of spiritual faculties as a natural *immutatio*. To be moved by a natural cause, we should claim that the intellect, for example, is moved by a natural impulse from the object of the internal senses. But “if only *phantasmata* were needed to move the intellect and the will, then the intellect and the will would be purely passive faculties, they would not move themselves to their own acts, and it would follow that heavenly bodies could directly move them” (q. 11.7). This would be because incorruptible bodies necessarily move corruptible bodies. If they only needed *phantasmata* to be reduced to action, it would follow that the intellect and the will would be indirectly moved by the celestial bodies. The unfortunate consequence would be that “a bad fantasy would necessarily cause a bad will” (q. 11.7). But what if the will itself were able to form a good or bad *phantasia*? Then a bad *phantasia* would cause a wrong act of willing, but this would still be voluntary, “ratione primae voluntatis phantasiam formantis”. This is true, Scotus agrees, but it is an incomplete circuit, for the will itself is only moved through the intellect and *phantasmata*.

Scotus’s solution is that celestial bodies, being corporeal, cannot directly move our spiritual faculties (cf. q. 11.10). Now the caveat is this: “our *phantasmata* cannot sufficiently move our intellect and will”, because the act of the agent intellect is needed first in order to abstract the intellect’s object. This can be willed or not willed by our rational appetite. The spiritual faculties are thus not affected in their *exercise* by the medium in any way (and the

the sensible potency is as such inseparable from the organ. On the other hand, the intellective potency is the total cause of the act of cognition, and does not require any other cause on the part of man; and therefore it is called separable, because it does not *per se* employ an organ as an instrument” (q. 5.12).

29 Natural intellectual knowledge is obtained “ab intellectu agente et phantasmate” (*Ordinatio*, prol. 1^a pars, 17n. 61).

30 Cf. Dumont, S. D., *The Origin of Scotus’s Theory of Synchronic Contingency. The Modern Schoolman*, 72, 1995, pp. 149–167.

will even less so than the intellect), even if they need perceptual knowledge to determine themselves, to an extent.

5. Concluding remarks

The author of the *Quaestiones super secundum et tertium De anima* is not, of course, the mature Scotus. Still, as I have argued, he seems to follow a path of gradual separation of spiritual acts from matter, even to the point of obtaining insightful remarks about the nature of the world and of the soul according to the perfection of the cognitive faculties. While his treatment of the will is not as nuanced or detailed here as in his later works, he is already paving the way for the distinction between natural and rational (free) faculties.

Indeed, that Scotus is attempting to outline a strongly spiritual notion of willing is clear in his ‘corrections’ to Aquinas and Giles of Rome. According to Scotus, Thomas believes the intellect and the will “are passive firstly in regards to the *species impressa* of the object” (q. 12.6). The *species impressa* is then a *principium elicivum*, in the sense that the faculty is not the principle of eliciting an act of *this* concrete knowledge, but rather of eliciting a “*totum compositum ex potentia et specie*”. So, according to Scotus’s interpretation (to which Aquinas would probably object), the spiritual faculties are only a passive principle with regards to the species or determination of the act, while the formal principle of the act is the *species impressa*. For Scotus, this makes the *species impressa* the actual *ratio eliciendi* of the cognitive act.³¹ Indeterminate potencies, such as the human spiritual faculties, can only be reduced to an act by a determinant principle. For Aquinas, Scotus claims, the *species impressa* is what operates this reduction. What Scotus finds objectionable in this reconstruction (cf. q. 12.9ff) is that an action must be attributed in a greater degree to a formal principle than to a material one: indeed, it is only *through* the formal principle that an action can be attributed to the material principle. If the species were the formal principle of action, then the act of our spiritual faculties would be attributed to them to a lesser degree than to the species, which for Scotus is absurd: a species is not a faculty. (If per impossible these objects were made to exist outside a faculty, they would be in act with no faculty to reduce them to such an act.)

The questions on the *De anima* seem in the end to correspond adeptly to the mature Scotus’s great themes. The first part, containing his exposition of the senses, is perhaps not radically new, but it builds the main theme of a growing perfection of the cognitive faculties that sufficiently distin-

31 Cf. q. 12.7.

guishes their degrees of perfection according to Scotus's understanding of the successive partial or total co-causes of human actions: the object *in re*, the organ's immutation, the immutation of the medium, and the act of the faculties themselves.

In this way, Scotus also manages to account for formally distinct perfections in natural things as pertaining to the degree of the perfection of a sense, and when a superior sense can be grounded upon an inferior one, while still being able to formally grasp a *natura in re* in a more perfect or higher fashion. This is not a vacuous point. Indeed, the exposition of the growing perfection of the cognitive faculties and their objects sets the stage for the latter questions on the spiritual faculties, in which Scotus prepares the way for his theories of the univocity of being and human knowledge of God.³²

ABSTRACT

This paper aims to examine some of Scotus's key notions on perception in his Commentary on the *De anima*, focusing on the notions of sense, medium, and object. I will keep two main points of interest at hand: first, Scotus's understanding and reception of the philosophy of perception advanced by his contemporaries, in light of his own theory of the faculties, objects, and the perfection of their respective acts; second, the distinction and classification of the external senses according to their perfection.

Keywords: Duns Scotus, perception, sensible object, medium, intentionality

32 "Dans les QQ *De anima* : Scot soutient la these que l'etant n'est pas un analogue logique parce qu'il serait dans ce cas equivoque. Dans une certaine mesure, l' etant est univoque a Dieu et a la creature, mais en un sens que Scot n'explique pas." Noone, T., *L'univocité dans les Quaestiones super libros de anima*, op. cit., p. 269.

More Aristotelian than Aristotle. Duns Scotus on Cognizing Singulars

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1. Two metaphilosophical mindsets

Sense (or sensory) perception has been contrasted against rational cognition since the beginnings of philosophy – one might even be inclined to believe that such a distinction is necessarily woven into the very notion of philosophy as a *rational* attempt to get beyond *appearances* to the heart of reality. This almost inevitable association of reason, the νοῦς or λόγος, with that which truly is, τὸ ἔόν – whereas, on the other hand, mere appearances are the object of the senses – can be found as early as in Parmenides. Although the ancient and modern interpretations of his fragmentarily preserved poem known as *On Nature* vary considerably,¹ especially as regards the degree of reality or unreality of the world of plurality and change described in the mostly non-extant cosmological part of the poem, they agree in viewing Parmenides as distinguishing between the realm of rational cognition and that of ordinary experience, of which the former is clearly regarded, in some sense or other, as superior or more real. The strong association of intellectual knowledge with genuine reality in Parmenides can be documented by one of his most famous sayings, “τὸ γὰρ αὐτὸ νοεῖν ἐστίν τε καὶ εἶναι” – literally, “it is indeed the same, to think and to be”. However, at this early point of instruction it is hardly to be expected that Parmenides’s goddess would preach to him some kind of obscure idealistic monism or panpsychism that would seek simply to ontologically identify being, εἶναι, and thinking, νοεῖν. Rather, the phrase might be taken (and is often so translated) as saying something like

¹ Cf. e.g. Palmer, J., Parmenides. In: Zalta, Edward N. (ed.), *The Stanford Encyclopedia of Philosophy* (Fall 2016 Edition). [retrieved 12 March 2017] At <http://plato.stanford.edu/archives/fall2016/entries/parmenides/>; or Matson, W. I., Zeno Moves. In: Preuss, A. (ed.), *Before Plato. Essays in Ancient Greek Philosophy VI*. Albany, State University of New York Press 2001, pp. 87–108.

“thinking and being have the same scope”, or “the thinkable is the same as the real”.

Through these ideas, Parmenides can be seen as a representative, if not the father, of one especially strong metaphilosophical conviction which I will call *metaphilosophical Platonism*, a conviction that has thenceforward been part and parcel of what one might call “philosophical consciousness”, or maybe even “philosophical conscience”. It can be expressed with a simple maxim: never believe appearances, they can fool you; use your rational faculty to find out the true matter of fact. This maxim is the source of all “critical” philosophy, which likes to distance itself from the naïveté of the common, un-philosophical man;² the source of all philosophical revisionism, of all philosophers’ attempts to “correct” the alleged errors of common sense, etc. And quite often this metaphilosophical stance is, by its adherents, even regarded as the *only* truly philosophical stance.

I call this metaphilosophical paradigm of thought *Platonic* for the obvious reason that Plato seems to have been its most distinguished and influential proponent (albeit in a clear debt to Parmenides). Just recall the distinction between δόξα and ἐπιστήμη, corresponding to the distinct ontological levels of *genuine being*, or the realm of Forms accessible to reason, on the one hand and, on the other hand, the unstable, ever-changing world of that which merely partakes in being but never truly is – the realm of material things subject to sensory experience. Moreover, in Plato we find, for the first time, these two realms unambiguously associated with *universality* and *singularity* respectively: the Forms, the objects of λόγος, are universal, whereas the material things perceived by the senses are singular. Whitehead was right that in a certain sense the European philosophical tradition consists of a series of footnotes to Plato; and for that reason it is difficult for us, Plato’s heirs, to perceive the non-obviousness of the Platonic identification of the rational with the universal on the one hand, and of the sensory with the individual on the other. It is one of the purposes of this paper to help to regain a sense for the non-self-evidence – which is not to say falsity – of this view.

It is easy to see the motivation for general metaphilosophical Platonism: it can be seen as a natural response to the philosopher’s experience with error. Philosophy was born as a conscious and systematic quest for truth; but our bitter experience is that the success of such an undertaking is by no means granted. A philosopher is susceptible to error, and as soon as he becomes

2 Cf. Plato’s use of “οἱ πολλοί” in *Crito* (Plato, *Crito* 44c–d. Ed. I. Burnet. In: *Platonis Opera*, t. 1. Oxford 1900), and other passages denigrating the common view – like Plato, *Respublica* VII, 516e–517a. Ed. I. Burnet. In: *Platonis Opera*, t. 4. Oxford 1904; or Plato, *Phaedrus* 249c–e. Ed. I. Burnet. In: *Platonis Opera*, t. 2. Oxford 1902; recall the very term “naïve realism” etc.

aware of this condition (which, in a true philosopher, cannot take very long), he is motivated to search for the roots of all error and un-truth, so that he may avoid it. And given that philosophy is, by definition, a *rational* undertaking, he rarely ventures to identify *rationality* as the root of all error – or else philosophy would have to be given up as being futile. So, having made up his mind that rationality is, of its nature, truthful, i.e., reality-revealing, the philosopher naturally assigns deception to the other part of our cognitive make-up – the senses. This is, more or less, the traditional interpretation of the Parmenidean-Platonic mindset.

But Plato was not a mere developer and sophisticator of this basic Parmenidean pattern of thought, characterized by this unwavering confidence in rationality. As it happened, the unsophisticated Parmenidean approach in fact spawned the first serious crisis of rationality in the history of philosophy. In the thought of Parmenides, and even more so in Melissus and Zeno, the purportedly truthful, reality-revealing rationality strayed so far from what we might call the “common sense”, and, indeed, the common sensory experience, that the claim of such a λόγος to credence suddenly started to look quite absurd. In this situation, the sophists, differing so little in their means of argumentation from the method of Zeno, rejected the objective, reality-revealing valency of rationality and presented an entirely different interpretation of its nature and purpose. The philosophical project of Socrates and his pupil Plato was, in the first place, a *defence* of rationality as a means of access to objective reality; and such a defence, in the situation given, had to, at least to a certain extent, amount to a rehabilitation of rationality *as compatible with common sense*.

In other words: Plato’s epistemology and metaphysics *are* revisionist, but not *radically* revisionist. Plato is critical of “common sense”, the level of δόξα, but he does not reject it as worthless. He does not dismiss the realm of sensory experience as thoroughly unreal: he merely claims that it is not the *ultimate* reality, but a mere likeness or shadow of it, which has the capability to point back to its paradigm.

This “vindicative” aspect of Platonism or Socrateism became one of the most important sources of inspiration for Aristotle. What Aristotle learnt from Plato was first and foremost his anti-misology,³ his insistence on the capability of human reason to reach out to objective reality. But he disagreed with Plato’s view of what true objective reality was. The ultimate reason for that seems to have been that Aristotle did not share Plato’s metaphilosophy. He was not a metaphilosophical Platonist at all; rather, a contrary mindset found in him the first pronounced exemplification in the history of philos-

3 Cf. Plato, *Phaedo* 89c–90e. Ed. I. Burnet. In: *Platonis Opera*, t. 1., op. cit.

ophy – let me call it *metaphilosophical Aristotelianism*. While the driving principle of “Platonic” philosophies is distrust of everything pre-philosophical, superficially obvious or “matter of course”, for the “Aristotelian” approach to philosophy the common-sense, pre-philosophical understanding of reality is the best starting point and a permanent corrective of any deeper philosophical enquiry.

The distinction I am making here is similar to the one proposed by P. F. Strawson in his famous essay *Individuals*, where he distinguishes between *descriptive* and *revisionary* metaphysics.⁴ However, for Strawson, metaphysics is not concerned with anything beyond our *conceptual scheme*: and it is descriptive or revisionist to the extent that it (a) either merely describes it, or (b) attempts to change it. But at least until Kant, metaphysics can hardly be said to relate to conceptual schemes. Both Plato and Aristotle were concerned about *reality* in the first place, and so both were prepared to revise their conceptual representations of it. Thus, the distinction between metaphilosophical Platonism and metaphilosophical Aristotelianism does not consist in the Platonist’s determination to replace our current conceptual scheme with a better one and in the Aristotelian’s aim to merely describe it. Rather, it consists in a different assessment of the cognitive value of common sense, measured by its capability to reveal the nature of reality *an sich*. The Aristotelian’s determination is, just like that of the Platonist, to unveil the hidden nature of things; but, unlike the Platonist, the Aristotelian regards pre-philosophical preconceptions about that hidden nature as very relevant for the quest for a correct account.

I suggest that Aristotle did not regard Plato’s defence of the capabilities of human rationality as successful for these metaphilosophical reasons. Plato, after Parmenides, shaped his account of what true reality is according to his understanding of what rationality is. Aristotle objected that what true reality is is pre-philosophically given: it is the world of material individual things, subject to change, which we are all acquainted with. A philosopher may well be able to unveil deeper and perhaps more fundamental levels of reality, but he is in no position to legislate *a priori* that what is given as reality to us is not in fact truly real.

Aristotle’s subscription to the Socratean and Platonic project of rehabilitating human rationality thus assumed a quite un-Platonic shape. And Aristotle did not stop at that, but extrapolated this principle to cover not just human reason, but also the senses – *both* reason *and* the senses, according to

4 Strawson, P. F., *Individuals: An Essay in Descriptive Metaphysics*. London, Methuen 1959, p. 9: *Descriptive metaphysics is content to describe the actual structure of our thought about the world, revisionary metaphysics is concerned to produce a better structure.*

Aristotle, relate to genuine reality. On the other hand, despite this profound difference, Aristotle did not abandon the principles of his teacher altogether. Most significantly, he did not abandon the notion that a certain duality of objects corresponds to the duality of reason vs. senses. Aristotle's relation to Plato is often described by the metaphor of Aristotle taking Plato's ideas and immersing them in the particulars. This is quite right: Aristotle did not *identify* the world of ideas with the world of particulars: he just *immersed* the former in the latter. For him, it was still a matter of course that “the intellect relates to universals, whereas the senses relate to particulars”.⁵ Although there is one single common reality (rather than the Platonic hierarchy of levels), the two cognitive faculties do not share the same object. Matter, which in Platonism seems to be responsible for the “non-ideality” and “less-than-reality” of material things, seems to play an analogical role in Aristotle: it individuates the forms, to the effect that when reason wants to grasp them according to their universal nature, it has to “pull them out” of the matter, perform the Aristotelian ἀφαίρεσις. That means that, for Aristotle, forms – the successors of Plato's ideas – can still be grasped by the intellect only insofar as they are (or become) separated from the realm of material particulars. It seems, therefore, that Aristotle's account is not free from certain inner tension: on the one hand, Aristotle set out to save reason's capacity to grasp what is truly real – which, according to him, are first and foremost material particulars. On the other hand, he ended up with a theory according to which reason can only grasp something insofar as it is *not* material and *not* particular. Apparently, the project had not been brought to completion.

The insufficiency of Aristotle's solution manifested itself in the Aristotelian tradition by the so-called “problem of universals”. There were various attempts to solve it, but it seems that until the end of the 13th century the aforementioned duality or division of labour between the intellect and the senses was seldom taken into question.⁶ For example, it was still well and

5 Cf. Aristotelés, *Analytica posteriora* I, 31, 87b37–39. Ed. I. Bekker. In: *Aristotelis Opera*, t. 1. Berlin 1831: Αἰσθάνεσθαι μὲν γὰρ ἀνάγκη καθ' ἕκαστον, ἢ δ' ἐπιστήμη τὸ τὸ καθόλου γνωρίζειν ἔστιν. See also *Auctoritates Aristotelis*. Ed. J. Hamesse. In: Hamesse, J., *Les Auctoritates Aristotelis. Un florilège médiéval: Étude historique et édition critique*. Louvain, Publications universitaires–Paris, Béatrice-Nauwelaert 1974, p. 319: *Sensus est singularium, scientia vero universalium*.

6 For a standard account of the development of the views on intellectual cognition of individuals between 1225 and 1325 see Bérubé, C., *La connaissance de l'individuel au moyen âge*. Montréal–Paris, Presses de l'Université de Montréal–Presses universitaires de France 1964; for a clear and succinct overview see King, P., *Thinking About Things: Singular Thought in the Middle Ages*. In: Klima, G. (ed.), *Intentionality, Cognition, and Mental Representation in Medieval Philosophy*. New York, Fordham University Press 2015, pp. 104–121.

alive in Aquinas, as evinced by numerous passages,⁷ and even in the Augustinian *Doctor sollemnis* Henry of Ghent.⁸ In the rest of my paper I would like to explain how radically, despite appearances, Duns Scotus departs from this traditional conception, and then offer an interpretation of how this departure is to be understood in the context of the two rival metaphilosophical approaches described so far.

2. Duns Scotus on modes of intellecting singulars

Now the originality of Scotus does not consist simply in that he ascribed the capability to grasp singulars to the intellect. For one thing, Scotus was not the first to advocate the possibility of intellecting singulars – many of his immediate predecessors in the Franciscan line of thought, such as Peter John Olivi, Richard of Mediavilla or Vital du Four, did actually defend various incarnations of this position.⁹ Moreover, many of these pre-Scotistic thinkers were arguably *more* radical in ascribing the capacity of individual cognition to the intellect than Scotus. Scotus's originality is of a more subtle kind.

Scotus did not regard the traditional maxim “*sensus est singularium, intellectus vero universalium*” as exactly wrong, but rather as misguided and confused – as will soon be made clear. And from a certain point of view, his position heads in exactly the opposite direction than that of the Old Franciscan masters: rather than grant the capability of grasping singularity

7 Cf. Aquinas, *Summa contra gentiles* II, 66, 3: *Sensus non est cognoscitivus nisi singularium: cognoscit enim omnis sensitiva potentia per species individuales, cum recipiat species rerum in organis corporalibus. Intellectus autem est cognoscitivus universalium, ut per experimentum patet. Differt igitur intellectus a sensu.* Aquinas, *Summa theologiae* I, q. 86, a. 1, co.: [S]ingularis in rebus materialibus intellectus noster directe et primo cognoscere non potest. [...] Indirecte autem, et quasi per quandam reflexionem, potest cognoscere singulare, quia [...] etiam postquam species intelligibiles abstraxit, non potest secundum eas actu intelligere nisi convertendo se ad phantasmata, in quibus species intelligibiles intelligit [...] Sic igitur ipsum universale per speciem intelligibilem directe intelligit; indirecte autem singularia, quorum sunt phantasmata. Et hoc modo format hanc propositionem, ‘Socrates est homo’. On “indirect intellection” of individuals in Aquinas cf. Bérubé, C., *La connaissance de l’individuel au moyen âge*, op. cit., p. 13: *L’Aquinat estimerait que cette connaissance universelle constitue, par son lien avec la connaissance sensible directe du singulier, une intellection indirecte. A notre avis, cette innovation dans la terminologie n’implique pas une doctrine essentiellement différente [viz. from the doctrine of non-intellection of the individual]. Elle marque seulement un déplacement d’accent [...] L’individualité reste opaque à l’intellect mais la nature de l’individu lui est transparente.*

8 Henricus Gandavensis, *Quodlibet* IV, q. 21, co.: *Directe ergo et per se intellectus noster non cognoscit nisi universale abstractum a singulari. Indirecte autem et quasi quadam reflexione[,] convertendo se ad phantasmata in quibus sunt formae[,] sub ratione singularis [cognoscit].*

9 See Bérubé, C., *La connaissance de l’individuel au moyen âge*, op. cit., pp. 92–133; for an overview in English of the positions of Roger Bacon and Olivi see Denery II, D. G., *Seeing and Being Seen in the Later Medieval World: Optics, Theology and Religious Life*. Cambridge, Cambridge University Press 2005, pp. 120–124.

to the intellect, he denies it to the senses as well! Indeed, Scotus argues persuasively that the very singularity or individuality of things clearly is *not* perceived *whether* by the senses *or* by the intellect – or else we would be able to *perceive*, for example, which of two qualitatively perfectly similar objects is which:¹⁰

Third, I say that no cognitive faculty, be it intellectual or sensitive, can cognize particulars according to their proper singularity. For a faculty cognizing some object in such a proper aspect would be able to recognize and distinguish it from others, even if it disregarded all the other aspects. But if we keep just the proper singularities of two singular objects while removing all other aspects, we cannot distinguish them whether with our senses or with our intellect. An example: suppose two white things are presented to the sight, or two singular objects to the intellect, such that they are, as a matter of fact, essentially distinct, but have exactly similar accidents: the same place (like two bodies in the same place or two [superimposed] rays in a medium), exactly the same shape, size, colour, etc. In such a circumstance, neither the intellect nor the sense will be able to tell them apart.¹¹

10 Scotus's *Quaestiones super secundum et tertium De anima* [abbrev. QDA], quoted below, were once regarded as spurious and so disregarded by authors like Bérubé and Honnefelder (cf. Honnefelder, L., *Ens in quantum ens: der Begriff des Seienden als solchen als Gegenstand der Metaphysik nach der Lehre des Johannes Duns Scotus*. Münster, Aschendorff 1979, p. 229, note 246). The editors of the recent critical edition, however, argue convincingly that doubts about the authenticity of this work are unsubstantiated. The authenticity has been further confirmed by the (so far unpublished) research of the editors of Scotus's *Reportatio*, as reported by Cross, Richard, *Duns Scotus's Theory of Cognition*. Oxford, Oxford University Press 2014, p. 2, note 1, on the basis of personal communication by Stephen Dumont (Dumont also claims that their research points to a rather late dating of the QDA, viz. as late as 1298–1299, which would make them roughly contemporary with the *Lectura* (the editors suggest a dating to early 1290s, see OPH V: 143*). Unlike many earlier interpreters (listed in Honnefelder, *ibid.*), I think (and I hope this paper will show why) that there is no serious inconsistency between the QDA and the “canonical” works of Scotus on the present topic, especially the *Quaestiones super libros Metaphysicorum Aristotelis* [abbrev. QM]. I will therefore use this work freely (as Cross did in his book). Cf. note 53.

11 QDA q. 22, n. 26–27 (OPH V: 233–234): *Tertio, dico quod nulla potentia nostra, nec intellectiva nec sensitiva, potest cognoscere singulare sub propria ratione singularitatis. Quia potentia cognoscens aliquod obiectum sub propria ratione potest ipsum cognoscere et ab aliis distinguere, circumscripto quocumque alio non habente illam rationem; sed manente propria ratione singularitatis, amotis aliis, non possumus distinguere inter duo singularia, nec per sensum nec per intellectum; igitur etc. [...] Exemplum: si ponantur visui duo alba vel intellectui duo singularia quaecumque quae in rei veritate essent distincta essentialiter, si tamen haberent omnino consimilia accidentia ut locum – utpote duo corpora in eodem loco vel duo radii in medio illorum – et haberent figuram omnino consimilem et magnitudinem et colorem et sic de aliis, nec intellectus nec sensus inter ea*

To paraphrase Scotus's example: Suppose you are acquainted with Peter and Paul who are identical twins. Can you *see* which one is which? Of course, you can tell them apart if there is some minimal qualitative difference – a freckle or so –, but this is a *universal* trait, not a *singular* one, indefinitely replicable at least in principle (you can well imagine *both* of the twins having *exactly similar* freckles). So Scotus concludes, surprisingly, that *neither* the senses *nor* the intellect is able to grasp the “*propria ratio singularitatis*” – i.e., this particular singularity as such, the unique individuating feature proper exclusively to *this* particular thing.

Scotus struggled to offer an adequate explanation of the fact. He never denied that individual differences are intelligible *in themselves*, arguing that individuality involves some perfection, an addition of some “entity” to the common nature, and that there is no entity without intelligibility.¹² (After all, God certainly *does* know singulars down to their unique singularities.) Several texts reflect his view that singularity, although intelligible in itself, is incapable of exerting an *assimilative action* on our cognitive faculties.¹³ In a late interpolation to q. 15 of the *QM VII*,¹⁴ Scotus nonetheless develops (in two corrective steps) a position according to which the problem is not on

distingueret. Cf. a parallel passage in Scotus's *QM VII*, q. 15, n. 20 f. (*Oph IV*: 301f). For a detailed analysis (criticised below) see Honnefelder, L., *Ens in quantum ens*, op. cit., pp. 241–252.

- 12 QDA, q. 22, n. 17 (*Oph V*: 231): *Singulare est a nobis intelligibile secundum se, quia intelligibilitas sequitur entitatem. Quod igitur secundum se non diminuit de ratione entis, nec intelligibilitatis; sed singulare secundum se non diminuit de ratione entis, immo est actu perfectum. QM VII, q. 15, n. 14 (Oph IV: 298): Intelligibilitas absolute sequitur entitatem [...] Singulare totam entitatem quidditativam superiorum includit, et ultra hoc, gradum ultimae actualitatis et unitatis [...], quae unitas non deminuit, sed addit ad entitatem et unitatem, et ita ad intelligibilitatem.*
- 13 QDA, q. 22, n. 27 (*Oph V*: 235): *Cuius causa est principium agendi-assimilandi, quia agens intendit assimilare patiens sibi, et hoc specialiter est verum in cognitione quae fit per assimilationem; sed principium assimilandi non est singulare ut singulare, immo magis distinguendi (quia in singularitate [singularia] differunt), sed magis natura communis [est principium assimilandi] in qua singularia conveniunt; igitur singulare ut singulare non est principium agendi nec in sensu nec in intellectu. QM VII, q. 15, n. 22 (Oph IV: 302): Nulla potentia cognoscitiva in nobis cognoscit rem secundum absolutam suam cognoscibilitatem, in quantum scilicet est in se manifesta, sed solum in quantum est motiva potentiae. Quia cognitivae hic [in via] moventur ab obiectis; natura autem non movet secundum gradum singularitatis. Tum quia iste gradus non est principium actionis, sed limitativus principiorum actionis; tum [...] quia non est principium assimilandi, sed natura tantum, et idem est principium agendi et assimilandi. Cf. Ord. III, d. 14, q. 4, n. 123 (Vat. IX: 473–474): [I]sta negatio cognitionis singularium non inest nobis quia repugnat intellectui nostro, – conosceremus enim singularia sub propriis rationibus, in patria, sub eodem intellectu sub quo modo sumus (ut Deum sicuti est in se et nos ipsos), aliter nos non essemus beati; sed pro statu isto intellectus noster nihil cognoscit nisi quod potest gignere phantasma, quia non immutatur immediate nisi a phantasmate vel phantasiabili. Entitas autem singularis non est propria ratio gignendi phantasma, sed tantum entitas naturae praecedens illam entitatem singularem: illa enim entitas singularis non esset nata immediate movere aliquam potentiam cognitivam nisi intellectum; et quod nostrum nunc non moveat, est propter connexionem eius ad phantasiam. In patria autem non erit talis connexio; et ideo cum erimus beati, hoc ut hoc intelligeretur sicut est in se.*
- 14 *QM VII*, q. 15, n. 24–30 (*Oph IV*: 302–305).

the part of singularity at all, but purely on the part of the imperfection of our intellect.¹⁵ But whatever the correct explanation of that fact may be, Scotus is adamant that the proper singularity of any given particular is hidden from us *in via*.

However, to say that we cannot grasp the proper *ratio* of singularity is not to say that we cannot grasp *singulars* qua such. Quite the opposite: Scotus insists that we not only can perceive singulars with our senses (which is quite unsurprising), but that we also can grasp them with our intellect – even in “this state”, affected by the disastrous effects of Original Sin.¹⁶ By “grasping singulars” Scotus means at least three things:¹⁷

(1) We are capable of grasping one single thing and of distinguishing it from any other existing thing by means of what would nowadays be called a *definite description*: a combination of accidental features rich enough to pick up uniquely this particular thing.¹⁸ This is the only way we can intellectually grasp a *determinate* individual, i.e., an individual qua distinct from any

15 QM VII, q. 15, n. 25 (OPh IV: 303): *Ideo dicitur corrigendo, quod omnis entitas actualis cuiuscumque rationis est ratio agendi in intellectum actione intelligibilis, quia sic actus et intelligibile convertuntur.* QM VII, q. 15, n. 28 (OPh IV: 304). *Et tunc corrigitur, quod omnis entitas actualis est ratio agendi immediate in intellectum, qui capax est.*

16 QDA, q. 22, n. 20 (OPh V: 232): *Secundo, dico quod singulare est a nobis intelligibile pro statu isto.* QM VII, q. 15, a. 1, n. 14 (OPh IV: 298).

17 In QDA, q. 22 Scotus treats the three alternatives described below twice: once accommodated to the assumption that no *species intelligibilis* is needed (n. 34–35, OPh V: 237), once assuming its existence (n. 36, OPh V: 237); in n. 37 he summarizes the two accounts as follows: *quod autem in tali ordine fiat cognitio intellectus patet per praedicta, quia scilicet ars et cognitio intellectualis imitatur naturam. Dictum autem est quod natura primo intendit individuum vagum; secundum naturam in ipso; tertium, individuum signatum, quod est terminus generationis; igitur talis erit modus intelligendi, sive species ponatur in intellectu sive non.* Cf. also note 23.

18 QDA, q. 22, n. 34–35 (OPh V: 236–237): [T]ertio, *reflectendo considerationem naturae ad circumstantias signatas ad ipsam, per illas determinando individuum signatum, possumus intelligere utpote quia est hic et nunc et cum tali figura et magnitudine et colore et ceteris. Descriptio autem talis quam possumus habere in via de singulari, vel conceptus quicumque, non repugnat contradictorie [alteri] [...]. Dictus autem modus intelligendi singulare non est simplex, [...] sed compositus ex conceptibus multarum circumstantiarum universali conceptui additarum. Et hoc patet experimento: sicut enim res intelligimus, sic eas significamus et aliis exprimimus; sed conceptum singularis signati nullo alio modo exprimimus quam praedicto nec alios aliter scimus docere.* I have changed the strained punctuation of the first sentence in the critical edition – as printed, it reads: *Tertio, reflectendo considerationem naturae ad circumstantias signatas ad ipsam (per illas determinando) individuum signatum possumus intelligere, utpote quia est hic et nunc et cum tali figura et magnitudine et colore et ceteris.* (The editors are apparently trying to force the explicit statement that *possumus intelligere individuum signatum* out of the text, but that is unnecessary, given the clear context.) Cf. QM VII, q. 15, n. 32 (OPh IV: 306): [N]on tantum sunt aliqua secundae intentionis condiciones singularis experimentia, ut ‘singulare’, ‘suppositum’ etc., sed etiam aliqua primae intentionis, ut ‘individuum’, ‘unum numero’, ‘incommunicabile’ etc. *Natura igitur intelligitur determinata istis, et est conceptus non simpliciter simplex, ut ‘ens’, nec etiam simplex quiditativus, ut ‘homo’, sed tantum quasi per accidens, ut ‘homo albus’, licet non ita per accidens. Et iste est determinatior conceptus, ad quem devenimus in vita ista. Nam ad nihil devenimus cui, de ratione sua in quantum a nobis concipitur, contradictorie repugnet alteri inesse. Et sine tali*

other actual individual.¹⁹ Still, such an “individual concept” applies merely *contingently* to a given individual, precisely because it inevitably fails to include in its comprehension the only feature that is *necessarily* proper to *this particular* individual: the individual difference or “proper singularity” (“*propria ratio singularitatis*”).

(2) We are capable of grasping a “*singulare vagum*”:²⁰ that is, we grasp something qua an individual of a certain nature (for example, “a man”), but an *unspecified* one. That is, in this way we grasp an individual qua *an* individual, but not qua *this* individual: we somehow succeed in grasping a singularity, but without being able to tell *which one*.²¹

(3) Significantly, under the header of “*modi intelligendi singulare*”²² Scotus includes also the normal *universal* intellection of the (common) nature qua abstracted from the singularity.²³ We will return to the significance of this move below.

According to Scotus, these three ways of grasping individuals come in a certain order, which is different from that given above: we grasp the *singulare vagum* first (2), then we can abstract the common nature from it (3), and finally we may add some identifying descriptions to the concept so as

conceptu numquam intelligimus singulare distincte.” I have added the inverted commas around “ens”, “homo”, and “homo albus”.

- 19 As Cross (*Duns Scotus’s Theory of Cognition*, op. cit.), rightly points out in many places, this still does not amount to a *de re* cognition of the respective individual, i.e., to a cognition capable of distinguishing it from any other possible individual (as there are, presumably, infinitely many exactly similar possible individuals). Cross, however, seems to imply that this also precludes forming *de re* propositions (cf. *ibid.*, p. 46). I don’t see how that is the case: the fact that we cannot have *de re* knowledge of Peter that he is sitting (but merely *de dicto* knowledge that the particular satisfying just now the description associated with Peter is sitting) does not of itself preclude the possibility of our referring rigidly to whoever is satisfying the description just now and forming a *de re* proposition about that person. The impossibility of *epistemic de re* rapport with particulars does not seem to preclude the possibility of *semantic de re* rapport with them (viz. the Kripkean rigid reference).
- 20 The notion originates from Porphyry’s *Isagoge* and was later elaborated by Avicenna (and others), cf. Avicenna Latinus, *Liber primus naturalium: Tractatus primus de causis et principiis naturalium* 1. Ed. Riet, p. 12, l. 31 f. Scotus’s present exposition clearly echoes this Avicennian passage.
- 21 QDA, q. 22, n. 34 (OPh V: 236–237): [Si non ponimus speciem in intellectu sed tantum in phantasia,] [...] species in phantasia primo repraesentat singulare vagum in quod primo fertur cognitio intellectus (et hoc patet, quia aliquando primo intelligimus aliquod singulare, ignorando in qua specie est).” *Ibid.* n. 36 (OPh V: 238): “Si vero ponamus speciem in intellectu, [...] sic primo repraesentat naturam in supposito vago, quia illud se primo offert intellectui [...]” See also below note 53.
- 22 Cf. QDA, q. 22, n. 34 (OPh V: 234): Quarto dicendum, quoad modum intelligendi singulare...
- 23 *Ibid.*: [Species in phantasia, si non ponimus speciem in intellectu,] secundo repraesentat naturam absolute (quando scilicet intellectus fertur in naturam non considerando eius singularitatem [...])

to narrow it down to exactly one individual (1).²⁴ In other words: it is true that the intellect cannot grasp the essential individual difference as such and so has to emulate uniqueness of representation by means of an intersection of universals. On the other hand, the intellect is *not* prisoner to the realm of universals,²⁵ nor is its access to particulars merely secondary (like the Thomistic–Henrician *reflexio super phantasmata*²⁶). Quite the other way around: the intellect is aware *from the very start* that it is cognizing *something singular* (despite the fact that it cannot focus on any particular singularity as such).²⁷ What is secondary is not its rapport with the particulars, but its *universal* knowledge – and even that is still understood as universal knowledge *of particulars*.

3. Is singular intellectual cognition necessarily intuitive?

I will return shortly to the significance of this point; but before I do, I have to address one aspect of Scotus's teaching on the intellection of singulars that has so far remained obscure: namely the relation of this teaching as presented in his questions on the *Metaphysics* and on the *De anima* to his notorious distinction between abstractive and intuitive cognition. In recent interpretations of Scotus's theory of intellecting singulars this distinction usually plays a crucial role: often the question of the possibility of *singular* intellectual cognition in Scotus is either identified with or reduced to that of the possibility of *intuitive* intellectual cognition.²⁸ But so far I have been able to reconstruct Scotus's defence of intellecting singulars *without* any

24 See note 17. Cf. QM VI, q. 1, n. 94 (OPh IV: 35–36): *Hic nota ordinem intellectus nostri in intelligendo: quomodo confusum sensibile primo intelligit et in eo impercepte [or 'imperfecte', according to ms. G and Wadding/Vivès] communissima; deinde illa communissima percipit et distincta notitiā; deinde particularia distincte.*

25 This is basically the thesis of Pini, G., Scotus on the Objects of Cognitive Acts. *Franciscan Studies* 66, 2008, pp. 281–315; see esp. p. 303: [I]t is common natures and not individual things that are the objects of both sensory and intellectual acts. Not only can we not grasp that by which two individuals are distinguished; we do not even grasp individuals at all. A criticism of his position can be found in Cross, R., *Duns Scotus's Theory of Cognition*, op. cit., pp. 20–22; and a position similar to Cross is defended by King, P., *Thinking About Things*, op. cit., esp. p. 112. I agree with Cross and King; more on this below (cf. note 57).

26 See above notes 7 and 8.

27 Cf. QM VII, q. 15, n. 17 (OPh IV: 299): *Singulare [...] includit complete quidquid est intelligibilitatis in quocumque superiori. Non est ergo natum intelligi singulare ut pars inclusa in primo intellecto, sed tantum ut primum intellectum in quo alia quaecumque superiora per se intelliguntur.*

28 Cf. Bérubé, C., *La connaissance de l'individuel au moyen âge*, op. cit.; and Honnefelder, L., *Ens in quantum ens*, op. cit.; in Czech and Slovak also Sousedík, S., *Jan Duns Scotus: doctor subtilis a jeho čeští žáci*. Praha, Vyšehrad 1989, esp. pp. 50–52; Chabada, M., *Ján Duns Scotus: vybrané kapitoly z jeho epistemologie a metafyziky*. Bratislava, Vydavateľstvo UK 2007, esp. pp. 36–39; Cross, R., *Duns Scotus's Theory of Cognition*, op. cit., p. 74 f., establishes the existence of abstractive intellection of singulars in Scotus.

recourse to, or defence of, intuitive intellective cognition. That suggests that the presumed connection is in no way absolute.

Let me note first that the distinction between abstractive and intuitive cognition is consistently defined by Scotus in terms of abstraction from *existence* and *actual presence*,²⁹ never in terms of abstraction from *singularity*:

There is one kind of cognition that essentially relates to something existing, such that it grasps its object according to its proper actual existence. An example of this is the vision of a colour, or, in general, any perception by the external senses. And there is also another kind of cognition: that of an object not qua existing in itself, but either the object does not exist, or if it does, it is not cognized qua such. An example – imagining a colour: for it happens that we imagine something when it does not exist, just like when it does exist. And the same distinction can be demonstrated to hold for intellective cognition.³⁰

This quotation alone makes it clear that not all singular cognition – insofar as singular cognition is possible at all – is intuitive: since imagination (Scotus’s recurrent example of abstractive cognition) is no less singular than sensation. Furthermore, Scotus *explicitly confirms* the possibility of singular but abstractive *intellective* cognition:

There are two kinds of intellection: viz. quidditative intellection, the one that abstracts from existence, and the other that is called “vision” and concerns an existing thing qua such. And although the former usually concerns universals, it can primarily relate to something singular; and whenever it does, it takes the singular as its primary object. For a singular thing does not of necessity

29 I leave aside the “imperfect intuition”, sometimes mentioned by Scotus (cf. *Ord.* III, dist. 14, q. 3, n. 111 and 115 (Vat. IX: 467 and 469)), requiring a mere *past* or (even more confusingly) *future presence*. I take it that an imperfect intuition is not an intuition, just like an imperfect circle is not a circle. See Cross, R., *Duns Scotus’s Theory of Cognition*, op. cit., p. 62; Bérubé, C., *La connaissance de l’individuel au moyen âge*, op. cit., p. 184.

30 *Quodl.* 13, n. 8 (Vivès XXV: 521): *Aliqua ergo cognitio est per se existentis, sicut quae attingit obiectum in sua propria existentia actuali. Exemplum: de visione coloris et communiter in sensatione sensus exterioris. Aliqua etiam est cognitio obiecti, non ut existentis in se, sed vel obiectum non existit vel saltem illa cognitio non est eius ut actualiter existentis. Exemplum: ut imaginatio coloris, quia contingit imaginari rem quando non existit sicut quando existit. Consimilis distinctio probari potest in cognitione intellectiva.* For a reliable systematic treatment of intuitive cognition in Scotus see Cross, R., *Duns Scotus’s Theory of Cognition*, op. cit., esp. 43–63. Scotus’s most important texts are the following: *Quodl.* 6; *Quodl.* 7; *Quodl.* 13; *Quodl.* 14; and *Ord.* II, d. 3, p. 2, q. 2.

involve existence but is abstracted from it, just like a universal. The latter kind of intellection concerns “the whole all at once”, that is, the singular qua existing.³¹

In other words, since any intuitive cognition is “*simul totius*”, i.e., it grasps its object in its entirety and without abstracting from whatever belongs to it, it inevitably *somehow* includes its singularity as well as its common nature and existence. But from that it does not follow that intuitive cognition is the *only* way how to grasp something singular! And given Scotus’s often repeated principle that any cognitive perfection that belongs to a lower faculty (internal or external sense) must also belong to a higher faculty (the intellect),³² it seems that if there is abstractive sensory cognition of singulars, *abstractive intellectual cognition of singulars must be also possible*, at least in principle.

If this implication is taken seriously, it may explain why the possibility of *singular* (as opposed to *intuitive*) intellection is defended *independently* of the assumption that there is intellectual intuition both in the *Questions on De anima* and in the *Questions on Metaphysics* (the only two extensive treatments of the possibility in Scotus’s oeuvre). In the exposition in the *QDA*, intuitive cognition is not even mentioned: it may well be that these questions actually *predate* Scotus’s adoption of this doctrine³³ – but then Scotus’s defence of the possibility of intellectual cognition of singulars (despite our acknowledged incapability of cognizing singularity as such *in statu viae*) also predates his theory of intuitive cognition, and so is in fact independent of it! The *QM* as originally written³⁴ do mention intuitive intellection, but only to argue that the singular is “*primo intelligibile*” in relation to *both* kinds of intellection, intuitive *and* abstractive;³⁵ and the final exposition of the way

31 QM VII, q. 15, n. 18 (OPh IV: 300): *De tertio, intellectio duplex: una quiditativa, quae abstrahit ab existentia; alia, quae dicitur uisio, quae est existentis ut existens. Prima, licet sit communiter respectu universalium, tamen potest esse primo respectu singularis. Et quandocumque est singularis, est eius primo. Non enim singulare ex se determinatur ad existentiam, sed abstrahit, sicut et uniuersale. Intellectio secunda est simul totius, id est, singularis in quantum existens.*

32 Cf. e.g. Quodl. 6, n. 8 (Vivès XXV: 243): [...] *omnis perfectio cognitionis absolute, quae potest competere potentiae cognitivae sensitivae, potest eminenter competere potentiae cognitivae intellectivae [...]*; Ord. IV, q. 3, n. 137 (Vat. XIV: 181): [...] *perfectior et superior cognoscitiva in eodem cognoscit illud quod inferior [...]*

33 See note 10.

34 On the later interpolation (see note 42) where Scotus discusses intuitive intellection in some detail see below.

35 QM VII, q. 15, n. 13 and 18 (OPh IV: 289–300): *De primo articulo primo videndum est, quomodo singulare sit per se intelligibile. Secundo, quomodo est ‘primo intelligibile’. Tertio, quomodo dicitur sumptum sic ‘primum intelligibile’ respectu duplicis intellectionis. [...] Ad tertium, intellectio duplex [...]* (see note 30 for the continuation of the quotation).

in which we actually grasp singulars does not make any use of it, agreeing in general outlines with the “intuition-free” treatment of the *QDA*.³⁶ So it must be acknowledged that Scotus conceived, at least originally, his defence of the intellectual cognition of singulars *independently* of his theory of intellectual intuition.³⁷

This is something that interpreters often misrepresent or conceal. Bérubé wants Scotus (in contrast to his Franciscan predecessors) to understand direct intellectual cognition of singulars as exclusively *intuitive*. Therefore, he must disregard the *QDA* as spurious, identifying their doctrine as an ill-advised amalgamation of Scotus’s genuine theory and that of Vital du Four.³⁸ He cannot set aside the *QM*, however, and so he relegates their treatment to a separate chapter in his book and presents it as defending a mere “indirect intellection” of singulars (“l’intellection indirecte Scotiste”) – an unsatisfactory step backward from the contemporary Franciscan “direct intellection” theories that needs to be supplemented with Scotus’s brilliant theory of intuition.³⁹ However, the term “indirect intellection” is Bérubé’s own: Scotus never uses it to describe his own position. Instead, he explicitly *rejects* the Thomistic–Henrician theory of the paradigmatically indirect *reflexio super phantasmata*⁴⁰ and in his own account insists that there are not only

36 Cf. above, notes 18–23.

37 King, P., *Thinking About Things*, op. cit., pp. 113–114, argues for the opposite (Scotus clearly intended *intellective cognition to be addressed to the issue of singular thought* [...], p. 113); but he claims that Scotus’s motivation was not *epistemological* (viz. to provide grounding for contingent truths) but *psychological* (viz. to explain how singular thought is possible at all); and he notes Duhem’s observation that Scotus was first moved to consider intellectual intuition in connection with his worries about the possibility of the Beatific Vision. My suggestion goes in the same direction as King’s but further: it seems to me that Scotus came to defend intellectual intuition for psychological reasons indeed, but not in order to explain the *singularity* of Beatific Vision (and other instances of intellectual intuition), but to explain its immediate, *face-to-face* character: that it is indeed a *vision* (Quodl, q. 13, n. 8 (Vivès XXV: 521): [...] *alioquin posset aliquis esse beatus in obiecto, esto [...] ipsum non esset existens* [...]), i.e., the only kind of cognition that *acquaints* us with its object and so guarantees its actual *reality* for us. Cf. Cross, R., *Duns Scotus’s Theory of Cognition*, op. cit., pp. 45 and 47, citing Ord. IV, d. 45, n. q. 2, n. 65 (Vat. XIV: 157–158). In the context of late medieval Franciscan thought, the possibility of singular cognition was not a problem; it is evident that we have singular thoughts all the time. The possibility of *intellective vision*, however, is not evident at all: Scotus originally believed it to be impossible *in via* QM II, q. 2–3, n. 81 (OPh III: 225): [...] *in intellectu, notitia visionis vel intuitiva* [...] *non est possibilis in via* [...] – this is rejected in a later addition, *ibid.*, n. 111 f., p. 231 f.), and even late in his career still considered it to be “not as evidently experienced by us as abstractive cognition” (Quodl. 6, n. 8 (Vivès XXV: 243): [...] *quem tamen non ita certitudinaliter experimur in nobis* [...])

38 Bérubé, C., *La connaissance de l’individuel au moyen âge*, op. cit., p. 224.

39 *Ibid.*, p. 175.

40 QM VII, q. 15, n. 31 (OPh IV: 305). Bérubé misunderstands Scotus as *endorsing* the view, which Scotus only briefly mentions as unsatisfactory. Scotus’s dissatisfaction with the Thomistic theory is evident from q. 14, where he discussed in detail but after listing a series of objections against it decided to abandon the question altogether and make a fresh start, resulting in the

second intention terms expressing singularity (like “singular” or “supposit”), but also *first intention* terms of such kind (“individual”, “numerically one”, “incommunicable”).⁴¹ This is equivalent to acknowledging a *direct* intellection of singulars – still without any mention of *intuition* –, as first intentions apply *directly* to reality, whereas second intentions only apply directly to first intentions and as such represent a *reflexive* cognition that relates to reality merely *indirectly*.

Honnefelder’s strategy, even though he never criticizes Bérubé, is quite different: he presents the *QM* treatment as an answer to the “*Frage nach der intuitiven Erkenntnis des existenten Singulären*”⁴² – i.e., takes it as explaining and defending *intuitive* intellectual cognition. But q. 15 of *QM* VII never asks such a question. The extended passage in which intuitive intellection is discussed is a later interpolation,⁴³ of which the purpose is to offer a better justification than originally given for Scotus’s thesis that singularity as such is incognoscible to us *in via*. For Scotus has grown dissatisfied with the premise from which he originally deduced this thesis – viz. the premise that singularity as such cannot act upon a cognitive power, because as such it does not function as a “principle of action”, but rather as a “limiting factor of a principle of action”.⁴⁴ Scotus objects to his younger self that if this argument were sound, it would make singular intellection impossible for any passive intellect, i.e. also for the angels – which cannot be admitted.⁴⁵ The ensuing discussion is an attempt to find such balanced principles that would

q. 15 (cf. the editors’ note 1 to q. 14, OPh IV: 281). A similar structure is found, in a simpler but more finished form, in the QDA, where too Scotus first states the Thomistic theory (n. 10–11, OPh V: 229–230), then rejects it (n. 12–16, OPh V: 230–231) and then presents his own solution to the question (n. 17f, OPh V: 231f). Bérubé, believing that Scotus endorses the *reflexio super phantasmata*, conflates it with Scotus’s genuine theory of descriptive cognition of the singular – cf. Bérubé, C., *La connaissance de l’individuel au moyen âge*, op. cit., p. 169: *Cette reflexio ad phantasmata est un acte par lequel l’intellect réunit, dans un concept unique, toutes les données de la connaissance sensible préalablement universalisées par l’intellect agent et exprimées par l’intellect possible en autant de concepts distincts. Ce est proprement [...] une determinatio rei singularis per conceptus universales.*

41 See note 18.

42 Honnefelder, L., *Ens in quantum ens*, op. cit., p. 241: “Die Frage, was vom Gegenstand in seiner Existenz und Gegenwart im einzelnen intuitiv erkannt wird, ist damit noch nicht geklärt. Eine nähere [...] Antwort gibt Met VII q. 15 [...]”

43 *QM* VII, q. 15, n. 24–30 (OPh IV: 302–305).

44 *QM* VII, q. 15, n. 22 (OPh IV: 302): [I]ste gradus [singularitatis] non est principium actionis, sed limitativus principiorum actionis. Cf. note 13.

45 *QM* VII, q. 15, n. 24 (OPh IV: 303): *Sed hoc, si esset verum, concluderet, quod angelus non intelligit singulare, ita quod singularitas sit modus intellecti, quia eius intellectus est passivus.* That means: an angelic intellect, just like ours (but, assumedly, unlike the divine intellect), cognizes by being acted upon by an object; therefore, if some object, albeit intelligible in itself, could not exert such an action, the angelic intellect could not cognize it.

still account for the unintelligibility of singularity for us humans *in via*, but without endangering its intelligibility for angels.

As for intuitive intellection, it is discussed in this context not as an “Antwort” to a “Frage”, but as an *undisputed fact* that needs to be taken into account in any exact delineation of the nature of the intelligibility/unintelligibility of singularity for us and for angels. Moreover, this fact is never played out as an immediate confirmation of singular intellectual cognition, as it perhaps might be expected. Quite the opposite: the *singularity* of intuition is being “bracketed” in the arguments, the focus being on its grasping the *existence* of its objects.⁴⁶ Even the long final paragraph of this interpolation,⁴⁷ rejecting any role of the active intellect in intellectual intuition, belongs to this context: viz. that of precisely delineating the possibility and requisites of immediate passive cognition for human and angelic intellects. And while it may be legitimate to mine a text for answers to questions the text never asks, in doing that one should not overlook the questions the text *does* ask and the answers it explicitly gives. In this case, one should not overlook

46 Most obviously in QM VII, q. 15, n. 27 (OPh IV: 303): *Contra: intellectus noster habet aliquam intellectionem, quae dicitur visio, quae potest esse naturae existentis sine visione singularitatis, sicut visus oculi videt. Ergo intellectus noster est immediate receptivus actionis a re; ergo a singulari.* Note well the structure of the reasoning: Scotus does not argue (nor does he want to argue here) that we have singular intellection because we have intuitive intellection. What the argument (an objection against a provisional conclusion) precisely needs to establish at this point is the intellect’s capability to be *immediately acted upon* by singulars. And this is not drawn as a trivial implication of the notion of intuitive cognition; the argument is constructed in a surprisingly complicated way: We have “intellectual vision”; that involves acquaintance with an *existing* nature, even if its *singularity* were, as such, not “seen”. Therefore, our intellect is capable of being immediately acted upon by *a thing* (because – this is an unstated premise – only an immediately acting object is required to actually exist at the moment of its action); and so (since everything that exists is singular – another unstated premise) the intended conclusion finally follows.

47 Honnefelder, L., *Ens in quantum ens*, op. cit., 246, note 291; quoting QM VII, q. 15, n. 30 (but from the Vivès ed.): *Ulterius, de intellectu agente potest dici quod non habet actionem circa [i]ntelligentiam, et ideo nulli obiecto coagit in intellectione visiva, quae est immediate in intelligentia [thus mss. CGKLM; intellectiva in OPh and Wadding/Vivès], non mediante specie in memoria: tunc enim non esset visio. Sed nec intellectus agens obiecto nato intelligi visive coagit ad speciem in memoria, quia illa fit ab illi mediante visione, et ita ab [i]ntelligentia, non ab intellectu agente. Itaque, cum omnis entitas, quae est actu in re, nata sit ab angelo videri, nulla requirit intellectum agentem. Nec in nobis natura quae nata est videri, et est actu in re, ut natura. Sed nec in nobis respectu singularis, quia si esset natum movere intellectum nostrum, esset ad visionem. Universale ut universale non est actu in re, et ita non est actu sub ratione talis intelligibilis nisi fiat in memoria, quia intelligentia praesupponit actu intelligibile; ergo non potest fieri in memoria ab intelligentia, sed tantum ab intellectu agente (non a re tantum, quia nec sic est indeterminata, nec nata est sola agere nisi in intelligentiam). Itaque in angelo et nobis tantum propter universale est intellectus agens.* I have slightly modified the punctuation and removed, as indicated by the brackets, the capricious capitalization of “intelligentia”. Clearly, all the occurrences of “intelligentia” in this passage just mean “the (passive) intellect” and not “an immaterial substance”. Honnefelder’s correct paraphrase (based on the uncapitalized Vivès ed.) reflects this.

that the text of *QM* VII, q. 15 asks how intellective cognition of singulars is possible, and its actual answer to this question does not mention intellectual intuition at all.⁴⁸

I conclude that Scotus, at least originally,⁴⁹ defended the possibility of intellective cognition of singulars *without requiring it to be intuitive*. In other words, he admits for a *non-intuitive* intellection of singulars. How should one make sense of this position?

4. A distinguished voice

Many distinguished Scotists believed that Scotus indeed defended some kind of genuinely individual direct abstractive intellection by means of some kind of individual intelligible species, and their judgement should not been taken lightly. So e.g. the Prince of Scotists, Bartolomeo Mastri (1602–1673), together with his unduly neglected co-author Bonaventura Belluto (1600–1676),⁵⁰ rejected intellectual intuition of extramental particulars *in via*,⁵¹ but defend abstractive intellection of singulars.⁵² In this connection, the Baroque Scotists offer a crucial insight (which they credit to the Paduan Scotist Antonius Trombetta, 1436–1517):

It is worth noting what Trombetta says [...], viz. that it is one thing to say that a singular is grasped according to its singularity so that singularity is the very aspect under which it is being grasped,

48 Honnefelder disposes of the relevant passage of q. 15 in a parenthetical remark in footnote 291 (p. 246), merely observing that “in the following section of the question Scotus talks about the indirect abstractive cognition of singulars” and refers the reader to Bérubé.

49 It may be that as the theory of intuitive intellection emerged and gained prominence in Scotus’s thought, it eventually came to “absorb” his older conception of abstractive singular intellection. Whether and how this happened is not my concern here.

50 B. Mastrii et B. Belluti *Philosophiae cursus integer ad mentem Scoti*, t. III, De anima, disp. 6, q. 7, n. 202f (Venetiis, Pezzana 1727: 175 f.); cf. the criticism by Bérubé, C., *La connaissance de l’individuel au moyen âge*, op. cit., p. 207 f.

51 *Ibid.*, n. 203, (1727: 175b): *Quoad cognitionem intuitivam dicendum est quod licet singulare materiale, et sensibile, quod nimirum subest accidentibus hic, et nunc quantitati, qualitati, etc. hoc genere cognitionis non attingitur ab intellectu nostro pro statu isto, absolutè tamen attingi potest, imò de facto attingitur ab intellectu angelico, et humano soluto.*

52 *Ibid.*, n. 203 (1727: 175b): *Quo autem ad cognitionem abstractivam dicendum est, singulare materiale, et sensibile non solum absolutè loquendo esse per se, et directe intelligibile, sed etiam à nobis pro statu isto proprio, ac directo conceptu attingi, ac proinde per propriam speciem, licet (non) ita propriam, ut illud repraesentet sub propria ratione singularitatis.* The word “non”, clearly required for sense, is missing in the two editions I consulted (1727 and 1671), but is present in Bérubé’s quote from the 1678 edition (p. 207, note 3) and argued to be necessary by Heider, D., *Universals in Second Scholasticism*, Philadelphia, John Benjamins Publishing Company 2014, p. 255, note 844. Heider provides a detailed analysis and a defence of Mastri and Belluto’s position.

and quite another thing is to say that singularity is the grasped object, or part of the grasped object. In the first way, singularity is not conceived by us, because to conceive it thus would mean to conceive it distinctly and separately from another singularity and from the nature or quiddity to which it belongs. In the other way, however, singularity is well conceived, and grasped by us, since whenever an object is conceived adequately, whatever is really and essentially included in it is secondarily and by consequence conceived as well. But the whole singular is thus grasped as the object of one intellection, and so the singularity in it will also be conceived – albeit not so that it should be the mode of the grasped object or the aspect under which it is being grasped.⁵³

Mastri and Belluto are essentially saying that to deny that singularity is grasped by us *as such, distinctly*, i.e., so as to allow us to distinguish it from any other reality, be it a common nature or another singularity, is not yet to say that it is not grasped at all; let alone to deny that *singulars* are grasped! So even when conceding that singularity as such is unknowable to us *in via*, there remains plenty of conceptual space not only for cognizing the singular, but even for the cognition of a singular *qua singular* (though not *qua this singular*): the “*singulare vagum*” from the *QDA*.⁵⁴

53 Mastri, *ibid.*, n. 215 (1727: 178a): *Notandum est ex Tromb. cit. ar. 2. quod aliud est singulare intelligi sub ratione singularitatis, sic quod singularitas sit ratio intelligendi, aliud est, quod singularitas dicatur esse objectum intellectum, aut pars objecti intellecti, primo modo singularitas non concipitur à nobis, quia sic concipere singularitatem est concipere {ipsam} {ipsam} distinctè, et seorsum ab alia singularitate, et à sua natura, seu quidditate: secundo modo singularitas bene concipitur, et intelligitur à nobis, quia quando aliquod unum objectum concipitur ad(a)equatè, quicquid realiter, et essentialiter includitur in illo, secundario, et ex consequenti concipitur, sed totum singulare sic intelligitur, tanquam objectum adaequatum unius intellectionis, ergo etiam concipitur singularitas in ipso, non tamen sic, quod sit modus objecti intellect{u}, aut ratio intelligendi [...]* (Typos corrected according to the 1671 edition.)

54 Mastri and Belluto agree with me in not perceiving any real inconsistency between the *QDA* and *QM* accounts of intellection of individuals but cite them as parallel sources of essentially the same doctrine: cf. e.g. *ibid.* (1727: 178a), n. 214 in the beginning or n. 215 in the end. It is to be acknowledged, however, as an anonymous reviewer pointed out, that the term *singulare vagum* is unique to the *QDA*, which might suggest that Scotus later rejected the notion and the associated doctrine. I don't think this is the case, however. The notion of *singulare* (or *individuum*) *vagum*, originating in Porphyry's *Isagoge*, is a well-established part of scholastic logical semantics, and so unlikely to be entirely abandoned by a scholastic author (cf. Ashworth, J., *Medieval Theories of Singular Terms*. In: Edward N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy* (Winter 2015 Edition). [Retrieved 28 September 2017] At <https://plato.stanford.edu/archives/win2015/entries/singular-terms-medieval/>). Rather, what seems to me to have happened is the following: in the *QDA*, which is a rather didactic, introductory-level work (cf. the editors' introduction, § 4.A (OPh V: 139*)), Scotus modelled his exposition according to the standard Porphyrian account of singular terms; whereas later, in the *QM*, he approached the matter in a

5. Conclusion

For my main purpose it is not necessary to dwell upon the thesis that Scotus recognized a kind of abstractive cognition of singulars *qua singulars*: for I want to claim that according to Scotus we *do cognize that which is singular* by means of abstractive rational cognition, *whether that cognition be singular or universal*. Consider this potentially surprising passage, answering the question whether a universal is something in reality:

Regarding the second horn of the question, viz. whether it [the universal] is in reality, I respond: to be in the intellect in the first or second way means nothing else but to have a relation of reason to the intellect. But that which is in reality does indeed have such a relation; therefore that which is universal is in reality.⁵⁵

At first sight (and without the context), this passage might be understood as making a kind of ultra-realist claim that universals do, as such, actually exist in reality. However, it would be a mistake to read Scotus in this way. This passage follows after Scotus's sophisticated analysis of the process of abstraction, where he makes it clear that, as Averroes had said, it is the abstracting intellect which "produces universality within things".⁵⁶ According to Scotus, anything that really exists or can exist is *singular*; there are no universals in reality.⁵⁷ So how can Scotus suddenly proclaim that *that which is universal is in reality*?

The answer is very simple, and it is the point of Scotus's understanding of the relation between the universal and the individual. According to Scotus, universals and particulars are not two different kinds of objects (whether separated or immersed in each other) – unlike Plato, and, I should say, unlike Aristotle, Aquinas, and many others. The particulars are the *only* objects that there are, and they have no universal parts, principles or ingredients.⁵⁸ So whenever we cognize something real, we just cognize one or more particu-

more independent and speculative way, elaborating essentially the same doctrine but not feeling the need now to connect it explicitly to the schoolish Porphyrian terminology.

55 QM VII, q. 18, n. 58 (OPh IV: 354): *Quoad secundum membrum quaestionis, scilicet an sit in re, responsio: esse in intellectu primo modo vel secundo non est nisi habere relationem rationis ad intellectum. Illud autem, quod est in re, bene habet istam relationem; ergo illud quod est universale, est in re.*

56 Cf. QM VII, q. 18, n. 26 and 46 (OPh IV: 344 and 350).

57 QM VII, q. 15, n. 30 (OPh IV: 304–305); cf. Honnefelder, L., *Ens in quantum ens*, op. cit., p. 246, note 291.

58 The common nature, of course, is not universal in reality (although the selfsame common nature that is universal in thought is also out there in reality, individualized).

lars. But – and this is the fundamental insight –, we have the capability to grasp these particulars without at the same time grasping their particularity. Inasmuch as we do so, we are said to conceive a universal – but still, this conceived universal is nothing else but the selfsame particular existing in reality, conceived in a certain special, selective way. Universals are not a special sort of objects: they are particulars conceived in a special way.⁵⁹

So, for Scotus, there is just one single realm of cognizable objects: the realm of things that do or can really exist – and all these things are individual. All our cognitive faculties relate to this single realm of objects (or, in case of the senses, to some of its sub-classes), but they do so in different ways.⁶⁰

Notice how this approach differs from that of Aristotle or Aquinas: these “traditional” thinkers start with the old Platonic notion that there are two kinds of objects – universals and particulars – correlated with the two kinds of cognitive faculties – the intellect and the senses –, and then go on to solve, successfully or not, the associated problems, such as:

- How is the realm of universals connected with, or “immersed in”, that of the particulars?
- How can the intellect ever transcend the realm of universals proper to it and think of individuals – which it obviously does?

and so on.⁶¹ And notice further how Scotus completely divorced his account of abstraction from the Aristotelian talk about forms being “pulled out of the

59 This is the ultimate reason why Bérubé’s (and Honnefelder’s, see note 47) labelling Scotus’s theory of non-intuitive intellectual cognition of particulars through universals as “indirect” is misguided. For Scotus, when particulars are grasped by means of universals, they are grasped by means of *themselves*, i.e., *directly*, not indirectly as if through something else! And this is also the reason why Pini’s conclusion that according to Scotus we “do not grasp individuals at all”, given that the object of our cognitive acts is always the common nature, is out of place: even if Pini were right (and Mastri wrong) that singularity is never “part of the content of our cognitive acts” according to Scotus (Pini, Scotus on the Objects of Cognitive Acts, *op. cit.*, p. 282), it would not follow that *individuals* are not the objects of these acts. Scotus’s common natures are really identical with individuals, and so by conceiving common natures we *eo ipso* do conceive individuals.

60 Note that this radical change of perspective in Scotus is not immediately related to Scotus’s position on the realism–nominalism scale. The fact that for Scotus there is just one single type of cognizable objects, viz. the particulars, does not make him more (or less, for that matter) nominalist than, say, Aristotle or Aquinas. Scotus’s approach *does*, of course, set the stage for Ockham’s nominalism, but is, of itself, fully consistent with Scotus’s own strong realism involving formal distinctions, less-than-numerical unity of common natures, and so on. It is more a change in how the entire realism–nominalism scale is conceived than a shift along that scale.

61 Again, ascribing this kind of Platonic dualism with respect to universals and particulars to Aristotle and Aquinas is not to ascribe Platonic realism of universals to them. Aquinas, e.g., despite being a dualist in the described sense, is actually *less* realist than Scotus, at least according to the common wisdom. It might perhaps be argued that, ultimately, there is a certain tension between this Aquinas’s dualism and his anti-Platonism in the problem of universals (indeed,

matter". Scotus's abstraction is not the Aristotelian ἀφαίρεσις, it does not consist in separating one kind of objects from another. Universal cognition has nothing to do with de-materialization for him, with pulling the natively universal forms out of the individuating matter. Forms, like matter, are individual in reality⁶² – as everything is – but, like anything that is individual, they can be grasped in a universal way, due to the abstractive powers of our intellect.

Scotus's emphasis on the importance of the individual is often, and naturally so, interpreted as an Augustinian trait in his thought. He had, after all, inherited it from the older Franciscan-Augustinian tradition. Without rejecting this usual way of reading Scotus as wrong, I would like to suggest another, perhaps complementary perspective.

In the first part of my paper I distinguished between two metaphilosophical approaches which I labelled "Platonic" and "Aristotelian". It seems to me that, in spite of the fact that Scotus's account radically departs from Aristotle in a certain respect, it can at the same time be seen as an actual completion of the Aristotelian metaphilosophical project. The driving force behind Aristotle's thought was his effort to rehabilitate our cognitive faculties as capable of reaching out to reality qua pre-philosophically given. In practice, however, he still upheld the old Platonic cleavage between the immaterial and intelligible level of reality on the one hand and the material world of common experience on the other. Duns Scotus seems to have been among the first thinkers to explicitly reject such a duality and to insist that the reality that is the object of intellectual scientific enquiry is, in a very strict sense, the very same reality we experience in our everyday life through our senses. In this way, Scotus may be seen as even more Aristotelian than Aristotle himself.⁶³

it seems to me that such a tension clearly manifests itself in the crucial passages of *De ente et essentia*); but Aquinas himself clearly did not see things that way.

62 Ord. II, d. 3, p. 1, q. 5–6, n. 188 (Vat. VII: 483–484): *Non est igitur ista entitas [viz. differentia individualis] materia vel forma vel compositum, in quantum quodlibet istorum est natura, sed est ultima realitas entis quod est materia vel quod est forma vel quod est compositum [...]* Cf. Cross, R., *The Physics of Duns Scotus: The Scientific Context of a Theological Vision*. Oxford, Clarendon Press 1998, pp. 34–35.

63 This paper is a reworked and substantially enlarged version of a talk given at the conference *Issues of Perception between Medieval and Early Modern Philosophy*, Ostrava, 6th–7th October 2016. My work on the topic has been supported by the University Centre for the Study of Ancient and Medieval Thought ("UNCÉ"), Charles University in Prague. I thank Světa Hanke Jarošová for invaluable help with the final shape of the paper: she not only corrected my clumsy English but also suggested substantial improvement of the overall structure. I am also grateful to the two anonymous reviewers for their critical remarks that helped me to refine the paper (although I could not agree with all of them). All remaining shortcomings are, of course, purely my responsibility.

ABSTRACT

At least from Plato and Aristotle onward the common wisdom of the entire philosophical tradition, hardly ever questioned, was that while universals are grasped by the intellect, individuals are perceived by the senses. Even in the “moderately realistic” Aristotelian-scholastic setting (perhaps best represented by Aquinas) where universals are situated “*in rebus*”, this axiom naturally generated the idea of two separated realms of objects of cognition – individuals and universals – whose ontological status, mutual relations, etc. would, in turn, be philosophically investigated. In my reading, Scotus does not share this common preconception at all; rather, he takes the position that ultimately there is only one single realm of cognized objects – the individuals or particulars. Thus, although it may be argued that his theory of cognition does not represent any radical departure from the moderate-realistic, Avicenna-inspired paradigm of the 13th century, but rather a specific elaboration of it, a closer look reveals that Scotus takes an entirely new perspective on the problem and reinterprets the old approaches from a new standpoint. And yet, this new perspective can at the same time be understood as being merely a consistent completion of the anti-Parmenidean and anti-Platonic movement in philosophy initiated by Aristotle – namely that of epistemic rehabilitation of the world of ordinary particular things. Scotus’s epistemic thought can thus be described as simultaneously consistently traditional and revolutionary.

Keywords: singular intellection, abstractive cognition, intuitive cognition, Duns Scotus, Aristotelianism, Platonism, Augustinism

Attention, Perceptual Content, and Mirrors: Two Medieval Models of Active Perception in Peter Olivi and Peter Auriol¹

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1. Introduction: Models of active perception

In this paper I focus on the notion of active perception in the context of medieval philosophy, i.e., the question whether the perceptual process involves an activity of some kind on the part of the perceiving person. I argue that the notion of activity can be viewed from several positions. As an illustration, I introduce two different accounts of active perception, both proposed by Franciscan philosophers, namely Peter Olivi and Peter Auriol.

At present, the notion of perceptual activity tends to be associated with Kant and his conception of perception as involving both the sensation as *matter* passively received in our mind from without, and space and time as *forms* by means of which the mind actively “moulds” the matter and organizes the sensations.² In the premodern accounts of perception, passivist and objectivist features tend to be stressed. Nevertheless, some recent scholars have made increasingly obvious that premodern thinkers not only were able to account for the activity of the senses, but that they actually developed several different ways of treating such activity.³ However, none of these premodern accounts pushes the presumption of the activity of senses to the Kantian consequences – medieval thinkers do not assume that the cognitive powers make radical changes in the perceptual content by, e.g., projecting the categories of space and time onto reality. Generally speaking, medieval

1 The research behind this article was supported by the project *Collective Identity in the Social Networks of Medieval Europe* (University of Ostrava, Faculty of Arts, IRP 201548).

2 E.g. Kant, I., *Critique of Pure Reason*. Ed. and transl. P. Guyer – A. Wood. Cambridge, Cambridge University Press 1998, A19–20/B33–34, A42/B59, A167/B209, pp. 155–156, 185, 291.

3 Esp. the papers collected in Silva, J. F. – Yrjönsuuri, M. (eds.), *Active Perception in the History of Philosophy: From Plato to Modern Philosophy*. Dordrecht, Springer 2014.

philosophers accounted for the activity of the senses in one (or more) of the four following ways:

- (1) Activity as *extramission*: the senses (especially vision) are active, because an entity comes forth or is emitted from the sensory organs. This entity is a real body made of a very subtle matter – either a visual ray of a fiery or luminous nature, as Platonists or proponents of the Euclidian geometrical optics supposed, or a visual spirit or *pneuma*, as Galenists argued.⁴
- (2) Activity as *attention*: the senses are active, because bringing about a perceptual act presupposes focusing the mind's attention. There is no conscious perception without paying attention, as especially thinkers influenced by Augustine argue.⁵
- (3) *Causal* activity: the sensory powers are active, because they *cause* the perceptual acts, as their total or partial efficient cause.⁶
- (4) *Active processing* of the received information: according to this view, the activity of the senses consists in processing perceptual information and in the mind's influence in the production of conscious perceptual *content*.

Of course, in the individual authors these four perspectives often coalesce. The present paper focuses on two Franciscan authors – Peter Olivi (ca. 1248–1298) and Peter Auriol (ca. 1280–1322). As I will show, Olivi stresses both (2) the attention of the senses and (3) their causal activity. The *total* efficient cause of a perceptual act is the sensory power; however, before the sense can cause its act, its attention must be focused on an external object and fixed upon it. Furthermore, in describing attention Olivi reinterprets the legacy

4 Varieties of the extramission theory of sight were endorsed by several ancient and Muslim thinkers (Euclid, Ptolemy, Galen, Al-Kindi); in medieval Latin Europe, especially by some Platonists of the 12th century (Bernard of Chartres, William of Conches, or Adelard of Bath). See e.g. Tachau, K. H., *Approaching Medieval Scholars' Treatment of Cognition*. In: Pacheco, M. C. – Meirinhos, J. F. (eds.), *Intellect et imagination dans la philosophie médiévale*. Turnhout, Brepols 2006, vol. 1, pp. 13–21 and note 22 below.

5 The role of attention is stressed by Augustinians such as William of Auvergne, Matthew of Aquasparta, Henry of Ghent, or Durand of St.-Pourçain. See e.g. Silva, J. F., *Medieval Theories of Active Perception: An Overview*. In: Silva, J. F. – Yrjönsuuri, M. (eds.), *Active Perception in the History of Philosophy*, op. cit., pp. 117–146; or Pasnau, R., *Theories of Cognition in the Later Middle Ages*. Cambridge, Cambridge University Press 1997, ch. 4.

6 This view was quite popular among the scholastics of 13th to 17th century – it is endorsed by Scotists or Jesuits; Averroists even postulate the so-called agent sense (*sensus agens*) to play the role of the cause of perception. See e.g. Heider, D., Francisco de Toledo, Francisco Suárez, Manuel de Góis and Antonio Rubio on the Activity and Passivity of the External Senses. In: Heider, D. (ed.), *Cognitive Psychology in Early Jesuit Scholasticism*. Neunkirchen-Seelscheid, Editiones Scholasticae 2016, pp. 38–66.

of (1) the extramissionist theories of vision – the visual ray theory provides a useful model for explaining attention and attentional shifts.

In Peter Auriol's view, the sensory powers are not the exclusive efficient causes of their acts – rather, perception is an outcome in part of the causal activity of the objects, in part of (3) the causal activity of the power. Further, the activity of the sensory power consists in the fact that it (4) actively processes the received information and produces the perceptual *content*, or, in Auriol's words, puts the external object into apparent being.

Finally, I consider both accounts in a context frequently mentioned by medieval thinkers, but sometimes neglected by modern scholars – the issue of *mirror perception*. Mirror perception is simply a situation when we see an object outside our visual field “by means of a ray reflected from the mirror” (*per radium reflectum*), as the medieval thinkers say.

In the Middle Ages, mirrors were regarded as peculiar and even marvelous objects. For example, Olivi mentions that in his native language mirrors are called “miracles” (*miracula*) and looking into them is called “to marvel” (*mirari*).⁷ In fact, mirror perception reveals some interesting features of the perceptual process. Here, I consider two of these – the role of mirrors in attentional switching (in Olivi) and the metaphysics of the mirror image (according to Auriol).

2. Peter Olivi and attention

The first model of active perception I consider here is the one developed by the Franciscan thinker Peter Olivi.⁸ As I have indicated above, the notion of activity is employed in Olivi's theory of perception in several ways. First of all, the senses are active in a *causal* sense. If one asks what the efficient cause of perception or of a perceptual act is, Olivi's answer is that such a role belongs *exclusively* to the sensory power.⁹

Olivi shares the Augustinian dualistic intuition that there are two ontological spheres: the corporeal realm consisting of material objects and

7 Peter Olivi, *Quaestiones in secundum librum Sententiarum*. Ed. B. Jansen. 3 vols. Quaracchi, Collegium S. Bonaventurae 1922–1926 (abbrev. *Sent.* II), q. 73, vol. III, p. 67: “[...] *specula in nostro vulgari vocamus miracula et speculari in eis vocamus mirari.*” (Olivi is referring to his native language – see *ibid.*, pp. XIX–XX.)

8 For Olivi's account of sensory perception, see Tachau, K. H., *Vision and Certitude in the Age of Ockham. Optics, Epistemology and the Foundations of Semantics, 1250–1345*. Leiden, Brill 1988, pp. 39–54; Pasnau, R., *Theories of Cognition in the Later Middle Ages*, op. cit., pp. 130–134, 168–181; Perler, D., *Theorien der Intentionalität im Mittelalter*. Frankfurt/M., Vittorio Klostermann 2004, pp. 109–138; and esp. Toivanen, J., *Perception and the Internal Senses: Peter of John Olivi on the Cognitive Functions of the Sensitive Soul*. Leiden, Brill 2013.

9 *Sent.* II, q. 74, III, pp. 124–127.

bodies and the spiritual realm including (besides other things) souls and their powers. Whereas material objects are extended and non-vital, souls and their parts are unextended (and therefore simple) and vital. The gap between these two realms is a salient one, which renders any causal influence of a material object on the sensory power impossible (at least in the sense of efficient causality).¹⁰ Since perceptual acts are vital (they are processes performed by living beings) and unextended (they cannot be localized) and they inherit these two features from their cause or principle, their cause must evince these properties – even in a higher degree than the acts themselves.¹¹ Obviously, the only possible candidate here is the sensory power itself. The efficient cause of a perceptual act is not the material object we perceive by means of this act, but the sensory power that produces it.¹²

Furthermore, the causal activity of our sensory powers is testified to not only by metaphysical reasoning, but also by our own inner experience. As Olivi points out, we have an innermost and continuous experience (*intima et continua experientia*) that cognitive acts are efficiently caused by our cognitive powers and that we grasp extramental objects by means of these acts (*active quodammodo capere et tenere ipsa obiecta*).¹³ If the primacy of the causal activity of the cognitive powers was denied, the human soul would be reduced like a trunk without branches or a shapeless mass of matter (*sicut truncus et quasi moles materialis*).¹⁴ (However, as I argue below, the objects also exert a causal influence in the perceptual process.)

Besides the efficient causal activity of the power in producing the perceptual act, Olivi also emphasizes another active element of the perceptual process – the notion of *attention*.¹⁵ He believes that – to be able to cause its act – every cognitive power must be in a conscious or attentive state

10 E.g. *Sent.* II, q. 72, III, pp. 18–27. This metaphysical foundation of Olivi's theory of perception is well documented in the literature – see e.g. Pasnau, R., *Theories of Cognition in the Later Middle Ages*, op. cit., pp. 176–181; Toivanen, J., *Perception and the Internal Senses*, op. cit., pp. 25–42; Silva, J. F., *Medieval Theories of Active Perception*, op. cit., pp. 132–135. Olivi's convictions are connected to his highly elaborate criticism of theories of perception based (at least according to him) on the passive nature of the senses. Olivi criticised not only Aristotelian theories, but also Augustinian ones in this way. See *Sent.* II, q. 58, II, pp. 461–515 and Toivanen, J., *Perception and the Internal Senses*, op. cit., pp. 119–139.

11 *Sent.* II, q. 72, III, p. 25: “[...] principium actus cognoscendi oportet [...] esse altius et vitalius et radicalius et spiritui intimius quam sit ipse actus cognoscendi.”

12 *Sent.* II, q. 58, II, p. 463; q. 72, II, pp. 22, 23.

13 *Sent.* II, q. 74, III, p. 124; also *Sent.* II, q. 58, II, pp. 463–464; q. 72, III, p. 24.

14 *Sent.* II, q. 74, III, p. 126.

15 For an elaborate account of Olivi on attention see Pasnau, R., *Theories of Cognition in the Later Middle Ages*, op. cit., pp. 130–134, 168–181; Perler, D., *Theorien der Intentionalität im Mittelalter*, op. cit., pp. 134–138; Toivanen, J., *Perception and the Internal Senses*, op. cit., pp. 25–42, 141–191.

and must be focused on an object. Olivi calls this distinct feature *aspectus*, *intentio* or *conversio*.

He cites some experiences to prove that perceptual acts necessarily demand one's attention to be focused. For example, sleeping persons cannot perceive anything because they are unconscious and thus unable to attend the object. Further, Olivi refers to a phenomenon, which is at present called "selective attention": even when we are conscious, we may fail to notice something in our visual field, simply because our attention is focused on something else.¹⁶ There is also the example of people in very deep sleep or of infants in the mother's womb. In such cases, the attentive state is completely taken away from the cognitive powers (*retractio*) and, consequently, no cognitive act can occur.¹⁷ Hence, attention (*aspectus*) is a necessary condition of every perceptual act and without focusing attention on a concrete object the cognitive power cannot exert causal action and create its act.¹⁸

And finally, I will argue that Olivi's account of active perception is considerably influenced by the extramission theories of vision – he treats it not only in a negative way, but also in a positive one.¹⁹ Judging from the authors he quotes and theories he refers to, Olivi was not acquainted with the proponents of extramission from the tradition of geometrical optics (e.g. Euclid, Ptolemy, or Al-Kindi); he rather mentions and criticizes "Platonists", esp. Augustine. Nevertheless, Augustine mentions extramission only on rare occasions and it does not seem possible to build a complex theory upon them.²⁰ Although Olivi was aware of them, he seems to have had a more

16 *Sent.* II, q. 73, III, p. 89 or Peter Olivi, *Quodlibeta quinque*. Ed. S. Defraia. Grottaferrata, Collegium S. Bonaventurae 2002 (abbrev. *Quodl.*), I, q. 7, p. 26.

17 *Sent.* II, q. 59, II, p. 552.

18 *Sent.* II, q. 72, III, p. 9. The thought experiment of "a man before the creation" proposed by Olivi can also be read as an argument for the necessity of attention for perception to occur. See Toivanen, J., *The Fate of the Flying Man: Medieval Reception of Avicenna's Thought Experiment*. In: Pasnau, R. (ed.), *Oxford Studies in Medieval Philosophy*, Vol. 3. Oxford, Oxford University Press 2015, pp. 86–94 for analysis of the argument.

19 In the literature, especially the negative part of Olivi's view on extramission is mentioned – see, e.g., Tachau, K. H., *Vision and Certitude in the Age of Ockham*, op. cit., p. 51; Pasnau, R., *Theories of Cognition in the Later Middle Ages*, op. cit., pp. 169–170; Toivanen, J., *Perception and the Internal Senses*, op. cit., pp. 136–137. Here I would like to accentuate the positive influence that the extramission theories may have had on Olivi and hereby corroborate the point briefly suggested by Silva, J. F. – Toivanen, J., *The Active Nature of the Soul in Sense Perception: Robert Kilwardby and Peter Olivi*. *Vivarium*, 48, 2010, No. 3, pp. 272–275. (See also Demange, D. *Olivi et les Perspectivi*. *Oliviana*, 5, 2016. URL: <<http://oliviana.revues.org/850>> – an up-to-date paper on Olivi's relationship to the perspectivist tradition, which cannot be taken into consideration here.)

20 Augustine mentions that visual rays (or the power of sight itself) are emitted from the eyes in *De musica* VI, 8.21, in: *De musica, Bücher I und VI: Vom ästhetischen Urteil zur metaphysischen Erkenntnis*. Ed. and transl. F. Hentschel. Hamburg, Felix Meiner 2002, p. 110; *De quantitate animae* 23.43. Ed. W. Hörmann. CSEL, 89. Wien, Hoelder-Pichler-Tempsky 1986; *Sermones*, 277, § 10. PL

elaborate theory in mind while criticizing extramission. According to this theory (which he refers to and ascribes to Platonists and Academics), perception occurs when real corporeal rays are emitted from the eyes all the way to the object seen, they grasp the corporeal form of the object and bring this form back to the eye. These rays are very subtle and lucid bodies (*corpora subtilissima et lucida*) and of a “vaporous” nature.²¹ Such a theory seems closer to some 12th-century Platonists (such as Bernard of Chartres, William of Conches, or Adelard of Bath) than to Augustine.²² The distinctive feature of these Platonists’ theories is the conviction that the visual ray not only reaches the object, but also grasps its form and brings it back to the observer. Such a conviction is present neither in Plato’s nor in Augustine’s theory.

Olivi’s attitude towards such extramissionist theories is ambivalent. He explicitly criticizes Platonists, but also defends a quasi-extramissionist approach to some optical problems.²³ Reading all the places where he talks about visual rays carefully makes it possible to reconstruct Olivi’s two basic tenets:

- (1) Visual rays as *corporeal* entities are implausible.
- (2) The visual ray theory is a plausible model for explaining attentional switches.

38, col. 1262–3; he also mentions (in a more Platonic manner) the emission of inner light – see Augustinus, *De Genesi ad litteram libri duodecim*. Ed. J. Zycha. Praha–Wien–Leipzig, F. Tempsky 1894, I, 16, pp. 22–23; IV, 34, pp. 134–135; VII, 14, p. 212. (See also O’Daly, G., *Augustine’s Philosophy of Mind*. Berkeley–Los Angeles, University of California Press 1987, pp. 82–83.) Olivi quotes some of these passages in *Sent.* II, q. 58, II, pp. 482–484; q. 73, III, pp. 55–58; *Quodl.* I, q. 4, pp. 15–16.

21 *Sent.* II, q. 73, III, p. 55.

22 Bernard of Chartres, *Glosae super Platonem*. Ed. P. E. Dutton. Toronto, PIMS 1991, II, c. 7, p. 207; William of Conches, *Glosae super Platonem*. Ed. E. A. Jeauneau. Turnhout, Brepols 2006, II, c. 137, pp. 248–249; and William of Conches, *Dragmaticon Philosophiae*. Ed. I. Ronca – A. Badia. Turnhout, Brepols 1997, VI, 19, § 3–5, pp. 244–245; Adelard of Bath, *Quaestiones naturales*. In: Adelard of Bath, *Conversations with his Nephew: On the Same and the Different, Questions on Natural Science, and On Birds*. Ed. et transl. Ch. Burnett. Cambridge, Cambridge University Press 1998, c. 23, pp. 140–142. William of Conches’s *Dragmaticon* mentions that the correct explanation of vision is the one held by “Platonists and Academics” (*academicam et platoniam sententiam de uisu, quae sola uera est, prius explanabo*); the matter of the ray is also described in terms similar to the ones used by Olivi: it is airy (*aerea*), very subtle (*nichil quod sit corporeum subtilius esse potest*) and Plato calls it fire (*ignis*). For some of these authors, see Lindberg, D. C., *Theories of Vision from al-Kindi to Kepler*. Chicago, University of Chicago Press 1981, pp. 90–94; or Smith, A. M., *From Sight to Light: The Passage from Ancient to Modern Optics*. Chicago, University of Chicago Press 2015, pp. 237–241.

23 See esp. *Sent.* II, q. 58, II, pp. 482–484; 486–499; q. 73, III, pp. 52–106.

Olivi criticized (1) the notion that visual rays as corporeal bodies come forth from our eyes.²⁴ These strange bodies would be susceptible to all the changes of the medium. Hence, our vision would be affected by hot or cold air or by winds, which obviously is not the case. Thus, a theory postulating corporeal rays is blended from impossible, improbable and (for the explanation of perception) useless claims²⁵ – and, according to Olivi, nobody actually held it at the time (*nullus hodie sequitur*).²⁶

Olivi does not deny (2) *the framework* of the extramission theory of vision. There are obvious parallels between Platonists' and Olivi's accounts. For example, both stress that the primary impulse for perception comes not from the object, but from the activity of a sense. The sense must perform an action for perception to occur – while for Platonists (and Augustine) such action amounts to an emission of corporeal rays from our eyes, for Olivi the action consists in focusing attention.

Further, Olivi seems to imply that the postulate of visual rays can be a plausible model for describing attentional states. He stresses several times that perceptual attention can be understood as rays of a sort coming forth from the sensory organs²⁷ – with one important qualification: these “rays of attention” are not corporeal bodies, but rather the spiritual or virtual traces of our attentional switching.²⁸ Hence, where Augustine and Platonists speak about corporeal rays, Olivi introduces “virtual rays” (*radii virtuales*).²⁹

What takes place is not an actual emission of a subtle matter from our sensory organs, but rather a *dynamic of consciousness* – attention has an “effort” (*conatus*), a “tendency” (*inclinatio*) and an “onset” (*impetus*) and these dynamic features bring about attentional switching.³⁰ Before a perception can occur, we are in an attentive state: our attention is dynamic and the virtual rays of our eyes penetrate the surrounding medium, scanning the

24 Esp. Sent. II, q. 73, III, pp. 59–61. His arguments against such a position are traditional and in fact similar to the ones advanced by Avicenna or Albert the Great.

25 Ibid., p. 59.

26 Sent. II, q. 58, II, p. 482.

27 Ibid., p. 490: “[...] *virtus visiva, secundum hoc quod habet aspectum virtualement in organo corporeo existente, secundum hoc potest dici habere radium virtualement. Qui radius non est aliud quam ipse aspectus sic virtualiter protensus [...]*”

28 Sent. II, q. 73, III, p. 67: “[...] *aspectus visivus non transeat realiter per medium ad rem visam: nihilominus non est communiter aptus natus aspicere res nisi per lineam rectam [...]*”

29 Sent. II, q. 58, II, p. 494: “*Et hunc modum posuit Augustinus, hoc excepto quod ubi isti ponunt radios virtuales, ipse posuit radios corporales.*” See also *ibid.*, p. 488 (where Olivi speaks about *extramissio virtualis virtutis visivae*), 490, 494 and 499 (where *radii virtuales* are mentioned). The term *virtualis* can have two meanings here: virtual as opposed to real, actual, or corporeal; and virtual as derived from the visual power (*vis*).

30 Ibid., p. 490: “[...] *ex naturali inclinatione et impetu virtutis aspicientis seu ipsius aspectus fit ipsa mutatio in ipso aspectu [...]*”; also *ibid.*, p. 466.

environment and “stretching” towards the objects. When the rays of attention encounter an obstacle (the object seen), our attention suddenly becomes “stiffer”. Then, the dynamic of our attention becomes quiet and stabilized (*quiescit et stabilitur*) and the attention is fixed upon the object.³¹

Once the attention is fixed, the sensory power creates a perceptual act with the proper content and we perceive the concrete thing. Hence, from the causal point of view, the perceptual act depends primarily on the perceptual power as its efficient cause. However, its content depends on the object grasped by the act, which serves as – in Olivi’s words – its “terminative” or “objective” cause (*causa terminativa* or *obiectiva*).³² Olivi bestows this special kind of causality on the material objects because they can exert an influence both on the *aspectus* (they fix or switch the attention) and on the perceptual acts (objects determine the contents of perceptual acts). However, the causal influence of the objects (i) is not an efficient one (in such case, the ontological superiority of the soul’s power would be compromised) and (ii) is only secondary (objects can exert it only once the *aspectus* or the perceptual act have been efficiently caused by the power).

Further, Olivi suggests that the different states of attention can be used even in classifying entities in the world; namely, for distinguishing between the transparent media and the opaque objects: The nature of the medium (air or water) is such that it is not able to stabilize the dynamic of our attention and the attentional ray penetrates it. On the contrary, perceptible objects can settle the dynamic of attention – the ray cannot go further behind the object.³³ However, there is also a third kind of entity that is neither an object nor a medium, namely, a mirror. Hence, a few words on Olivi’s view of mirror perception should be spent – i.e., how he describes the situations when we perceive an object by means of a ray reflected by a mirror.

The main feature of mirrors Olivi is concerned with is not their optical properties, but rather their role in attentional switching. Mirrors switch the

31 Sent. II, q. 73, III, p. 66: “Quando enim sic aspicit obiectum quod tota inclinatio et impenduntia perfecte quiescit et stabilitur, et tota eius capacitas ex cognitiva apprehensione obiecti repletur et occupatur, [...] tunc dicitur perfecte figi et terminari in illo obiecto [...]” Such a fixation is not a material contact, but rather a stabilization of the dynamic of our attention: “[...] aspectus non dicitur figi in obiecto per [...] materialem contactum, sed solum per hoc quod huius ad illud inclinatio et impenduntia firmiter quietatur [...]” – *ibid.*, p. 105.

32 See e.g. Sent. II, q. 58, II, pp. 414–415, 419; q. 61, II, p. 577; q. 72, III, pp. 10–12, 35–39; q. 75, III, p. 144 and Pasnau, R., *Theories of Cognition in the Later Middle Ages*, op. cit., pp. 119–121; Perler, D., *Theorien der Intentionalität im Mittelalter*, op. cit., pp. 133–134, 137; Toivanen, J., *Perception and the Internal Senses*, op. cit., pp. 145–150; Silva, J. F., *Medieval Theories of Active Perception*, op. cit., pp. 133. For a non-causal reading of the determination of perceptual content in Olivi, cf. Adriaenssen, H. T., Peter John Olivi on Perceptual Representation. *Vivarium*, 49, 2011, No. 4, pp. 339–346.

33 Sent. II, q. 73, III, pp. 66–67.

direction of our attention and hence we can see what is actually outside of our visual field.³⁴ According to Olivi, mirrors are peculiar objects – they are neither common perceptible *objects*, nor transparent *media*. They resemble objects in being obstacles to the rays of our attention, – but the attention cannot be fixed on them in the same way as it would be on common objects.³⁵ Objects resist attention in a “hard and harsh” (*dura et aspera*) way and the sight simply cannot attend any further behind the thing. Although in the case of mirrors attention also cannot go behind the mirror, it resists attention in a “plain and sweet” (*planus et suavis*) way and hence the attention’s direction is reflected from the mirror very easily and without difficulty. Such a mild resistance is also the reason why for an observer the reflection is insensible.³⁶

Olivi models the reflection of attention on the reflection of a ray of light. Hence, the ray of attention is reflected according to what we would nowadays call the law of reflection: the angles between the mirror’s surface and the incident or reflected ray are equal.³⁷ Visual attention is thus subordinated to the laws of optics.

34 It may seem that Olivi advocates a bizarre and confused claim: attention as a *psychological* property adopts some optical features proper to light as a *physical* entity. Thus, the ray of attention is subject to *reflection* from polished bodies, such as mirrors, or to *refraction* when it passes through media with different (optical) density. However, such a conflation of *psychology* of sight and *physics* of light was a common feature of premodern optics before Kepler. Ancient and medieval optics often formulated reflection or refraction not as a *physical* event (how light is reflected or refracted), but rather as a *psychological* event (how things are seen and appear when they are observed by means of a mirror or a lens). See Smith, A. M., What is the History of Medieval Optics Really About? *Proceedings of the American Philosophical Society*, 148, 2004, No. 2, pp. 180–194, who describes the transition between the *oculocentric* premodern and the *luminocentric* modern optics as revolutionary.

35 Sent. II, q. 73, III, p. 67.

36 *Ibid.*, pp. 72–73.

37 Sent. II, q. 73, III, p. 67: “*Sciendum ergo quod sicut luci corporali et potentiae visivae est naturale quod aspiciant et transeant sua media per lineas rectas: sic est eis naturale quod suum aspectum a speculo dirigant in oppositam partem et hoc sub quadam conformitate, ut in hoc ipso quaedam naturalis et recta proportio observetur, ut scilicet angulus seu angularis conus reflexionis a speculo sit aequalis angulo seu cono sub quo prior aspectus terminatur in speculo.*” For the Law of Reflection from ancient to late medieval science see Takahashi, K., *The Medieval Traditions of Euclid’s Catoptrica*. Fukuoka-sh, Kyushu University Press 1992, pp. 39–73. Olivi mentions that the optical scientists (*perspectivi*) of the time call these equal angles the “angle of incidence” (*angulus incidentiae*) and the “angle of reflection” (*angulus reflexionis*) – see Sent. II, q. 73, III, p. 70. Such terminology is introduced by Roger Bacon, *De multiplicatione specierum*. Ed. D. C. Lindberg. In: Lindberg, D. C., *Roger Bacon’s Philosophy of Nature*. Oxford, Clarendon Press 1983 (abbrev. *DMS*), II, 6, p. 136. Olivi was acquainted with Bacon’s *De multiplicatione specierum* and quotes him in Sent. II, q. 58, II, pp. 491–492 as one of the “followers of Arab optics” (*sequentes perspectivam Arabum*). Note that Olivi formulates what is nowadays called “law of reflection” in a way more traditional in medieval optics: the angles in question are included between one of the rays and the surface of the mirror. See e.g. Euclid, *De speculis*, prop. I. Ed. K. Takahashi, in: Takahashi, K., *The Medieval Traditions of Euclid’s Catoptrica*, op. cit., pp. 116–118, 214, 296. On

However, Olivi's account of mirror perception poses several problems. For example, if what is reflected by the mirror is our visual attention, why are we not aware of such a reflection? It is a general phenomenological fact that in mirror perception, the sight does not perceive the reflection itself – we see the object as if it were directly in front of us and located directly on the ray by means of which we see it.³⁸ Olivi proposes two solutions to this puzzle. First, the first part of the ray of attention (between the eyes and the mirror) is stronger and more principal, while the second part (from the mirror to the object seen) is weaker and secondary. The first part is so heavily forced upon our sight that we feel as if the part of the attentional ray after the reflection were in the direction of the first part. Second, the resistance of the mirror is very mild and thus insensible: and when the soul does something easily, it does so without noticing it. Thus, the ray is reflected but we do not notice that.³⁹

Another problem is what *causes* the reflection of the *aspectus*. At first sight, the mirror itself does not seem to be the right candidate – after all, it is a material object unable to affect the cognitive power of the spiritual soul. Therefore, Olivi tends to employ twofold causality, as in the issue of the causation of the perceptual act. He holds that the reflection is efficiently caused by the cognitive power (it follows from the nature of *aspectus* itself) and the mirror is only an objective or terminative cause.⁴⁰

To conclude: Olivi's account of perception is characterized by a special emphasis on the role of attention in the perceptual process. Attention (esp. the visual one) is described as a virtual ray coming forth from the eyes, scanning the environment and fixed on an object. Mirrors are special objects, which switch the direction of our attention without making us aware of such a reflection.

the contrary, Ptolemy (and contemporary optics) defines the angles of incidence and reflection as angles between either the incident or reflected ray and the *perpendicular* erected at the point of reflexion. See *ibid.*, p. 326.

38 Such a fact was often declared by optical scientists: even if we see by means of a mirror, all we see appears to be in front of us. See e.g. the second postulate of Euclid's *De speculis*: "*Visa omnia recte videri.*" – *De speculis*, p. 114.

39 *Sent.* II, q. 73, III, p. 71; see also q. 37, I, p. 671.

40 *Sent.* II, q. 73, III, p. 68: "*Speculum vero est causa obiectiva, quia ex natura quam habet sic terminandi aspectum et sic non terminandi cooperatur praedictae reflexioni ipsius aspectus.*" See also *ibid.*, pp. 89, 103–104 where he explicitly states that all the variations of the *aspectus* depend on the objects – not as on efficient causes, but as on terminative ones.

3. Peter Auriol and perceptual content

Now I proceed to the account of active perception advanced by another Franciscan philosopher, Peter Auriol.⁴¹ For Auriol, perception is, above all, a matter of *appearance*: seeing an object amounts to the fact that this object appears to us.⁴² What is, however, the status of appearances? Auriol believes that things do not appear just by themselves – they appear only when they are grasped by a living being’s cognitive power. Only the power’s activity can complete the perceptual act – namely by producing a conscious *perceptual content*.

Auriol therefore addresses the issue of the senses’ (and other cognitive powers’) activity primarily in terms of *causality* and *productivity*.⁴³ Unlike Olivi, Auriol does not propose any dualism concerning the sensory powers: the senses are not parts of an immaterial soul, but rather proceed from the conjunction of the soul and the sensory organs.⁴⁴ An important consequence is that material objects can exert an influence on our sensory powers. Our sensory organs are obviously affected by material objects – Auriol points out the example of damage to sensory organs caused by excessively strong

41 For Auriol’s account of sensory perception, see e.g. Tachau, K. H., *Vision and Certitude in the Age of Ockham*, op. cit., pp. 89–100; Denery, D. G., *The Appearance of Reality: Peter Aureol and the Experience of Perceptual Error*. *Franciscan Studies*, 55, 1998, pp. 17–52; Perler, D., *Theorien der Intentionalität im Mittelalter*, op. cit., pp. 258–283; and Lička, L., *Perception and Objective Being: Peter Auriol on Perceptual Acts and their Objects*. *American Catholic Philosophical Quarterly*, 90, 2016, No. 1, pp. 49–76.

42 See Peter Auriol, *Electronic Scriptorum*. Ed. R. L. Friedman; L. O. Nielsen; C. Schabel. URL: <<http://www.peterauriol.net/editions/electronicascriptum/>> (abbrev. *Scriptum*, *E-Scriptum*), d. 35, p. 1, a. 1, lin. 353–355: “[...] *videre consistit in habere aliquid sibi praesens per modum apparentis, nihil enim aliud est dicere aliquid veridici alicui quam illud sibi apparere. Unde cum videmus aliquid, ex hoc videre dicimur quod aliquid nobis apparet.*”

43 On the contrary, the extramissionist notion of (visual) activity is completely lacking in Auriol’s account. In his days, extramission was apparently regarded as an old-fashioned theory and the general attitude of scholars towards it was dismissive. As far as I am aware, Auriol only mentions it in his early *Repercussorium*: the extramissionist hypothesis is presented there as an example of some absurd claims made by some saints and especially Augustine: “[...] *dicta sanctorum confirmata sunt per ecclesiam, non, ut omnino sint necessaria ad credendum et eorum oppositum sit erroneum [...] multas etiam absurditates pro veritatibus confirmasset, ut: quod visio fiat per radorum extramissionem, secundum quod dicit Augustinus [...]*” – Peter Auriol, *Repercussorium*. In: *Gulielmi Guarrae, Ioannis Duns Scoti, Petri Aureoli Quaestiones disputatae de Immaculata Conceptione Beatae Mariae Virginis*. Quaracchi, Collegium S. Bonaventurae 1904, p. 148. For the context, see Duba, W., *The Immaculate Conception in the Works of Peter Auriol*. *Vivarium*, 38, 2000, No. 1, p. 26.

44 Peter Auriol, *Reportatio*. In: Peter Auriol, *Commentariorum in secundum, tertium, et quartum Sententiarum*. Roma, Aloysius Zanetti 1605 (abbrev. *Rep.*), IV, d. 45, q. 1, p. 213aE: “[*Potentiae sensitivae*] *non possunt dici radicaliter et causaliter fluere ab anima, sed a coniuncto [...] non sunt determinative tantum ab anima, sed ab aliqua alia forma complexionali totius organi concurrente cum anima.*”

stimuli: an excessively loud sound harms our auditory ability, an excessively bright colour can produce an afterimage in our vision, and some odours can cause a runny nose.⁴⁵ From the fact that the sensory organs are affected Auriol infers that they are receptive of qualities of the objects also in the sensory process – he calls this kind of quality a *species, similitudo* (since it is similar to the object) or impression.

However, to suffer an affection is not yet to perceive – if it were, even a medium would be capable of perception, since it receives *species*. An *active* response from the sensory power is also necessary for perception to occur. Hence, perception (and cognition generally) is both passive and active: it is passive insofar as the sensory power undergoes a change and receives a real impression (*pati realiter*), and it is active insofar as it responds to stimuli with intentional actions (*agere intentionaliter*).⁴⁶

For Auriol, the passive aspect of perception is of lesser significance – the concrete causal way by means of which the *species* of the object is received is not as important as the way in which it is cognitively processed.⁴⁷ Just like Olivi, Auriol cites the phenomenon of selective attention: although some stimuli from the object in the visual field are received in the sensory power, it need not be perceived, if the person concerned is deep in thought about something else.⁴⁸

For Auriol, the “intentional action” performed by our sensory powers is the most important aspect of perception. What is this *intentional action*? First of all, it is worth noting that the term “intentional” does not mean “intended” or “voluntary” here. In Auriol, “intentional” is predicated about entities whose existence and occurrence is *dependent* on the cognitive act of a cognitive agent (the opposite term is “real”, predicated about things that exist even when they are not cognized).

Scholastic philosophers often distinguished between two kinds of action: *transitive* and *intransitive* or *immanent*. The distinction is based on the nature of their products: while transitive actions (such as cutting a carrot or building a house) produce something other than themselves (the pieces of carrot or the house built), *immanent* actions allegedly produce nothing other than themselves. The traditional Aristotelian example of an immanent

45 Ibid., d. 44, q. 4, p. 210bD–F.

46 *Scriptum*, d. 27, p. 2, a. 2, E-Scriptum, lin. 538–540, also Peter Auriol, *Quodlibeta sexdecim*. Roma, Aloysius Zanetti 1605 (abbrev. *Quodl.*), q. 8, p. 87aD.

47 Such an attitude has important consequences: for example, it allows Auriol to include cases of sensory illusion in his theory of perception. Illusions are simply situations when the *species* received in our senses are somehow distorted, the information about the external world included in them is imperfect and in processing them the senses produce a non-veridical act of perception. See Lička, L., *Perception and Objective Being*, op. cit., pp. 69–75.

48 *Scriptum*, d. 35, p. 1, a. 2, E-Scriptum, lin. 702–708.

action is vision: when we see, we produce nothing other than the very act of seeing.⁴⁹

In Auriol this distinction is slightly reinterpreted. He believes that cognition is action; however, he does not agree that cognitive actions are immanent in the sense of not having any product. His point of departure is the intuition that actions that leave a product are expressed by transitive verbs, i.e., verbs demanding an object. The verb “to live” (*vivere*) is not transitive, since one cannot say “I live this or that”. But the verb “to see” (*videre*) is transitive, since one can say “I see you or him”. So there is a transitive element even in the immanent cognitive action of seeing: it must produce something.⁵⁰ At first sight, it may seem implausible: does seeing have a product similar to the house produced by the activity of building?

Auriol points out that even some actions that are ends in themselves (and, hence, are immanent) *do* have a product: for example, playing a lute or singing produces sounds, albeit the sounds do not persist when the action has finished. Similarly, a cognitive action has a product in intentional or objective being (*esse intentionale* or *obiectivum*): it does not remain once the cognitive act has ceased to exist. So the product of a cognitive action has only intentional being and is wholly dependent on the occurrence of the proper cognitive act.⁵¹ The action responsible for the production of intentional being is called “intentional” – not in the sense that the action itself were dependent of the cognitive activity, but with a modified meaning as “having an intentionally existing product”.

Now, what *is* the product of such an intentional action? Auriol’s answer involves his idiosyncratic term: an intentional action produces the “apparent being” of the thing cognized (*esse intentionale* or *esse apparens*). As I have mentioned, Auriol often talks about “appearances” and generally tends to understand all experience as a kind of appearance. Such an experience comprises two components, an objective one and a formal one – there is something *that* is appearing and something *by means of which* it appears. The latter component – called “formal appearance” (*apparitio formalis*) – is the cognitive act itself that really exists in the sensory power. On the other hand, “objective appearance” (*apparitio obiectiva*) is what appears in the act.⁵² It

49 The distinction is implied in Aristotle, *Metaphysica* IX, 6, 1048b; IX, 8, 1050a–b; it is explicitly proposed e.g. by Aquinas, *Summa theologiae* I, q. 54, a. 2; I, q. 85, a. 2.

50 *Scriptum*, d. 27, p. 2, a. 2, E-Scriptum, lin. 527–529.

51 *Ibid.*, lin. 543–552.

52 Peter Auriol, *Scriptum super primum Sententiarum*. Ed. E. M. Buytaert. 2 vols. St. Bonaventure (NY), The Franciscan Institute 1952–1956 (abbrev. *Scriptum*, Buytaert), d. 5, q. 17, § 107, II, p. 799: “Ex apparitione enim formali, quae est in mente actus intelligendi, oritur apparitio obiectiva rosae [...] non producitur aliqua res, sed res et apparitio constituunt unum simplex apparens [...]”

only exists intentionally or apparently: an objective appearance exists only as long as a cognitive act is grasping it.⁵³

To some extent, objective appearance can be understood as the *content* of a cognitive act.⁵⁴ It brings a conscious and phenomenal aspect and a first-person perspective into cognition. Auriol points out that cognition includes more than mere representation (that also obtains between a picture and the person depicted). There is also a conscious aspect, since the cognized thing is “given” to the observer and it is in his “consciousness” (Auriol uses the Augustinian terms *prospectus* and *conspectus*).⁵⁵ On the other hand, Auriol sometimes underscores that, especially in perception, the “appearance” is *outside of our mind* in the external world. It is *the thing itself* insofar as it appears to us.⁵⁶ In normal circumstances, the appearance is something indistinguishably bound (*indistinguibiliter adunatum*) to the thing⁵⁷ – normally, when we perceive a thing, we do not even notice that we are actively engaged in the thing’s appearing by intentionally producing its appearance.⁵⁸

Hence, the nature of *esse apparens* or objective appearance as Auriol conceives it is peculiarly dual.⁵⁹ The crucial aspect of this reading of Auriol is that, strictly speaking, *esse apparens* is neither in the soul or its powers, nor in the external world. Such a dual nature of *esse apparens* becomes obvious if we consider Auriol’s statements about where *esse apparens* is. Focusing on

53 *Scriptum*, d. 3, q. 14, a. 3, § 55, Buytaert II, pp. 712–713: “[...] visio est quaedam apparitio in oculo existens, ita quod dum res videntur apparent [...]”

54 See King, P., Duns Scotus on Mental Content. In: Boulnois, O. – Karger, E. – Solère, J.-L. – Sondag, G. (eds.), *Duns Scot à Paris, 1302–2002*. Turnhout, Brepols 2004, pp. 65–88.

55 Peter Auriol, *Scriptum super I Sent.*, dist. 23. Ed. L. M. De Rijk. In: Giralduus Odonis O. F. M., *Opera philosophica, vol. 2: De intentionibus*. Leiden–Boston, Brill 2005, pp. 695–747 (abbrev. *Scriptum*, De Rijk), here d. 23, a. 2, § 59, p. 714: “[...] Cesar pictus non est presens aut apparens picture nec in conspectu aut prospectu illius nec sibi obicitur aut offertur. Sed experientia docet quod res cognita est apparens, presens, obiecta intelligenti necnon et in prospectu aut conspectu illius.” See also Friedman, R. L., Act, Species, and Appearance. Peter Auriol on Intellectual Cognition and Consciousness. In: Klima, G. (ed.), *Intentionality, Cognition, and Mental Representation in Medieval Philosophy*. New York, Fordham University Press 2015, pp. 141–165, who emphasizes the conscious aspect of cognition in Auriol.

56 *Ibid.*, § 55, p. 712: “[...] rerum apparitiones obiectivas [...] sunt realiter eedem cum hiis que existunt extra” or *Scriptum*, d. 27, p. 2, a. 2, E-*Scriptum*, lin. 643–648: “[...] res posita in esse formato non est aliquid aliud quam res extra sub alio modo essendi. [...] vera res habet esse fictitium et apparens. Nec propter hoc fit bis, sed idem fit in duplici esse: realiter quidem exterius in natura, intentionaliter vero in mente.”

57 *Scriptum*, d. 27, p. 2, a. 2, E-*Scriptum*, lin. 583–598.

58 *Scriptum*, d. 3, q. 14, a. 1, § 31, Buytaert II, p. 698: “[...] non distinguitur imago seu res in esse apparenti ab esse reali, quia simul coincidunt in vera visione [...]” Auriol stresses that these appearances are external to us even in the case of sensory illusions – see *ibid.*, pp. 696–697; and Pasnau, R., *Theories of Cognition in the Later Middle Ages*, op. cit., pp. 72–76.

59 I have argued for such a reading of Auriol extensively in Lička, L., *Perception and Objective Being*, op. cit. See also Denery, D. G., *The Appearance of Reality*, op. cit., pp. 36–37, who emphasizes the double nature of *esse apparens*.

the fact that the appearance of a thing depends on the observer cognizing it, he states that *esse apparens* is in the mind (*in mente*) or in the consciousness (*in acie cogitantis*) and not in the nature of things regardless of the observer's activity (*in rerum natura*).⁶⁰ On the other hand, Auriol insists that it is the very extramental thing what appears – the thing and its appearance are not two different things (*duo distinguibilia*)⁶¹ and, as the case of a mirror image expounded below shows, Auriol models the appearances as being outside our mind, evincing spatial properties and thus localizable.

Therefore, to understand Auriol's notion of appearance as either something strictly mental or something strictly extramental is misleading – it is not an ontologically committing and full-fledged entity at all. Hence, no matter how strange it may sound to the modern ears, Auriol seems to endorse *both* that *esse apparens* is mind-dependent (or dependent on the cognitive activity) *and* that it is outside of our mind (at least in the case of sensory perception). Objective appearance depends on the observer in that it is produced by his cognitive acts and brings a special subjective feeling to the world of causal connections (from a first-person perspective). *At the same time*, however, appearances are bound to the things outside as their relational properties, which determine that precisely this thing appears to that observer under a certain “mode of appearing” (from this or that side, as coloured to the sight, non-veridically in bad conditions, etc.).

We can conclude that active perception as Auriol conceives it consists especially in *the causal activity* of the senses in bringing about the perceptual acts and in making their content appear to the subject. Two partial causes concur in the elicitation of a cognitive act: the similitude of the real thing received in a sensory power and the sensory power itself. Together these causes can elicit a cognitive act and make the thing appear, or, in Auriol's words, “give birth to the objective [component of] cognition or put the thing into apparent being” (*utrumque simul parit notitiam obiectivam sive ponit res in esse apparenti*).⁶² The sensory power creates the appearance (giving “apparent being” to the perceived object), the object and its similitude determine the appearing thing (ensuring that precisely this and not another thing appears).⁶³ Without extramental things there would be nothing to appear, without active minds there would be no possibility of appearing.

60 *Scriptum*, d. 27, p. 2, a. 2, E-*Scriptum*, lin. 553–556; see also the second quotation in note 56 above.

61 *Scriptum* I, d. 8, q. 23, a. 5, § 166, Buytaert II, p. 1018: “Res autem apparens non dicit duo distinguibilia, quia apparentia rei est modus intrinsecus existendi illius rei.”

62 *Scriptum*, d. 9, p. 1, a. 1, E-*Scriptum*, lin. 394–397.

63 *Quodl.* q. 8, a. 3, p. 85bD–E: “Habet igitur species in potentia cognitiva, ut faciat apparere, quia utrumque potentia scilicet et species, constituunt unum, ad quod sequitur obiecti apparentia, ita

Finally, I will illustrate Auriol's account of perception using the example of mirror perception. The main feature of mirror perception Auriol is interested in is not attentional switching (as Olivi was), but rather the nature of the images we see in mirrors. Investigating mirror images was a traditional part of medieval optics (*perspectiva*) – but the main issue for the *perspectivistae* was how to determine the *location* of an image using geometry. On the contrary, Auriol's fundamental interest is the *metaphysical* nature of mirror images. The notion of a mirror-image is also a perfect manifestation of Auriol's notion of *esse apparens*.⁶⁴

When Auriol investigates the nature of mirror images, he looks for an answer using a process of elimination. The first option he discusses is to understand the image as a *species*: a real quality impressed in the mirror. If that were the case, images would inhere in the mirror in the same way as a redness inheres in an apple. However, this option is not viable: no accident can exceed its subject, but images sometimes can be bigger than the mirror (when it mirrors a tower or the heavens).⁶⁵ Another option is that the image is the thing itself really existing beneath the surface of the mirror. That is not plausible, either, since when someone looks in a mirror, his face is obviously not behind the mirror, although it appears there.⁶⁶ If it were the case, the image would be the same from whatever angle we observed it. Hence, such a conception would reify the appearance.⁶⁷ There is also the opposite option: since the image is dependent on the observation, it could be reduced to the act of perception existing in the eyes (or elsewhere in the observer's sensory organs). However, Auriol rejects this solution, too: the image cannot be in the observer because it appears in the mirror outside the observer's mind.⁶⁸

quod quia esse apparens est esse vitale, quod sit haec apparitio, est ex potentia; quod vero sit talis res sub ista apparitione, est ex specie ipsa.”

64 For Auriol on the metaphysics of mirror images, see esp. *Scriptum*, d. 1, q. 6, a. 4, § 102, Buytaert I, pp. 366–367; d. 3, q. 14, a. 1, § 31, Buytaert II, p. 697, and *Scriptum*, d. 35, p. 2, a. 2, E-*Scriptum*, lin. 490–499. The only mention of Auriol's account of mirrors in the literature I am aware of is in Davenport, A., *Esse Egressus and Esse Apparens* in Peter Auriol's Theory of Intentional Being. *Mediaevalia Philosophica Polonorum*, 35, 2006, No. 1, pp. 63–65.

65 *Scriptum*, d. 3, q. 14, a. 1, § 31, Buytaert II, p. 697: “*Talis autem imago vel est species realis quae intimatur subiective in speculo; et hoc poni non potest ut demonstrat Perspectivus libro IV, tum quia maior est imago quam sit speculum, cum videatur in eo aliquando una turris vel medium caelum, – nullum autem accidens excedit suum subiectum [...]*”

66 *Ibid.*: “*Vel illa imago ponetur ipsa vera res habens esse reale; et hoc esse non potest, quia facies non est realiter infra speculum, ubi species ipsa apparet.*”

67 *Ibid.*: “[...] *aliqui imaginantur quod imagines sint in speculo [...]*sive videantur sive non videantur, hoc utique falsum est. Tunc enim sequeretur quod haberent verum esse reale.”

68 *Ibid.*: “*Vel dicitur quod imago illa est visio existens in oculo vel aliquid aliud ibi existens; quod esse non potest, cum apparet infra speculum et in situ diverso, ut Perspectivus probat.*”

Therefore, the only viable option is that a mirror image is only an appearance of the thing or the thing itself insofar as it has apparent being in the mirror.⁶⁹

The conclusion Auriol reaches is not an original one, of course. Many scholars of his age proposed the same or similar solution of the issue.⁷⁰ However, whereas they only point out that a mirror image is an external appearance of a thing, Auriol is better equipped to account for the meta-physical nature of mirror images – he has a more robust terminological and theoretical framework of the notion of *esse apparens*.

Thus, a mirror image is the *esse apparens* of the appearing thing. As I argue above, *esse apparens* of a perceived object is neither mental nor extramental: it is dependent on perception, just as a mirror image is dependent on the observer's position, but also external to the mind, just as the image is not in the eyes, but in the mirror – allowing for optics to investigate its location by means of the laws of geometry.

Note that the case of a mirror image is well suited to illustrate the peculiar nature of *esse apparens*. Although it is (partially) caused by the visual power, it is not *in* the power but outside it. But why is the appearance not bound to the thing seen, as in the case of normal perception? While Auriol does not address the issue explicitly, he may be saying that the causal chain behind such a visual process is intercepted by the presence of the mirror with the result that the appearance is separated from the appearing thing.

However, Auriol does not think that the mirror image is what we see in mirror perception – a mirror image is not a representation or a sign by which the object would be primarily seen and by means of which we would see the external thing. He holds that in normal perception we perceive directly the things themselves; although we perceive them only insofar as they appear to us: our perception grasps the appearance of the thing, or the thing in apparent being, but our perception is direct. Similarly, in mirror perception our vision terminates in the mirror image and does not reflect to the thing;

69 Ibid.: “Relinquitur igitur quod sit sola apparentia rei vel res habens esse apparens et intentionale, ita ut ipsamet res sit infra speculum in esse viso iudicato et apparenti.”; also *Scriptum*, d. 1, q. 6, a. 4, § 102, Buytaert I, p. 366: “Imagines enim eiusdem rei, in speculo apparentes, sunt quidem ipsa res quae apparet, et non aliquid impressum speculis, ut manifeste demonstrat Alacenus in *Perspectiva* libro IV.”

70 See Alhacen's account (which Auriol refers to) in Alhacen, *De aspectibus*, IV–V. In: Smith, A. M., *Alhacen on the Principles of Reflection*. 2 vols. Philadelphia, American Philosophical Society 2006, IV, 4, pp. 37–38; also Roger Bacon, *Perspectiva*. Ed. D. C. Lindberg. In: Lindberg, D. C., *Roger Bacon and the Origins of Perspectiva in the Middle Ages*. Oxford, Oxford University Press 1996, III, d. 1, c. 2, 3, pp. 258, 266; Bacon, *DMS* II, 5, pp. 132–136; or John Peckham, *Perspectiva communis*. Ed. D. C. Lindberg. In: Lindberg, D. C., *John Peckham and the Science of Optics*. Madison–London, University of Wisconsin Press 1970, II, prop. 19, pp. 168–170. Peter Olivi also points out that a mirror image is not a *species*, but the thing itself seen out of its place – see *Sent.* II, q. 58, II, pp. 498–499; q. 73, III, pp. 69–71.

the mirror image is nothing other than the thing itself, albeit appearing to be beneath the surface of the mirror.⁷¹ Seeing the mirror image, we perceive the thing itself in an undiminished way – we can touch our face and clean a stain on it, although all that is in our visual field is an image of it in a mirror).⁷²

4. Conclusion

In this paper I aimed mainly to demonstrate that the notion of activity involved in perception may encompass several meanings. I introduced two medieval accounts to illustrate this point. Both were developed by Franciscan philosophers – Peter Olivi and Peter Auriol – between late 13th and early 14th century. The two accounts differ already in their initial assumptions: Olivi – influenced by the Augustinian worldview – tends to dualism and consequently plays down the causal role of material objects in bringing about perception while underscoring the causality of the sensory powers. By contrast, Auriol – being a more Aristotelian-minded thinker – admits that objects can exert a causal influence on the sensory powers and that the activity of the senses consists in actively processing the information received in the senses.

Therefore, the two philosophers advocated different notions of active perception. According to Olivi, attention and attentional switching is necessary for perception to occur. Attention is then described in terms derived from the extramissionist tradition of optics – Olivi understands attention as a virtual ray or spotlight of a kind. Once attention is fixed upon an object, the sensory power can efficiently cause a perceptual act. On the other hand, Auriol maintains that the sensory powers receive similitudes or *species* from objects and then actively process them. Once a similitude is received, the sensory power performs a special kind of action, whose product is a perceptual content. This perceptual content (called “objective appearance” or “apparent being”) is something produced by the cognitive act, but at the same time something indistinguishably bound to the perceived thing. Hence, the

71 *Scriptum*, d. 1, q. 6, a. 4, § 102, Buytaert I, p. 367: “*Quod enim imago quae apparet in speculo sit res quae videtur, claret ex hoc quod intuitus visionis terminatur ad illam imaginem ultimate, nec reflectitur ab illa super rem.*”

72 *Scriptum*, d. 35, p. 2, a. 2, E-*Scriptum*, lin. 492–499: “[*Imago in speculo*] differret realiter a re extra speculum existente, quae diceretur visa denominative per hoc quod res alia, videlicet imago existens in speculo, terminaret intuitum videntis. Nec tamen minus propter hoc res exterior denominative videretur, immo aspiciens illam imaginem operari posset circa rem exteriorem, utpote circa propriam faciem maculam abstergendo vel componendo et ornando aut super ipsam secundum situs varios manus ducendo. Diceretur igitur aequipollenter et aequae perfecte proprium vultum cernere per hoc quod imago distincta realiter et existens in speculo intuitum terminaret, ac si ipsamet facies existeret in speculo et terminaret aspectum.”

appearance is the extramental thing insofar as it is put into apparent being and appearing to the observer.

Finally, I considered the two accounts in the context of mirror perception. For Olivi, mirrors are a special sort of objects whose proper job is to switch the direction of the observer's attention. Since an attentional ray can neither penetrate the mirror nor be fixed upon it, it is reflected to the other side – according to the laws of geometrical optics. For Auriol, mirrors have the peculiar property of being able to separate the perceived object from objective appearance. A mirror image is not a representation, but the thing itself insofar as it appears to an observer.

ABSTRACT

In the paper I argue that medieval philosophers proposed several notions of the senses' activity in perception. I illustrate the point using the example of two Franciscan thinkers – Peter Olivi (ca. 1248–1298) and Peter Auriol (ca. 1280–1322). Olivi's notion of active perception assumes that every perceptual act demands a prior focusing of the mind's attention. Furthermore, Olivi is partially inspired by the extramissionist theories of vision and reinterprets the notion of a visual ray postulated by them as a useful model for explaining attention and attentional shifts. In Auriol's view, perception is active because it participates in producing a perceptual content. The senses not only receive information from the environment, they also actively process it and, in Auriol's words, put the external object into apparent being. The peculiar feature of Auriol's account is his obvious tendency to conceive perceptual content as both dependent on our perceptual activity and external to the senses. Finally, I consider the two theories in the context of mirror perception – while Olivi focused on the ability of mirrors to switch attention's direction, Auriol investigated the metaphysical nature of mirror images.

Keywords: Peter Olivi, Peter Auriol, perception, attention, visual ray, perceptual content, mirror perception

Plethon's Critique of Aristotle's Theory of Sense Perception in the Light of the 15th-Century Controversy on the Philosophy of Plato and Aristotle¹

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1. Introduction

The two major obstacles encountered by a scholar considering the work of Neohellenic philosophers of the 15th century are, on the one hand, a lack of up-to-date editions of most of their writings and, on the other, the fact that in the specific case of certain treatises, such as the *Laws* (*Νόμων Συγγραφή*) of Georgios Gemistos, the text that has been preserved to our era is fragmentary and therefore incomplete. Moreover, even though the current research and bibliography on the subject cannot be regarded as sufficient, diverse lines of elucidating 15th-century Greek texts have already been drawn² and

1 This paper is of a double origin as for the conception of its subject: its first part initially resulted from reading Plethon's philosophy in the light of early Neohellenic philosophy; some of the material included also appears in my paper entitled "Reconsidering a 15th Century Controversy on the Philosophy of Plato and Aristotle" (*Φιλοσοφία. Yearbook of the Research Centre on Greek Philosophy at the Academy of Athens*, 46, 2016, No. 2, pp. 152–162. Its second part was created on the occasion of the international conference entitled "Issues of Perception between Medieval and Early Modern Philosophy" (Ostrava, 6th–7th October 2016) organised by the Department of Philosophy and the Vivarium – Centre for Research in Medieval Society and Culture of the University of Ostrava and the Czech Society for the Study of Aristotle. It is expected that the approach to the issues suggested here will initiate a new research project at the Academy of Athens, focusing on the philosophy of Plato and Aristotle as interpreted in 15th-century Greek scholarship.

2 The account, in the first part of this paper, of the 15th c. controversy amongst Greek scholars on the comprehension of the philosophy of Plato and Aristotle is given under the need to overcome the dividing diversity of the ways 15th c. Greek philosophy is elucidated in contemporary Greek scholarship. In a similar way, the reference, in the conclusion of this paper, to the issue of the Neohellenic identity, a central notion of the Neohellenic thought from the time of Plethon up to our days and a subject related to the perception of both ourselves and the rest of the world, aims to show that, in terms of appeal within the contemporary Greek cultural heritage, the thought of philosophers and scholars such as Plethon, Bessarion and Scholarios

the need for a coherent and amalgamated understanding of the texts has already become apparent and is under concern. Additionally, the exact degree to which 15th-century Greek texts were reflecting the ideas of Western European late mediaeval and early Renaissance philosophy has not been investigated yet, either as direct translations or in the form of assuming someone's alleged thought and expanding on his primary wording and notions.

At the same time, a contemporary scholar must, within the framework of his research, pay tribute and respect to particular and at their time ground breaking approaches, which have marked modern research on the subject under consideration. Such was the dissertation entitled *Georgius Gemistus Pletho's Criticism of Plato and Aristotle* by John Wilson Taylor, who should be regarded as the first scholar who has attempted to come up with a coherent chart presenting the Greek scholars of the 15th century involved in the dispute over the priority of Plato's and Aristotle's philosophy, although it was insufficient due to the limited primary sources employed.³ In this paper, following a memorable form of inquiry set by him in a paper reflecting on Cardinal Bessarion⁴ and adopting a textual approach similar to the technique of working with text quotations and excerpts introduced by David Konstan,⁵ I will attempt, after giving a bibliographically detailed account of the scholars and treatises involved in the 15th-century controversy on the philosophy of Plato and Aristotle, to present specific traces of Plethon's view

should not be restricted within the chronological boundaries of mediaeval and Renaissance thought, as they are also part of the core from which the Neohellenic thought evolved.

- 3 Taylor, J. W., *Georgius Gemistus Pletho's Criticism of Plato and Aristotle*. Menasha, The Collegate Press 1921, p. 19. This controversy should be thought of now more in the sense of a *comparatio*, namely of comparative assessments, and less in the sense of a persistent duration in the case of each individual scholar and coherent in argumentation dispute. The accuracy of the diagram suggested by Taylor on page 19 of his treatise is still open to further elaboration, minor corrections and additions, as a great number of texts are (a) still either unedited, or (b) have not been yet thoroughly studied, and (c) the chronological order of many of the writings involved in the dispute has not yet been established.
- 4 Idem, Bessarion the Mediator. *Transactions and Proceedings of the American Philological Association*, 55, 1924, pp. 120–127. Following the example of G. W. Taylor, I have translated here in English the Greek texts presented on the occasion of this paper.
- 5 Konstan, D., Excerpting as a Reading Practice. In: Reydam-Schils, G. (ed.), *Thinking Through Excerpts. Studies on Stobaeus*. Tournhout, Brepols 2011, pp. 9–22. It is worth noting that working with excerpts, as also working with extracts and quotations taken from treatises the full content of which is sometimes lost, is a process similar to working with pieces of philosophical correspondence or partially edited text. It is not a matter of just selecting, ordering, copying and pasting certain references in view of some fresh re-coordination of their content, but rather a technique and practise of reconsidering philosophical conceptions and their associations – a technique taken out from the same ancient toolbox in which abridgements, synopses, compendia and epitomes are also included, in an attempt to open a new window on the transmission of a cultural heritage.

of sense perception, and of the reaction to it by two of his main adversaries, Cardinal Bessarion and Georgios Scholarios.

2. The controversy on Plato and Aristotle

Georgios Gemistos (ca. 1360–1452), also known under the pen name ‘Plethon’, was a Platonic philosopher who taught in Constantinople, Mistras and Florence.⁶ Under his influence, Cosimo del Medici is said to have established the Platonic Academy of Florence,⁷ through which Western European thought became acquainted with Plato’s philosophical tenets. A major figure in the revival of Hellenic identity in the collective consciousness of the Greeks,⁸

6 A brief and historic account of Plethon’s life is included in Δημητρακοπούλου, Α. Κ., *Ὁρθόδοξος Ἑλλάς, ἥτοι Περί τῶν Ἑλλήνων τῶν Ἰραψάντων κατὰ Λατίνων καί περὶ τῶν συγγραμμάτων αὐτῶν*. Leipzig, Metzger und Wittig 1872, pp. 108–109. For a thorough account of the life and works of the philosopher as a social reformer, cf. Matula, J. & P. R. Blum (eds.), *Georgios Gemistos Plethon: The Byzantine and the Latin Renaissance*. Olomouc, Univerzita Palackého v Olomouci 2014; Siniossoglou, N., *Radical Platonism in Byzantium: Illumination and Utopia in Gemistos Plethon*, Cambridge Classical Studies. Cambridge, C.U.P. 2011; Blum, W. & W. Seitter, *Georgios Gemistos Plethon (1355–1452): Reformpolitiker, Philosoph, Verehrer der alten Götter*. Zürich, Diaphanes 2005; Schulze, F., *Georgios Gemistos Plethon und seine Reformatorischen Bestrebungen*. Jena, Mauke’s Verlag 1874; Tozer, H. F., *A Byzantine Reformer. The Journal of Hellenic Studies*, 7, 1886, pp. 353–380; Θεοδωρακοπούλου, Ι. Ν., Πληθώνεια, *Λακωνικές Σπουδές*, 3, 1977, pp. 5–35; Σολδάτου, Χρ., *Γεώργιος Γεμιστός Πλήθων*, Ἀθήνα, 1973; Hladký, V., *The Philosophy of Gemistos Plethon. Platonism in Late Byzantium, between Hellenism and Orthodoxy*. Surrey, Ashgate 2014; Woodhouse, C. M., *George Gemistos Plethon. The Last of the Hellenes*. Oxford, Clarendon Press 1986. On Plethon’s contribution to the study of rhetoric, cf. Πλήθωνος, Γ., *Συντομή περὶ τῶν μερῶν τῆς ῥητορικῆς*. Walz, Ch. (ed.), *Rhetores Graeci*. Stuttgart–Tübingen, J. G. Cotta 1832, VI, pp. 542–598; Temmerman, K. de, *Ancient Rhetoric as a Hermeneutical Tool for the Analysis of Characterization in Narrative Literature. Rhetorica. A Journal of the History of Rhetoric*, 28, 2010, No. 1, pp. 23–51; Monfasani, J., *Byzantine Scholars in Renaissance Italy. Cardinal Bessarion and Other Emigrés*. Ashgate, Variorum 1995, pp. 174–187; Stavelas, A., *Reconsidering a Fifteenth Century Controversy on the Philosophy of Plato and Aristotle*, *Φιλοσοφία*, ed. by the Research Centre on Greek Philosophy of the Academy of Athens, 46, 2016, No. 2, pp. 152–162.

7 This old and rather romantic view was stated by Marsilio Ficino in the prologue of his Latin translation of Plotinus’s *Enneads* (Florence, 1492). As Al. Brown notes: “The revival of Platonism in Florence after the arrival there of Plethon in 1439 was particularly important from our point of view, because Plato contributed two vital elements to the new theory of sovereignty that provided the flexibility and authority needed by rulers like the Medici: a secular universal law, which was the basis of Stoic natural law, and the justification of the free rule of the wise philosopher-ruler”: Brown, A., *Political Thought in Early Modern Europe, I. The Renaissance. The Journal of Modern History*, 54, 1982, No. 1, p. 53; Hankins, J., *Cosimo de’ Medici and the ‘Platonic Academy’*. *Journal of the Warburg and Courtauld Institutes*, 53, 1990, pp. 144–162; Idem, *The Myth of the Platonic Academy of Florence. Renaissance Quarterly*, 44, 1991, No. 3, pp. 429–475.

8 On this subject, cf. Kaldelis, Ant., *Hellenism in Byzantium. The Transformations of Greek Identity and the Reception of the Classical Tradition*. Cambridge, University Press 2007, pp. 121, 173, 183. On the reception of Plethon’s tenets within later Neohellenic thought, cf. Δινάρδου, Ν., *Η θρησκευτική και ἔθνική ταυτότητα τοῦ Γεωργίου Γεμιστοῦ Πλήθωνος. Ἐνα παράδειγμα μεταβαλλόμενων ταυτοτήτων στὸν ἑλληνικὸ κόσμο*. In: Dimadis, K. A. (ed.), *Identities in the Greek World. Proceedings of the 4th European Congress of Modern Greek Studies*, V, pp. 127–142;

Plethon associated the political shrinkage of the Byzantine Empire with the doctrines of Orthodox theology. Moreover, he regarded the attempts to form a unified Christian Church, made in the course of the Ferrara-Florence Council (1438–1439), as a commercialised sophistry, aiming at political profit, not at the pursuit of truth.⁹ Hence, he attempted to construct a comprehensive philosophical and theological system, based on Neoplatonic philosophy and incorporating features of Zoroastrianism. In his treatise entitled *Laws (Νόμων Συγγραφή)* he attributed the power and the means for the recovery of the Greek nation to Divine Providence. Within this conception and acting as a quasi-precursor of the Age of Reason,¹⁰ he resorted to a system of universal theism – a novel conception of a universal religion, involving features of Iamblichus’s and Proclus’s syncretic mysticism, in which God is the central notion and piety (*θεοσέβεια*)¹¹ is the principal virtue, by means of which one may assimilate oneself with God. In response to Plethon, Cardinal Bessarion (1403–1472),¹² his former disciple in the School of Philosophy at Mistras and a dedicated reader of Aquinas, primary Bishop of Nicaea, *Latinorum Graecissimus and Graecorum Latinissimus*, held that the subject issue posed by Plethon is explicable only with respect to the theory of ideas and that Plethon’s objections against Aristotle derived from his own endorsement of the Platonic theory of ideas. Additionally, Bessarion proposed that Plethon’s conception, stated in his treatise *De fato (Περί εΐμαρμένης)*,¹³ viz. that causality should be thought of as belonging

Cheadle, M. P., The Vision of Light in Ezra Pound’s The Unwobbling Pivot. *Twentieth-Century Literature*, 35, 1989, No. 2, p. 120.

- 9 Τατάκη, Β. Ν., *Ἡ Βυζαντινὴ Φιλοσοφία*, Αθήνα, Εταιρεία Σπουδῶν Νεοελληνικοῦ Πολιτισμοῦ καὶ Γενικῆς Παιδείας, 1977, p. 263.
- 10 Peritore, N. P., The Political Thought of Gemistos Plethon: A Renaissance Byzantine Reformer. *Polity*, 10, 1977, No. 2, pp. 168–191; Webb, R., The Nomoi of Gemistos Plethon in the Light of Plato’s Laws. *Journal of the Warburg and Courtauld Institutes*, 52, 1989, pp. 214–219.
- 11 For the later development of *θεοσέβεια* under the influence of deism and within the scope of Greek Enlightenment, cf. Καΐρη, Θ., *Γνωστική. Στοιχεῖα Φιλοσοφίας*. Ed. Ν. Σινιόσογλου, Ἄνδρος, Εὐρασία-Καίριος Βιβλιοθήκη, 2008. Καζολέα-Ταβουλάρη, Π., *Θεόφιλος Καΐρης. Ἀπὸ τῆς Φιλοσοφικῆς Ψυχολογίας στὴ Θεοσεβικὴ Ἠθική*, Αθήνα, Τυπωθῆτω, 2005.
- 12 Mohler, L., Kardinal Bessarion als Theologe, Humanist und Staatsmann. Paderborn, Ferdinand Schöningh 1927 (vol. II) & 1942 (vol. III); Mariev, S. – Marchetto, M. – Lucher, K., *Bessarion. Über Natur und Kunst*. Hamburg, F. Meiner 2015; Keller, A. G., A Byzantine Admirer of ‘Western’ Progress: Cardinal Bessarion. *The Cambridge Historical Journal*, 11, 1955, No. 3, pp. 343–348. Idem, Two Byzantine Scholars and Their Reception in Italy. *Journal of the Warburg and Courtauld Institutes*, 20, 1957, No. 3, pp. 363–370. For a short sketch of Bessarion’s life, cf. Karamanolis, G., Basil Bessarion. In: Lagerlund, H. (ed.), *Encyclopedia of Medieval Philosophy Philosophy Between 500 and 1500*. Dordrecht et. al., Springer 2011, pp. 145–147.
- 13 Keller, A., Two Byzantine Scholars and Their Reception in Italy, op. cit., p. 363. On the discussion upon the the *De Fato* treatise cf. Taylor, G. W., Theodore Gaza’s *De Fato*, *University of Toronto Studies. Philological Series*, 7, Toronto, 1925.

to the advanced and superior level of ideas in comparison with empirical data, should not be accepted.

3. Textual testimonies on sense perception

Pending Plethon's view upon sense perception, one has to admit that, for him, the relationship between theology and the world of our senses is established as the deity moves the higher part of the soul, which participates in the deity and subsequently moves the lower part of the soul. On this conception Plethon based the relationship of physics to theology, by which physics may become excellent. Within the framework of an absolute theism and an unconditional idealism, the problem for Plethon was that Aristotle seemed to have disregarded God as the creative force, favouring a discussion of the virtues and failing to introduce immortality of the soul. In this view, Aristotle would be regarded as a strict materialist, while Plethon preferred to resort to Zoroastrianism, as initially introduced in Greece by Pythagoras. Plethon's treatise on the shortcomings of Aristotle's philosophy in comparison with the philosophy of Plato, in which Plethon declared Plato to be the superior philosopher of Greek antiquity and qualified Aristotle as ignorant in the most vital issues,¹⁴ was eventually refuted by Georgios Scholarios (1405–1472) in his treatise *Against the Questions of Plethon to Aristotle*.¹⁵

It is literally a pity and a misfortune that a whole chapter entitled "On the senses and their particulars" (*Περὶ αἰσθήσεών τε καὶ τῶν καθ' ἑκάστας*) of Plethon's treatise *Laws*¹⁶ has not been preserved in the manuscript tradition of his works. Consequently, one is obliged to restrict, at least at this primary level of research, the scope of such an inquiry to the partial references on the subject made by Plethon, as they are found in various parts of his treatises. In the 6th chapter of his treatise *De Platonicæ et Aristotelicæ Philosophiæ Differentia* (*Περὶ ὧν Ἀριστοτέλης πρὸς Πλάτωνα διαφέρεται*) Plethon notes:¹⁷

14 "Πῶς γὰρ οὐ περὶ τὰ μέγιστα ἀμαθὴς Ἀριστοτέλης." In: Migne, J.-P. (ed.), *Patrologia Graeca*, 160, 928D4.

15 Δημητρακοπούλου, Γ. Α., Ο ἀντι-Πληθωνισμὸς τοῦ Γεωργίου Σχολαρίου-Γενναδίου Β' ὡς ρίζα τοῦ φιλοθωμανισμοῦ του καὶ ὁ Ἀντι-χριστιανισμὸς τοῦ Γεωργίου Γεμιστοῦ-Πλήθωνος ὡς ρίζα τοῦ ἀντι-ἀριστοτελισμοῦ του. In: Διεθνῆς Ἑταιρεία Πληθωνικῶν καὶ Βυζαντινῶν Μελετῶν (ed.), *Πρακτικὰ Α' Ἐπιστημονικῆς Συνάντησης «Βυζάντιο, Ὁ κόσμος του καὶ ἡ Εὐρώπη»*, Ἀθήνα-Μυστράς, 2001, pp. 109–127.

16 Γεμιστοῦ Πλήθωνος, Γ., *Νόμων Συγγραφή*, Θεσσαλονίκη, Ζήτηρος, 2005, p. 66.

17 The character of the Greek text in the extracts quoted from this point and thereafter is enigmatic in itself and on several occasions dubious. These attributes had to be preserved in the English translation so as to defend the polysemy of the content, the ambiguity of which had raised in the 15th c. a great deal of troubles for Plethon and his colleagues.

Καὶ μὲν δὴ οὐδ' ἂν ἐκεῖνο αὐτῷ ὀρθῶς λέγοιτο, τὸ τὸ αἰσθητὸν πρότερον χρόνῳ οἶον τ' εἶναι τῆς αἰσθήσεως εἶναι, ἀναιροῦντι καλῶς ἔχοντα καθόλου λόγον, ὡς τὰ πρὸς τι τὲ καὶ σχετικὰ ἀναγκαῖον εἶη ἅμα εἶναι. Εἰ μὲν γὰρ ὡς οὐδέ ποτ' ἂν ἐσομένης αἰσθήσεως, πῶς ἂν οἶον τ' εἶη αἰσθητὸν τι εἶναι μῆτε οὔσης, μῆτ' ἂν ποτε ἐσομένης αἰσθήσεως; εἰ δ' ὡς ποτε καὶ ἐσομένης, δηλὸν ὅτι ἐκ τῆς δυνατῆς ἂν ἔσσεσθαι ἐσομένης ὥστ' ἔσται καὶ τὸ αἰσθητὸν αὐτὸ τε δυνάμει αἰσθητὸν καὶ πρὸς δυνάμει αἰσθησιν, ἢ τε δυνάμει αἰσθησιν πρὸς δυνάμει αἰσθητὸν, ἐνεργίᾳ δ' οὐδέτερον οὐδετέρου πρότερον, πρὶν γ' ἂν ἐνεργίᾳ ἄμφω ἦ. Καὶ οὕτως οὔ ποτ' ἂν γένοιτο αἰσθητὸν τι αἰσθήσεως πρότερον.¹⁸

And yet it would not be right for him to say that it is possible for the sensible, which is prior in time, to belong to the function of sense perception (αἰσθησις), against the well-posed universal reason, namely that it would be necessary for those in reference and in relation to coalesce at the same time (ἅμα εἶναι). (And this is so) because, if sense perception could not be established at any time, how could something perceptible via the senses subsist without it, how can it be perceived when sense perception is not present, or is not about to be present? And if sense perception is to be or become present at some future point of time, it is obvious that it becomes present out of the possibility of being present. Thus, the possible object of sense perception will be both a potency of the object to be perceived and also something *referred*¹⁹ to sense

18 Migne, J.-P. (ed.), op. cit., c. 897-900; Lagarde, B., Le 'De differentiis' de Pléthon d'après l'autographe de la Marcienne. *Byzantion*, 43, 1973, pp. 312–343.

19 The *reference*, here mentioned in italics, is a *hyperonym* and has the meaning of the Greek technical term *anaphora*, conceived not just as employed in Greek oratory but within the broader philosophical scope of Greek thought. Traditionally contrasted to *deixis* and nowadays contrasted to *cataphora* or *backwards anaphora*, as in the case of the sentence *If he is lucky, John will win*, *anaphora* is that layer of syncategorematic function in wording which, while falling within the broader category of *relation*, describes a logical relation between the *essence* and the *attribute* of it. For the character and linguistic problems related to *anaphora* in classical Greek, cf. Kiparsky, P., Greek *Anaphora* in Cross-Linguistic Perspective, *Journal of Greek Linguistics*, 12, 2012, No. 1, pp. 84–117. On the place of *anaphora* in the modern logical analysis, in which it is treated (as also *tense*, *adverbial modification*, *identity*, *definite description*, *propositional attitude verbs*, *indexicality* and *modality*) as a logical form, cf. Lamarque, P. V. – Asher, R. E., *Concise Encyclopedia of Philosophy of Language*. Pergamon, B. P. C. Wheatons 1997, p. 23. The crucial point in the case of *reference* as *anaphora* is to understand that in the core of the act of noting something by making a *reference* there is also denoted a syncategorematic element of *ellipsis*. On the syncategorematic function of *reference* within the discussion of *universals* cf. Růžička, M., Some Marginal Notes on Polarity and Negation. *Brno Studies in English*, 25, 1999, pp. 43–57.

perception as a potency, and also the potency of sense perception will be *referred* to the potency of the object to be perceived; also, issues that do not subsist have no actual (*ἐνεργία*) priority relating them to each other, but that is possible before their substantiation as actualities. And consequently, it would never be possible for an object of sense perception to become perceptible prior to sense perception itself.

The key term of this passage is Plethon's conception of universal reason²⁰ as outlined a little earlier:

Παραπλήσιον δ' αὐτῷ κάκεινο, τὸ τὸ μὲν καθόλου τῆ ὕλη φάσκειν ἀνάλογον ἔχειν, τὸ δὲ κατὰ μέρος εἶδει. Τοῦναντίον γὰρ ἂν ἅπαν εἶη, εἴ γε ὅλον μὲν τι τὸ καθόλου, τὸ δὲ κατὰ μέρος μέρος. Τὸ δ' εἶδος πανταχῆ ἐν τῷ ὅλῳ μᾶλλον ἢ ἐν τοῖς μέρεσι, καὶ ἐνεργία δὲ μᾶλλον τὸ καθόλου ἐστὶν ἢ τὸ κατὰ μέρος. Τὸ μὲν γὰρ καθόλου, καθόλου ἐπ' αὐτῶν τῶν πραγμάτων λαμβανόμενον, αὐτό τε ἐνεργία ἐστὶ καὶ τὰ κατὰ μέρος ἅπαντα ἐνεργία περιέχει· τὸ δὲ κατὰ μέρος αὐτὸ μὲν ἐνεργία ἐστὶ, τὸ δὲ καθόλου ἐν ἑαυτῷ οὐ καθόλου ἔχει, ἀλλ' ὅσον μόνον κάκεινου ἑαυτῷ προσήκει. Καὶ τέλειον μὲν τι τὸ καθόλου, ἀτελὲς δὲ τὸ κατὰ μέρος.²¹

It is in the same way, to say (Aristotle) that the universal has some correspondent to matter and that the particular has some correspondent to species. But everything could be conceived contrary to this statement, if, of course, the universal is an entirety and the particular is a partiality, since the species is in every case to be conceived in entirety rather than in partiality and since it is the universal rather than the particular which is (to be conceived) as active (*ἐνεργία*). [And this may be accepted] because the universal as taken into consideration conclusively on these issues, it is both an actuality (*ἐνεργία*) and an inclusive of all particular partialities; and the partial itself is an actuality on the one hand, while the universal is universal in itself only insofar as it refers to itself. And the universal is perfect, while the partial is incomplete.

20 It is preferable and, I believe, more accurate to render *καθόλου λόγος* as *universal reason*, considering *καθόλου* as an adverbial adjective and not just simply as an adjective, rather than as simply a *general statement*, because of the context of the reference quoted, of the polysemy of *λόγος* in the Greek language, and of the comprehensive and all-encompassing meaning of *καθόλου*.

21 Ibid.

An immediate reply to Plethon's proposals came from Cardinal Bessarion in his treatise *In Calumniatorem Platonis*, in which²² he stated that what is in issue here is species, matter and privation considered as natural principles (ἀρχαί).²³ Following Aristotle, he explained that Aristotle's *species* corresponds to Plato's notion of *ungenerated and indestructible* (ἀγέννητόν τε καὶ ἀνώλεθρον),²⁴ differentiating also between noetic entities (νοητὸν ὄν) and proper entities (κυρίως ὄν), between sensible objects, natural principles (φυσικαὶ ἀρχαί) and elements (στοιχεῖα).²⁵ What was *αἰσθητὸν* for Plethon was mainly what Bessarion explained as follows:

[...] τὸν αἰσθητὸν τοῦτον καὶ καθ' ἕκαστα ἄνθρωπον οὐκ αὐτὸν ἄνθρωπον εἶναι λέγοντες, ἀλλὰ τῆ μετοχῇ τοῦ αὐτοανθρώπου ἄνθρωπον εἶναι [...].²⁶

[...] it is not the conception of man, as a natural species, in the meaning of the separable (χωριστόν) and in the sense of a compound material entity reducible to something immaterial and simple, but it is the share in the humanity of each individual person.

This conception of man as a compound entity refers to the content and the tradition of Aristotle's *On the Soul*, where the soul is essentially (οὐσιωδῶς) comprised of nous, as a potency (δυνάμει) and an actuality (ἐνεργεία), where potency replaces matter and actuality replaces species.²⁷ And as corporeal entities are comprised of matter and species perceptible via the senses, in the same way separated substances (χωρισταὶ οὐσίαι), apart from the prime one, are comprised by the potency and actuality of the nous in the sense of the *out of which* noetic matter and species or form.²⁸ Bessarion quotes Averroes,²⁹ according to whom, “[...] as the object perceptible by the senses is divided into matter and form (or species), in the same way that which is a noetic entity (τὸ νοητὸν εἶναι) is in the same way divisible into something assimilating matter and something assimilating form (or species).”³⁰

22 Mohler, L., op. cit., II, ch. 6.

23 Ibid., 1.6.2.1–3.

24 Ibid., 1.6.2.11–12.

25 Ibid., 2.12.5.1.

26 Ibid., 3.3.1.20.

27 Ibid., 3.22.11.5.

28 Ibid., 3.22.12.14.

29 Ibid.

30 Ibid., 3.22.12.14.

Then, referring not to man and his definition but to the world as a sense-perceptible totality (*αἰσθητὸν κόσμον*), Bessarion argues³¹ that Plethon's conception of the tangible and feasible world as an image of the mental cosmos would lead to the conclusion that mental essences (*νοηταὶ οὐσίαι*) would necessarily admit of origination and corruption, which should be viewed as absolutely false:

[...] εἰ γὰρ διὰ τὸν αἰσθητὸν κόσμον εἰκόνα εἶναι τοῦ νοητοῦ πάντα τὰ ἐν τῷ αἰσθητῷ καὶ ἐν τῷ νοητῷ εἶναι δεῖ, ἔπεται πάντως καὶ φθαρτὸν τι εἶναι ἐν αὐτῷ ὡς περ ἐν ταῦθα. καὶ ὡς περ ἐν τῷ αἰσθητῷ κόσμῳ τὰ μόρια τῆς ὕλης οὐκ αἰεὶ συμπαραμένονσι τοῖς ἀτομικοῖς αὐτῶν εἶδεσιν, ἀλλ' εἰσὶ δυνάμει πρὸς ἄλλο εἶδος διὰ τὸ τοιοῦτον εἶδος μὴ ἔχειν πᾶσαν τὴν τοῦ εἶδους τελειότητα, οὕτω καὶ τῷ νοητῷ, ἐπειδὴ εἰσι πλείω τοῦ αὐτοῦ εἶδους ἄτομα, τὰ μόρια ἐκεῖνα τῆς ὕλης οὐκ ἂν συμπαραμένειν αἰεὶ τοῖς αὐτῶν εἶδεσι δύναιτο διὰ τὸ ἐκάστοις αὐτῶν τὴν ὅλην τοῦ εἶδους μὴ περιέχεσθαι τελειότητα, ἀλλ' εἴη ἂν ἐτέρου εἶδους αἰεὶ ἐφιέμενα. καὶ ταύτη γενητὰς εἶναι καὶ φθαρτὰς ἀνάγκη τὰς νοητὰς οὐσίας κατὰ τὸν νέον τοῦτον φιλόσοφον.³²

[...] if there should be that, for having the sense-perceptible world standing as an image of the noetic one, everything in the sense-perceptible world must subsist also in the noetic one, it follows that there must be something corruptible in itself, as is the case here. And precisely as the particles of matter in the sense-perceptible world cannot all the time stay adherent to their own individual species, but they are potencies *referred* to a different species, as that kind of species does not have the full perfection of (a) species, even in the noetic world, since a greater number of individual (particulars) of the same species subsist there, those particles of matter could not stay adherent continuously to their own species, because the whole perfection of (their) species cannot be included in each of them, but they are brought upon a different species. And in this way it is (shown as) necessary, according to this young philosopher, that the noetic essences admit of generation and corruption.

As Bessarion explains, one is to realise that the whole being is complemented by the nous, the soul and body, that soul is the medium between the

31 *Ibid.*, 3.24.

32 *Ibid.*, 3.24.1.19.

intellect and the material body, having its essence as mediating, its assets (*ιδιότηται*) eternal in its essence and timely active in its actualities, giving the sense of an essence both indivisible and divisible: the soul of being (or cosmos) indivisible as an image of the noetic universe, divisible in the paradigmatic (exemplary) forms of perception.³³

Perhaps the most detailed reaction to Plethon's statements on sense perception is to be found in the writings of Georgios Scholarios. For him, the solution to this problem is Aristotle's division of essence into primary and secondary substance, differentiating on the nature of the essence's qualitative attributes (*ιδιότητες*): not everything coalesces with each other in accordance with nature, but only those co-subsist and co-testify the truth of each other, in which there is a two-sided, mutual and permanent order, equally in reason *referred* and really dependable on each other. Because, Aristotle claimed, of the things *referred* to, some have being as their object of reference and others have their object of reference in the wording of the reference – two cases following diverse ratios. In Scholarios's own words:

ὁ Πλήθων ... εἰπὼν γάρ, φησί, περὶ τῶν πρὸς τι, ὅτι ἅμα εἰσὶ τῇ φύσει, κακῶς ἐπήγαγεν ὅτι τὸ αἰσθητὸν δύναται χρόνῳ πρότερον τῆς αἰσθήσεως εἶναι· ἀδύνατον γάρ, φησὶν, εἶναι τι αἰσθητὸν, μῆτε οὔσης αὐτοῦ αἰσθήσεως, μῆτε δυναμένης εἶναι ὥστε εἴ τινος αἰσθητοῦ ἢ αἰσθησις δυνατὴ ἐστὶ, καὶ αὐτὸ δυνάμει αἰσθητὸν ἐστὶ, καὶ ἅμα τέ ἐστιν αὐτὸ δυνάμει αἰσθητὸν, μῆπω οὔσης τῆς ἐνεργείας αὐτοῦ αἰσθήσεως, καὶ ἡ δυνάμει αἰσθησις αὐτοῦ μῆπω ἐνεργεῖα ὄντος ὑπὸ τῇ αἰσθήσει. Καὶ αὐθίς ἐπειδὴν θάτερον ἐνεργεῖα ἢ, καὶ τὸ λοιπὸν ἐνεργεῖα ἐστὶ, καὶ ἅμα εἰσὶν ἄμφω ἐνεργεῖα, καὶ οὐδέτερον οὐδετέρου πρότερον, ἢ ὕστερον.³⁴

Plethon [...] was mistaken in concluding that it is possible for the sense-perceptible to be prior to sense perception. Because it is impossible, he says, for something to be perceived by the senses without the presence of sense-perception itself or the potentiality of it becoming present; thus, if the perception of a perceptible is possible, this means that the perceptible is potentially perceptible, and at the same time it is perceptible as a potentiality, namely without the actuality of its perception, and that

33 Ibid., 4.15.2.1–19.

34 Curteses (Scholarios), G., *Contra Plethonis ignoracionem de Aristotele*. Ed. Jugie, M. – Petit, L. – Siderides, X. A. (eds.), *Oeuvres Complètes de Georges (Gennadios) Scholarios*. Paris, Maison de la Bonne Presse 1935, 2.69.37–2.70.9.

its potentiality of being perceived is not yet actualised by the senses. And [i.e., Plethon] states that whenever one of the two cases is actualised, the other is also actualised; thus they are to be conceived as being both active and thus neither of them is prior or posterior to the other.

4. Conclusion

As obvious in this passage, Scholarios's contribution to Neohellenic philosophy and Aristotelian studies is paramount, mainly because of the apparent clarity with which he treats such complex issues. Testifying that “as the awareness of the conceptual begins with the knowledge of the sense-perceptible, we conduct the names employed in sense perceptible awareness towards an intellectual cognizance”,³⁵ he aligns himself with Aristotle, who noted that the man perceiving something via his senses is somehow making a judgement³⁶ and with Leon Magentinus (1300-1399), who in rephrasing Aristotle's observation admitted of sense perception as a form of judging.³⁷ In Scholarios's wording the object of this *conduct* (μεταφορά) is identical with the assets or attributes (ιδιότητες) mentioned also by Bessarion.

For the Neohellenic philosophy, the fundamental and ultimate issue under scrutiny as for the sense and/or intellectually perceptible object of awareness is the issue of the Neohellenic identity and self-identification of the Greeks – an issue utterly dissimilar to that of “national identity” and of the evolvment of a national consciousness, and also a theme quite chaotic in its contemporary interpretations and semantic intermingling of the terms ἔθνος (nation), γένος (genus) and φυλή (clan). These terms are often misconceived and confused with each other, always disregarding the philosophical background of the term γένος when referred to the genus of the Greeks or Hellenes, making its sense less tangible and feasible and, consequently, disregarding the interrelation between γένος and αἴσθησις within the broader scope of the “Neohellenic identity” subject³⁸ – an enduring requisite of the

35 Ἐπει δὲ ἐκ τῶν αἰσθητῶν ἐπὶ τὴν γνῶσιν τῶν νοερῶν ἀφικνούμεθα, καὶ τῆς αἰσθητῆς γνώσεως τὰ ὀνόματα πρὸς τὴν νοητὴν μεταφέρομεν γνῶσιν, *Epitome Summae Contra Gentiles Thomae Aquinae*, 3, 53,7–8.

36 *Topica*, 1111a19.

37 “ἡ αἴσθησις εἶδος τοῦ κρίνειν ἐστίν”, Magentini, L., In *Aristotelis Topicorum Prooemium et Librum Secundum Commentaria*, 1.46,7. In: Kotzabassi, S., *Byzantinische Kommentatoren der aristotelischen Topik: Johannes Italos & Leon Magentinos*, Ἐταιρεία Βυζαντινῶν Ἐρευνῶν 17. Βάνιας, Θεσσαλονίκη, 1999.

38 Cf. Angelou, Ath. D., (co-ed.) “Who am I?” Scholarios' answers and the Hellenic identity, in *Φιλέλλην. Studies in Honour of Robert Browning*, Bibliothek 17. Venice, Istituto Ellenico di Studi Bizantini e Postbizantini 1996, pp. 1–20.

Greek culture. It is in this spirit that Scholarios's view of sense perception may be highly appreciated and may be considered as more venerable, when compared to the view of many of his contemporaries and many of our contemporary scholars.

ABSTRACT

In *Categories* 7b36–38 Aristotle prioritized the object of sense perception over the act of perception itself, observing that the withdrawal of the perceptible (*αἰσθητόν*) entails the cancelation of perception (*αἴσθησις*), while the removal of the act of perception leaves the perceptible subsisting. This last point was enough for Plethon to initiate his own critique, advocating that Aristotle did not seem to have endeavoured a solid coalescence between the problems raised in his theory of knowledge and the issues elaborated in his *Metaphysics*.

In an attempt to present these two fields of inquiry as in greater harmony with each other and to shed light on what he considered to be the weak points and contradictions of Aristotle's theory of knowledge, Plethon claimed that Aristotle's view seemed to disprove his own vision of *καθόλου λόγος*, especially insofar as the category of relation (*πρός τι*) is involved. Plethon conceived of relation as of the simultaneous and necessary character of the natural concurrence (*ἄμα τῇ φύσει*, *Cat.*, 14 b 27–28) between the act of perception and its object. Thus, for him, Aristotle's approach should be thought of as false or, at least, as inadequate; first, because an object and an act of perception must always concur naturally and, second, because, in accordance with *Metaphysics* 1010 b 30–32 and *De anima* 425 b 25, if sensible perception (*αἴσθησις*) is not sustained or is withdrawn, the object (*αἰσθητόν*) of a non-subsisting sense perception cannot subsist. On the other hand, if sense perception is to subsist in the future, it is obvious that it will appear out of something potentially subsisting (*δυνάμει ὑπάρχον*). Thus, for Plethon, the object of sense perception is both the potentially perceptible (*δυνάμει αἰσθητόν*) and perception in relation to its potency (*πρός δυνάμει αἴσθησις*).

Keywords: Plethon, Bessarion, Scholarios, sense perception

The Internal Sense(s) in Early Jesuit Scholasticism¹

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1. Introduction

Although the cognitive operations and functions of particular internal senses in the theories of representatives of medieval scholasticism differ to the extent that it is difficult to detect common features in them,² a topic can be found in the early Jesuit community of enquiry that can be regarded as *the* issue in the domain of internal senses. It is the question of the number or, more precisely, the query about the (ir)reducibility, or reciprocal (ir)reducibility of the internal senses. This question is important for, at least, two reasons. From the systematic viewpoint, it is a version of the perennial philosophical problem of the One and the Many. Second, from the historical perspective, the early Jesuits' theories are characterized by the reductionist tendency typical of early modern philosophy. This trend ultimately led to abandoning psychology of the faculties, which was a common topic in medieval and post-medieval scholasticism.³ Despite differences in descriptions of the function of particular senses and different answers given to the question concerning the number of the internal senses, ranging from six faculties⁴ to one, the theoretical approach to the scholastic topic of the higher perceptual powers was largely determined by Avicenna and by Aquinas's

1 This study is a result of the research funded by the Czech Science Foundation as the project GA ČR 14-37038G "Between Renaissance and Baroque: Philosophy and Knowledge in the Czech Lands within the Wider European Context".

2 For this conclusion see Black, D. L., *Imagination and Estimation: Arabic Paradigms and Western Transformations*. *Topoi*, 19, 2000, pp. 59–75.

3 For Descartes's and Locke's critiques of the scholastic theory of really distinct accidents, i.e., powers interceding between the soul and its acts cf. Perler, D., *Faculties in Medieval Philosophy*. In: Perler, D. (ed.), *The Faculties. A History*. Oxford, Oxford University Press 2015, pp. 97–139, esp. 97–100. For the elimination of the real distinction between the soul and its powers in early Jesuit scholasticism, exemplified by Pedro Hurtado de Mendoza cf. also forthcoming Heider, D., *Psychology and Theory of Knowledge*, forthcoming in: Casalini, C. (ed.), *Jesuit Philosophy on the Eve of Modernity*. Leiden, Brill 2017.

4 It was Guy de Chauliac (ca. 1300–1368) who in his surgical text *Chirurgia Magna* (1363) suggested six internal senses, two for each of the three ventricles of the brain. Cf. Kemp, S. – Fletcher, J.

adoption of the Arab philosopher's teaching. In this connection, Avicenna's standpoint bears upon the establishment of the criteria of multiplication of "the senses of the brain", as they were called by Gregory of the Great.⁵ Anachronically speaking, employing Kantian *façon de parler*, any possible "deduction" of the internal senses is to be based on principles formulated by *Ibn-Sīnā*. Generically speaking, his shibboleth is twofold. The first kind is physiological or anatomical; this standard amounts to the localizability of the interior senses in the different ventricles. The allocation of a particular power is also correlated with a particular qualitative disposition of an individual ventricle. The second principle was purely philosophical; it is based on distinct sensible objects and different ways of apprehension. If applied (at least partially), one obtained what can be called "the Pluralist View"; if not applied, "the Unicity View", i.e., the theory of the unique internal sense, is the logical outcome.

The fully reductionist approach to the issue of the number of the interior senses and the partially reductionist one can be noticed in the *De anima Commentaries* of three leading representatives of the early Society of Jesus. They are Francisco de Toledo (1534–1596), Manuel de Goís (1543–1597) – one of the Coimbran authors who wrote the famous scholastic manual *Cursus Conimbricensis* –, and Francisco Suárez (1548–1617).⁶ Each of these Jesuits states a different number in the reply to the query "How many internal senses there are". Consequently, their theories give us evidence of considerable doctrinal plurality in the early Jesuit philosophy. In the following, I restrict myself to the present issue of the number of the internal senses. I leave aside all the other (no doubt, interesting) enquiries into the topics, such as the interface of sensory and intellectual powers or the issue of the comparison of human and beastly internal powers. Accordingly, I will largely have in mind human internal senses as the model case.

O., The Medieval Theory of the Inner Senses. *American Journal of Psychology*, 106, 1993, No. 4, pp. 559–576, 562.

5 Wolfson, H. A., The Internal Senses in Latin, Arabic, and Hebrew Philosophic Texts. *Harvard Theological Review*, XXVIII, 1935, No. 2, pp. 69–133, esp. 71.

6 The following sequence does not correspond to the chronological order in which the commentaries of the three Jesuits were published. While Toletus and Suárez wrote them at more or less the same time (the former published it in 1574; Suárez's text was composed in the first half of the 1570s, though it was published as late as in 1621), the *Commentary* of the Coimbran authors was finished and published in 1598. The present ordering is primarily systematically-driven. It aims to show the surge in reductionism of the internal senses.

2. Criteria for the multiplication of the internal senses

For the majority of medieval scholastics the point of departure was Avicenna's theory of the internal senses. In his *Kitāb al-shifā'*: *De anima*, first part, chapter 5, Avicenna formulates three epistemological principles, resulting in his fivefold conception of post-sensory faculties.⁷

- 1) For every different type of sensible object, there must be a distinct internal sense to apprehend this object. If we get typologically distinct objects, these objects must be attributed to really distinct powers.
- 2) Receptive powers differ from retentive powers. Reception substantially differs from retention.
- 3) Active powers differ from passive powers. Active powers and passive powers are mutually exclusive capacities.

In applying the first principle Avicenna distinguishes between two kinds of sensibles. The first object corresponds to the sensible forms perceived by the external senses. Various sensible aspects of the objects, apprehended by the visual, auditory, olfactory, gustatory and tactile faculties, are processed by internal apprehension. The principle, recruited from the external senses, that triggers the corresponding operations is what Aquinas later names the sensed species (*species sensata*).⁸ Avicenna gives the example of a sheep which perceives a greyish oval spot emitting horrible noises, namely a wolf. The wolf is apprehended by the sheep by means of its visual, auditory (and perhaps also olfactory) sensory modalities. The data coming from these modalities are received, discriminated, and synthetically elaborated by the first internal sense, namely the common sense. Then they are conveyed to

7 For these criteria cf. Avicenna Latinus, *Liber de anima seu Sextus de naturalibus I–II–III*. Ed. S. van Riet. Louvain, E. Peeters – Leiden, E. J. Brill 1972, pars prima, cap. 5, pp. 85–90. Description of these principles is a set agenda in the secondary literature devoted to the topic of the internal senses. Among others, see Black, D. L., *Imagination and Estimation: Arabic Paradigms and Western Transformations*, op. cit., pp. 59–60; Toivanen, J., *Perception and the Internal Senses. Peter of John Olivi on the Cognitive Functions of the Sensitive Soul*. Leiden, Boston, Brill 2013, pp. 231–245; Hasse, D. N., *The Soul's Faculties*. In: Pasnau, R. – Van Dyke, Ch. (eds.), *The Cambridge History of Medieval Philosophy*. Vol. I, Cambridge, Cambridge University Press 2014, pp. 305–319, 308–309; Kemp, S. – Fletcher, G. J. O., *The Medieval Theory of the Inner Senses*, op. cit., pp. 561–565; Casini, L., *Cognitive and Moral Psychology in Renaissance Philosophy. A Study of Juan Luis Vives' "De anima et vita"*. Uppsala, Universitetsstrykeriet 2006, pp. 100–102; Harvey, E. R., *The Inward Wits. Psychological Theory in the Middle Ages and the Renaissance*. London, The Warburg Institute, University of London 1975, pp. 43–46.

8 For Aquinas see Sanctus Thomas Aquinas, *STh*. I, q. 78, a. 4. *Opera omnia*, t. 5. Rome, ed. Leoni-na 1889, pp. 255–257.

the retentive sense, the imagination. Imagination, as a kind of memory, is what conserves these forms. The second kind of object is completely different, though. Unlike the object cognized by the sensed species, this object is, sort of, “hidden” behind the images. Although it is more abstract, it can still be detected by a corporeal power. In order to explain the sheep’s reaction and behaviour on encountering the wolf, its fear and flight, a special kind of object, called “intention” by Avicenna (*ma’ânî*), must be posited. This object, which is the intention of the wolf’s hostility, cannot be perceived by any of the external senses. It can be detected only by a power making instinctual judgments, which is more perfect than a faculty restricted to the apprehension of sensible forms. Avicenna calls this capacity “the estimative faculty”.⁹

In line with the second criterion the Arab philosopher says that a power cognizant of an object *in praesentia* and one knowing its object *in absentia* must be two separate faculties. Obviously, a power cognizing its object abstractively, in its absence, is more perfect than one apprehending it intuitively, in its presence. The capacities to receive and to retain require distinct material dispositions. What is good for reception commonly is not convenient for retention. While water, as a malleable subject, is suitable for the reception of an impression made by a signet ring, it is entirely unfitting for its retention. On the contrary, what is not fitting for reception is usually fitted for retention. While wax or stone, as a stable substrate, is well suited for retaining that impression, it is not suitable for receiving it. This organic difference goes back to a difference in the prevalence of the quality of Moisture, or the dominance of Dryness. While the quality convenient for reception is Moisture, the quality of Dryness is good for retention.

For Avicenna (less explicitly so for Aquinas¹⁰) the layering of Moisture and Dryness is connected with Galen’s ventricular theory. Accordingly, the brain is divided into three ventricles, i.e., the front, the middle and the rear

9 For a famous critique of these intentions as distinct objects cf. John Duns Scotus, *Ordinatio* I, d. 3, pars 1, q. 1–2, n. 62, ed. Vatican, vol. 3, pp. 43–44. Scotus says that a lamb would flee from a sheep miraculously changed to a wolf with all its sensible qualities. However, it would not do that if it had estimation of the agreeability of the object.

10 Despite Aquinas’s reluctance to explicitly correlate the internal senses with the individual ventricles, in his *Opera omnia* we can find the following statements locating the cogitative power in the middle ventricle: “Et sic singularibus se immiscet mediante ratione particulari, quae est potentia quaedam sensitivae partis componens et dividens intentiones individuales quae alio nomine dicitur cogitativa, et habet determinatum organum in corpore, scilicet mediam cellulam capitis.” Thomas Aquinas, *Quaestiones disputatae de veritate. Opera omnia*, t. 22, vol. 2, fasc. 1. Rome, ed. Leonina 1970, q. 10, a. 5, corp., p. 309; “Et ideo quae in aliis animalibus dicitur aestimativa naturalis, in homine dicitur cogitativa... Unde etiam dicitur ratio particularis, cui medici assignant determinatum organum, scilicet mediam partem capitis...”, Thomas Aquinas, *STH* I, q. 78, a. 4, corp., *Opera omnia*, t. 5. Rome, ed. Leonina 1889, p. 256.

ventricle.¹¹ According to Galen, these cavities are the seats of three interior senses, which are phantasy *sive* the common sense, the cogitative power *alias* reason (Galen conceived reason as a corporeal power) and memory. The main rationale for this localization lies in Galen's experimental medical knowledge concerning the correlation of the physical damages of particular cavities and corresponding cognitive disorders. Lesion of the front ventricle is said to cause error in apprehension. Injury in the middle ventricle results in incorrect judgment. Damage of the rear ventricle eventuates in bad memory.¹² All the ventricles are interconnected by means of fluid animal spirits leading from the organs of the external senses to the front part and through a narrow passage called the *vermis* to the middle ventricle and then up to the back occipital cell. Adding two bisections in the front and in the middle ventricles Avicenna arrived at a fivefold division of the brain. The common sense, apprehending its object intuitively, and the retentive imagination, cognizing its object abstractively, were located in the front ventricle. The back ventricle, possessing the driest disposition, became the seat of the memory. Unlike the retentive imagination, its function was to conserve first of all unsensed intentions.

Besides the first two criteria, employed by Aquinas, Avicenna also adopted a third criterion based on the mutual exclusivity of active and passive powers. According to this criterion it is necessary to distinguish between the retentive imagination and the compositive (active) imagination. The compositive imagination, composing and dividing both forms and intentions, cannot be identical with the retentive imagination since this power is nothing more than a storehouse of sensible forms. Unlike brutes, compositive imagination in human animals can be controlled and harnessed by the intellect. If controlled, it is called the cogitative faculty by Avicenna. The incessant activity of the compositive imagination is the reason why it differs from the estimative power, which is substantially passive. Accordingly, this distinction is also the reason why the middle ventricle is to be "bisected".

In sum, Avicenna endorses five post-sensory faculties. Two of them are in the front ventricle, the receptive common sense and the retentive imagination. The two are situated in qualitatively distinct parts of this ventricle. In the middle ventricle the active cogitative faculty, or active compositive imagination, is located. Besides, the middle ventricle contains the passive estimative power, which is *of* unsensed intentions. The memory is placed in

11 Unlike Aristotle, for Galen and for the majority of later authors the seat of the interior senses is not the heart but the brain.

12 *Galen De symptomatum differentiis*. Ed. B. Gundert. Berlin, Walter de Gruyter 2009, cap. 3, pp. 225–227.

the back (not bisected) ventricle, called cerebellum. Unlike retentive imagination, a treasury for images received by the common sense, the memory is a storehouse for both the intentions received by the estimative power and the complex forms composed both of intentions and the sensible forms produced by the compositive imagination.

However closely Aquinas follows the Avicennian model, the Angelic Doctor made two important modifications.¹³ First, and for our purpose most importantly, in line with Averroes, Aquinas denies the validity of the above-mentioned third criterion based on the distinction between passive and active powers. The retentive imagination and the compositive imagination are one and the same power called *imagination sive phantasia*. Although very brief in his justification of this identification Aquinas seems to give us a clue in *STh.* 1, 78, 4, c., where he indicates the criterion similar to that employed later by Suárez (see Section 5). Unlike Avicenna, Aquinas makes clear that the compositive imagination called by him fantasy occurs only in humans and not in brutes. However, if it holds that we do not have to posit the cogitative power (the so-called particular reason that deals discursively with individual intentions) and reminiscence (the memory that syllogistically seeks for a recollection of the past by individual intentions) as two additional capacities to the (instinctive) estimative power and (associative) memory of perfect brutes, we do not have to posit in humans a new capacity of phantasia either. The higher perfection of the cogitative power, memory and imagination is not the reason for the introduction of the new faculties. This higher perfection can well be explained by their participation in the intellectual power.¹⁴ Second, more explicitly than Avicenna, Aquinas explicitly associates the abstract intentions with the individual intentions perceivable by the so-called incidental perception.¹⁵ In this way Aquinas substantially revises the cognitive function of Avicenna's cogitative faculty. In his rendering it becomes the human (more perfect) counterpart of the beastly estimative power. He also designates this power as "ratio particularis" since

13 For these modifications see Black, D. L., *Imagination and Estimation: Arabic Paradigms and Western Transformations*, op. cit., pp. 66–68.

14 "Avicenna vero ponit quintam potentis mediam inter aestimativam et imaginativam, quae componit et dividit formas imaginatas, ut patet cum ex forma imaginat auri et forma imaginata montis componimus unam formam montis aurei, quem nunquam vidimus. Sed ista operatio non apparet in aliis animalibus ab homine, in quo ad hoc sufficit virtus imaginative." Thomas Aquinas, *STh* I, q. 78, a. 4, ed. Leonina, p. 256.

15 In a white object standing on the opposite side of the street I recognize my friend Peter. For the most detailed analysis of the cogitative power in Aquinas see Klubertanz, G. P., *The Discursive Power: Sources and Doctrine of the vis cogitativa according to St. Thomas Aquinas*. St. Louis, Modern Schoolman 1952; as regards the crucial role of the cogitative faculty in Aquinas's system of internal apprehension cf. also the recent Lisska, A. J., *Aquinas's Theory of Perception. An Analytic Reconstruction*. Oxford, Oxford University Press 2016.

it is capable of reasoning proto-syllogistically with particular objects as its terms. All in all, Aquinas advocates a theory of four human internal senses, which are the common sense, the cogitative power, the imagination *alias* phantasy, and the memory *alias* reminiscence proceeding discursively from the known to the yet unknown.¹⁶

3. Francisco de Toledo: Three internal senses

In the sixth question *Whether phantasy differs from the common sense* of the third chapter in his Commentary on the third book of Aristotle's *De anima*, Toletus presents as the most probable view a theory of only three internal senses, which are the common sense, the estimative power *alias* the imagination, and the memory.¹⁷ The background of this theory, given by the theories, which are to be reduced in the number of the internal senses, are the above presented doctrines of Avicenna and Aquinas.

Toletus warrants Aquinas's theory, which he considers (in the typically Jesuit verbal reverence to Aquinas's authority) to be the probable view, not only by means of the aforesaid (philosophical) principles but also by the anatomical theory of the four cavities (*sinus*). Referring to Galen, Toletus says that the front ventricle is divided into two cavities of equal size. By means of nerves the two concur in the middle part of the brain, which is in itself undivided, to continue to the occipital part. All the concavities are interconnected by the animal spirits, in which species are transmitted. Since there are four such parts we have a good reason, based on anatomical experience, to claim that there are also four internal senses.¹⁸

Despite that Toletus does not take that medical experience to be of crucial authority in the issue of determining the number of the senses. On the contrary, he aims to show that there are only three integral organs. Since the number of the internal senses is not to be increased beyond the number of the organs, there must be only three powers. The right and the left parts of the front ventricle are not to be regarded as different organs of two senses since no passage leads from one to the other and thus there is no way how the species could be transmitted. In analogy to the single visual power with two organs, one interior power, the common sense, must be situated in both cavities. Since a power must have an integral organ, the middle ventricle cannot be divided either. It cannot become an organ for two faculties but only for

¹⁶ Aquinas, *STh.* I, q. 78, art. 4.

¹⁷ Francisco de Toledo, *Commentaria una cum quaestionibus in tres libros Aristotelis de Anima*. Hildesheim, Georg Olms Verlag 1985, In lib. De anima 3, cap. 3, q. 6, p. 126: "... prima Conclusio probabilis. Sensus interiores tantum sunt tres."

¹⁸ Toletus, In lib. De anima 3, cap. 3, q. 6, pp. 125–126.

one, which is the estimative power *alias* the imagination. It is one and the same power, which retains the sensible forms in the absence of its objects, combines them, and elicits the unsensed intentions from the sensibles. The overall emphasis on cognitive activism – a general feature of early Jesuit cognitive psychology¹⁹ – leads him to attribute acts with the unsensed intentions to the imagination. The indivisible connection between the perception of the sensed forms and the unsensed intentions is confirmed by his reference to Aristotle's third chapter of the third book in *De anima*. There the Stagirite says that brutes behave according to the images of the phantasy.²⁰ But if brutes act according to the estimative faculty, Aristotle had to assume that the power of phantasy also covers the function of the estimative power. It cannot be assumed that Aristotle neglected the estimative power since such assumption would be unworthy of him.²¹

While Toletus is clear about the fusion of the imaginative faculty and the estimative power, he is no less confident about the distinction between the common sense and the imagination. As said, due to the fusion of the estimative power and the imagination the new capacity, namely the imagination *alias* the estimative power is said to perceive both the sensed form and the unsensed intentions. However, perception of the unsensed intentions cannot be conceded to the common sense, which stands closest to the external senses. Although the common sense can perceive its object even in a brief absence,²² Toletus is sure that the cognition of the imagination *alias* the estimative power is substantially distinct from the apprehension of the common sense. In his reasoning for a real distinction between these powers he comes to combine the two abovementioned standards, which are based on the distinction between intuition and abstraction, and on the difference between sensed and unsensed objects. Embracing the theory of three ventricles, the Jesuit also argues for the really distinct memory. As the common sense is located in the first cavity, the imagination resides in the second cavity, the third power, i.e., the memory, has its seat in the third ventricle. While the first part is humid, fitted for reception, the second is more tempered, suited both for reception and retention, the third cavity, the driest one, is convenient only for retention.²³

19 For this see Heider, D., Francisco de Toledo, Francisco Suárez, Manuel de Góis and Antonio Rubio on the Activity and Passivity of the External Senses. In: Heider, D. (ed.), *Cognitive Psychology in Early Jesuit Scholasticism*. Neunkirchen-Seelscheid, Editiones Scholasticae 2016, pp. 38–66.

20 See Aristotle, *On the Soul*. Transl. by W. S. Hett. Cambridge, Mass., Harvard University Press 2000, Book 3, ch. 3, 429a4–7, p. 163.

21 Toletus, In lib. De anima 3, cap. 3, q. 6, pp. 125–126.

22 Toletus, In lib. De anima 3, cap. 2, q. 5, p. 122.

23 Toletus, In lib. De anima 3, cap. 3, q. 6, p. 126.

4. Manuel de Góis: Two internal senses

In the first question *Whether the number of the internal senses is rightly established by philosophers* of the third chapter of the *Commentary* on the third book of *De anima*, Manuel de Góis, in contrast to Toletus, articulates his certain scepticism to the ventricular theory conceived as the decisive criterion for determining the number of the internal senses.²⁴ At the beginning of the question he alludes to the numeral variability in the ventricular theory, noticed also by Toletus. Once three, at another time four, or even five ventricles are embraced by those who employed the theory as the abovementioned standard. Beside that it is not entirely clear what exactly the function of the ventricles is – do they produce the animal spirits, or do they assist in the evacuation of the dross? The Coimbran argues that if we assume that the common sense is localized in the front ventricle, which is composed of two cells, we must face the difficulty associated with its centrality. The duplication of its organ does not square with the central standing, which the common sense is supposed to take in respect to the external senses. Even if the theory of only three ventricles were espoused, referring to Andreas Vesalius's *De humani corporis fabrica* (1543),²⁵ the nerves leading from the external senses do not lead to the place where the common sense is seated. Góis also notes that the argument based on the correlations of the damages of particular ventricles and cognitive disorders does not stand either. In each part the cerebral disposition (*temperamentum*) can be damaged in various ways causing once this, at other times a different cognitive disorder. A certain lesion of the same ventricle can cause disorders in apprehension, not in judgment and memory, or error in judgment, not in apprehension and memory, or it can give rise to a dysfunction in memory, not in apprehension and judgment.²⁶ Concluding, Góis, laying emphasis on the fact that the internal senses are first of all qualities and not corporeal organs, does not regard medieval anatomical teaching, in its clarity impugned by Vesalius, to be a fully reliable source for a philosophical conclusion concerning the determination of the number of the internal senses.

What is typical of Góis's procedure is the “probability scaling” of the views. This quadrates with his assessment of the issue as the “res abdita” and the “res ambigua”.²⁷ As the first probable view, Góis introduces Aquinas's theory.

24 Collegium Conimbricense, *In tres libros de Anima*. Hildesheim, Georg Olms Verlag 2006, In lib. 3 de Anima, cap. 3, q. 1, art. 1, p. 387: “... ex cerebri ventriculis ... Sed hoc argumentum aliis parum efficax videtur...”

25 Vesalius, Andreas, *De humani corporis fabrica libri septem*. Basel 1543, lib. 7, cap. 6, pp. 633–636.

26 Conimbricenses, In lib. 3 de Anima, cap. 3, q. 1, art. 1, pp. 387–390.

27 Conimbricenses, In lib. 3 de Anima, cap. 3, q. 1, art. 2, p. 391.

Even though he evaluates his theory as “verisimilior”, Góis is not reluctant to add that the doctrine of three internal senses is equally probable. The cogitative power can be reduced to the phantasy *alias* the imagination, as Toletus had already done. Like the intellect, exercising various more or less perfect operations, the phantasy can exercise operations connected with both the sensed and the unsensed intentions.²⁸

Nevertheless, besides these views Góis comes with a third theory, more parsimonious than the previous two. It is this theory that he assesses as the most probable view. As he notes, this theory is not new in the texts of early Jesuit philosophers. Already Pedro Fonseca defended it.²⁹ On this teaching, there are only two internal senses, the common sense and the phantasy.³⁰ The fact that the common sense is to be posited – based on the following notorious functions: synthesis of the perceptual manifold; perception of external perception; discernment between the sensibles of the external senses – is a conclusion Góis establishes already in the second question of the previous (second) chapter of the *Commentary*.³¹ However, beside the common sense there is only the phantasy. All the operations attributed by most scholastics to more than one internal sense are to be related, according to Góis, only to the “universal” faculty. Providing the (human) phantasy with a rather broad and robust set of cognitive functions including the formation of singular propositions and those of discursive reasoning, this power can take over the functions exercised otherwise by the memory and the *aestimativa*. As already stated, the phantasy can elicit the unsensed intentions from the sensed images. It can combine them, and it can discursively proceed from the unsensed intentions to the sensed images, or vice versa. There is nothing to prevent the identification of the phantasy with the cogitative power and the memory either. There can be a temperament of the qualities in the ventricle of such mediocrity, which will be fitting for both reception and retention. Moreover, if there is one faculty eliciting the unsensed from the sensed species, which also combines them, it is superfluous to distinguish phantasy storing the sensed species from memory conserving the unsensed species as well.³²

28 *Ibid.*, pp. 391–393.

29 Fonseca, P., *Commentariorum in Metaphysicam Aristotelis Stagiritae Libros, t. 2, lib. 5, cap. 28, q. 7, sect. 4*. Coloniae, S. Lazari Zetzneri 1615, pp. 1011–1016. The first edition of this second volume of Fonseca's *Commentary* was published already in 1589 (Rome).

30 Conimbricenses, In lib. 3 de Anima, cap. 3, q. 1, art. 3, p. 394: “Caeterum alia quaedam est opinio, etsi non antiquitati, ut quibus videtur, certe veritati magis consentanae, quam praeter alios nostrae aetatis nobiles Philosophos ... asserens duas tantum esse potentias sensitivas internas; sensum communem & phantasiam.”

31 Conimbricenses, In lib. 3 de Anima, cap. 2, q. 2, art. 1, pp. 373–375.

32 Conimbricenses, In lib. 3 de Anima, cap. 3, q. 1, art. 3, pp. 394–395.

Considering Góis's reception of the really distinct common sense and phantasy, how does he argue for their distinction? Why does he still adhere to the Plurality View? Why does he not replace it with the Unicity View? Despite his scepticism to the relevance of the ventricular theory for the issue of the number of the internal senses, in this context he employs the argument "from the more humid and the drier parts of brain". The disjunction of the internal powers requires the corresponding disjunction in the organ. Góis distinguishes between the front part characterized by the prevalence of humidity, and the remaining part of the brain, the seat of the phantasy, which is of a more tempered composition.³³ Referring to Aristotle, considered by Góis (how else?) to be the proponent of the theory of the double sense, he recurs to the abovementioned principles of multiplication. Since the common sense apprehends its object intuitively, it is immediately affected by the external senses, cognizes only the sensed forms, and since the phantasy apprehends its objects abstractively, it is affected by the external sensibles only by means of the common sense, discerns the unsensed intentions, they must be two really distinct powers.³⁴

5. Francisco Suárez: One internal sense

Although, like Toletus and Góis, Suárez regards Aquinas's theory of the four-fold sense as a probable view, the most likely tenet for him is the theory of only one internal sense.³⁵ Before refusing the standard for the multiplication of the internal senses based on the correlation of the tripartite division of the brain and the individual senses, in the first question of Disputation 8 of his Commentary, Suárez premises two main *fundamenta* of his reductionist procedure. In the first one he asserts that the senses are not to be multiplied if one sense can perform more than another. They are to be differentiated only if one cannot exercise the act of the other. Only if the acts of the powers are incompatible in the way that one cannot do what the other can is one allowed to posit a plurality of the senses. As Suárez shows, this criterion can be applied, e.g., to the distinction between the external and the internal senses. The external senses can do what the internal senses cannot do, namely they can be intentionally affected immediately by external objects.³⁶ In the second *fundamentum*, Suárez states an equality in

33 Conimbricenses, In lib. 3 de Anima, cap. 3, q. 1, art. 4, p. 397.

34 Conimbricenses, In lib. 3 de Anima, cap. 3, q. 1, art. 3, p. 395.

35 For Suárez's theory, conceived from the viewpoint of comparison with the theory of Aquinas, cf. South, J., Suarez on Imagination. *Vivarium*, 39, 2001, pp. 119–158.

36 Suárez, F., *Commentaria una cum quaestionibus in libros Aristotelis De anima*. Ed. S. Castellote. Tomo 3. Madrid, Fundación Xavier Zubiri 1991, disp. 8, q. 1, n. 15, p. 32 (hereafter referred to as DA 8, 1, 15, p. 32).

the number of human and beastly senses. The (perfect) brutes are endowed by the sensory nature with all its perfection proper to its order. If there is any act in humans that is more perfect than the corresponding animal operation, this is not to be taken as a reason for adding a new (human) internal sense. The higher perfection of this operation comes from its “rootedness” in the more perfect (rational) soul. Consequently, this second foundation is the reason why Suárez refuses to add the active (compositional) imagination, which creates fictitious images such as a flying man or a golden mountain, and the discursive memory *alias* reminiscence that discursively proceeds from the known to the unknown as two additional senses in the equipment of human internal apprehension.³⁷

It is the first premise that is the crucial guide for Suárez in his argumentation for the identity of the common sense and the phantasy (first conclusion), and for the sameness of the estimative power and the memory (second conclusion).³⁸ Regarding the first fusion, unlike his Jesuit predecessors who still operated with the principle differentiating the powers with the operations of intuitive and abstractive cognition, Suárez shows that the power cognizant in the absence of its object can and must first apprehend its object in its presence. Abstractive cognition is not incompatible with intuitive cognition. On the contrary, the latter actually precedes the first. The fact that one power apprehends intuitively and another cognizes intuitively and abstractively is not a reason to distinguish between them. A power that can render more perfect cognition, i.e., that of abstractive knowledge, can also exercise a less perfect act, i.e., an operation bound to cognition of its object existing *hic et nunc*. Once the external senses as active potencies cognizing intuitively are affected by the extramental objects, the interior sense is immediately also affected by the same object. The mediation between the less perfect and the more perfect capacities is in Suárez’s *De anima* justified by the theory of the sympathy of powers according to which once the lower power is operative, the higher, due to its “sympathy” with the lower one, is cognitively active in the same way as well.³⁹

Like Góis, Suárez takes a reserved stance to the criterion founded on the qualitative distinction of the ventricles. One and the same material, as the instance of lead shows, can be both receptive and retentive. Moreover, in harmony with Góis, affection by the sensibles is not purely material; it is first of all intentional. The sensible species are not received in the organ but in the

37 Suárez, *DA* 8, 1, 16, pp. 32–34.

38 *DA* 8, 1, 17, p. 34.

39 *DA* 8, 1, 17, p. 36. For the theory of the harmony of the powers cf. the old but still valid Ludwig, J., *Das akausale Zusammenwirken (sympathia) der Seelenvermögen in der Erkenntnislehre des Suarez*. München, Ludwig-Verlag 1929.

power,⁴⁰ even though, of course, the organ's disposition significantly contributes to the affection. Further, the distribution of the qualities of Moisture and Dryness in the individual cavities is not as clear as the older scholastics supposed.⁴¹ In line with Góis, Suárez asserts that excessive emphasis on the tripartite cerebral division conceived as *the* criterion for determining the number of the internal senses should be avoided. Following Galen's *De usu partium*,⁴² i.e., a text of the view different from the above quoted *De differentiis symptomatum*, in which the (classical) doctrine of three ventricles is formulated, Suárez proposes a different "reading" of the ventricle theory. While the front ventricle – being also the organ of the olfactory power – elaborates the animal spirits, by which the organs of the external senses are "irrigated",⁴³ the middle cavity serves as the passage (*meatus*) through which these spirits with the species as well are conveyed to the third ventricle; it is only the rear ventricle where (according to Suárez) the organ of the interior sense is to be located. In line with Góis, Suárez goes on to say that various kinds of disorders can be explained by different kinds of lesion of the very same organ. One and the same ventricle and its *temperamentum* can be damaged in so many different and unknown ways, which can cause the dysfunction of one and not of another kind of cognitive operation.⁴⁴

Aside from the aforesaid denial of the criterion between intuitive and abstractive cognition, Suárez declines also that based on the diversity between the sensed and the unsensed species. Rejection of this distinction leads him to identify the estimative power and the memory with the phantasy. Two arguments impugning the existence of two really distinct species are presented. First, the implementation of the unsensed species is redundant. The sheep comes to know the intention of the wolf's hostility by the same species that represents the wolf's sensible qualities. By the same species the sheep can judge that it is a wolf, elicits the emotion of fear and flees from the wolf. Second, the unsensed species is not only a redundant entity but even an impossible entity. If the sensed and the unsensed species are two distinct entities, then according to the criterion of real distinction they must be separable. However, can there be an intentional species representing the wolf *sub ratione inimici* without representing it *sub hac figura, hoc*

40 Suárez, F., *Commentaria una cum quaestionibus in libros Aristotelis De anima*. Ed. S. Castellote. Tomo 2. Madrid, Editorial Labor 1981, DA 5, 1, 6, p. 292: "Quando obiectum unitur potentiae media specie, necesse est ipsam speciem esse intrinsece in potentia cognoscente."

41 DA 8, 1, 18, pp. 36–38.

42 Claudius Galen, *De usu partium corporis humani libri XVII*. Lugduni, apud Gulielmum Rouillium 1550, book 8, ch. 10–11, pp. 479–484.

43 For this issue cf. also DA 6, 6, 10, p. 540.

44 DA 8, 1, 2, 8, p. 58: "... quarum laesiones diversae causae sunt ignotae."

colore, etc.? Apparently, it cannot. The unsensed “ratio” cannot be conceived as a feature abstracted from the sensed species. At most it can be regarded as its mode.⁴⁵ However, if this intention is only a mode, then since the phantasy can obviously cognize both the sensible forms and their modes – by analogy, the external senses can also apprehend both the proper sensibles and their modifications, namely the common sensibles –,⁴⁶ it is not necessary to posit extra internal senses such as the estimative power and memory.⁴⁷

Rejecting even formal distinctions between the powers, Suárez articulates his final conclusion about the most probable view, which (how else?) he detects in Aristotle’s texts,⁴⁸ as follows: There is really and formally only one internal sense.⁴⁹ The only distinction(s) that can be considered in this unique sense are conceptual distinctions, which nevertheless have their *fundamenta in re*. What are these *fundamenta*? They are not intrinsic but rather extrinsic to the power. They are its different operations. The unique internal sense is conceived by different names and concepts such as the common sense, the imagination, the phantasy, the cogitative power, the estimative power, the memory, the reminiscence only on the basis of comparing it to its distinct functions and operations.⁵⁰

6. Conclusion

Against the backdrop of what can be regarded as the traditional concept of the internal senses we have observed growing reductionism in the issue of the overall number of the internal senses in the theories of all the Jesuits of the end of the 16th century. More or less thoroughly, all three philosophers applied the reductionist strategy. In the philosophical narration, starting from Avicenna up to early modern philosophers who largely dismissed the faculty psychology of the scholastics, all these Jesuits seem to do justice to their *Zeitgeist*. All contributed to the progressive dissolution of the Pluralist view of the internal senses. Indeed, all articulated a libation to Thomism

45 DA 6, 2, 15, p. 492.

46 DA 6, 1, 10, pp. 462–466.

47 Referring to Aristotle (like Toletus and Góis), Suárez states that also in the Stagirite’s texts it was the phantasy, which moves sensory appetite.

48 He refers to the first chapter of his *De memoria et reminiscencia*, in which Aristotle identifies the common sense and the phantasy since he says that phantasm is the “affectum” of the common sense. Cf. Aristotle, *On Memory and Recollection*. Transl. by W. S. Hett. Cambridge, Mass., Harvard University Press 2000, ch. 1, 450a10–11, pp. 292–293.

49 DA 8, 1, 21, p. 40: “Probabilissimum videtur sensum interiore tantum esse realiter unum”; DA 8, 1, 23, p. 44: “Sensus interior est una potentia realiter et formaliter, solum quod distinguatur ratione, secundum quod ad diversos actus comparatur, et inadaequatis conceptibus concipitur.”

50 DA 8, 1, 24, pp. 44–46.

in their evaluation of Aquinas's theory as highly probable but in fact all regarded his theory as second rank. Considering Suárez's theory of the single internal sense, which is in charge of a broad scale of operations, associated by past authors with a plurality of capacities, I cannot share Harry Wolfson's assessment that it was as late as Eustachius a S. Paulo (ca. 1573–1640) who reduced the manifold of the internal senses to the unique sense of phantasy and who set the tone for the early modern discussion.⁵¹ Eustachius's three page exposition of the issue in his *Summa philosophiae quadripartita* (1609)⁵² is nothing but a brief extract from Suárez's presentation in his *De anima commentary*, which (even though it was not published yet at that time) may have circulated at the universities since 1570s.

Given Suárez's notorious excellent knowledge of his predecessors' doctrines not only in psychology but actually in all philosophical and theological disciplines, it is striking that the Jesuit did not allude to any partisan of the Unicity View. The most parsimonious doctrine mentioned by him was the theory of a twofold internal sense, the common sense and the phantasy, which was later defended by Pedro Fonseca and even later by Manuel de Góis. Does it mean that Suárez's theory of the single internal sense does not have a medieval predecessor? By no means. Leaving aside Augustine and the Hebrew medieval philosophical literature, in the Latin medieval tradition it was above all the Franciscan Peter John Olivi (1248–1298) who in many respects anticipated Suárez's view.⁵³ Despite some differences, in rejecting the Pluralist view Olivi proceeds analogously to Suárez. Like Suárez, Olivi formulates the abovementioned epistemological criteria of multiplication, which he rejects by arguments very similar to the Jesuit's: There are no distinct unsensed intentions; a power cognizant abstractively must apprehend intuitively as well; the corporeal criterion of qualitative difference in the organs, namely their humidity and dryness, is not as easily applicable in the issue of differentiation of the capacities as some scholastics suppose.

51 Wolfson, H. A., *The Internal Senses in Latin, Arabic, and Hebrew Philosophic Texts*, op. cit., p. 126.

52 Eustachius a S. Paulo, *Tertia pars Summa Philosophicae*, tomus posterior. Paris, C. Chastellain 1609, tract. III., disp. III, q. 1, pp. 391–394. As is well-known, it was Eustachius who was read and highly appreciated by Descartes who in his letter to Marine Mersenne said about his *Summa* the following: "I have bought the Philosophy of Father Eustache of St. Paul, which seems to me the best book of its kind ever made." Descartes, R., To Mersenne, 11 November 1640. In: *The Philosophical Writings of Descartes*. Transl. by J. Cottingham et al. Vol. 3: The Correspondence. Cambridge, Cambridge University Press 1991, p. 156. It is not thus surprising that, like Suárez and Eustach, Descartes identified imagination with the common sense as well. Cf. Descartes, R., *Meditationes de prima philosophia*. In: Adam, Ch. – Tannery, P. (ed.), *Œuvres de Descartes* VII. Paris, Léopold Cerf 1904, II. 13–19.

53 Simo Knuuttila points out their similarity as well. Cf. Knuuttila, S., Suárez's Psychology. In: Salas, V. – Fastiggi, R. (eds.), *A Companion to Francisco Suárez*. Leiden, Brill 2014, pp. 192–220, 208–209.

Both scholastics accept the principle of parsimony as an important regulative idea.⁵⁴ In light of their well-known similarity, consisting in broad application of the theory of the sympathy of powers underpinning a-causal mediation between the cognitive faculties (and between the cognitive faculties and the affective capacities), also related to their shared cognitive activism, it would be highly advisable for future research to devote a special study to comparison of Olivi's and Suárez's theories.

ABSTRACT

Against the background of the medieval theory of internal senses of Avicenna and Aquinas the author presents a survey of the theories of internal senses as advocated by the early Jesuits, namely by Francisco de Toledo (1534–1596), Manuel de Góis (1543–1597), one of the so-called *Conimbricenses*, and Francisco Suárez (1548–1617). Although all these Jesuits consider Aquinas's tenet of the four really distinct interior senses to be the probable view, each of them takes a more or less reductionist stance against it. In Suárez this eliminativist approach even results in the theory of the single interior sense called phantasy. In conclusion, this Jesuit reductionism is compared to the *Zeitgeist* of the classical early modern philosophy exemplified by the names of Descartes and Locke.

Keywords: internal senses, reduction, Avicenna, Aquinas, Francisco de Toledo, Manuel de Góis, Francisco Suárez

54 Peter John Olivi, *Quaestiones in secundum librum Sententiarum*. Ed. B. Jansen. Quaracchi, Collegium S. Bonaventurae 1924, q. 63–66, pp. 596–606; for Olivi's theory see Toivanen, J., *Perception and the Internal Senses. Peter of John Olivi on the Cognitive Functions of the Sensitive Soul*, op. cit., pp. 247–265.

The Role of Senses and Sense Perception in Valeriano Magni's Philosophy¹

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1. Introduction

The philosophical quest for the nature and role of sense perception in seventeenth-century philosophy is not reducible to polemics between empiricists and rationalists. Diverse variants of second scholasticism, following to various extents the legacy of Aristotelianism, were still developing in that period. Furthermore, alternatives to second scholasticism, rationalism and empiricism emerged at that time. The philosophical system of the Capuchin monk Valeriano Magni is one of them.² Magni explicitly professes to be following a medieval tradition, but not the one deriving from Aristotle, which he criticized for being atheistic and non-Christian. Rather than to medieval Aristotelians, the masters Magni referred to were St. Augustine and St. Bonaventure. This theological-philosophical orientation was actu-

1 This study is a result of the research funded by the Czech Science Foundation as the project GA ČR 14-37038G “Between Renaissance and Baroque: Philosophy and Knowledge in the Czech Lands within the Wider European Context”.

2 Magni is known as an influential ecclesiastical politician, the head of the Czech-Austrian province of the Capuchin order, an adviser to the Prague Cardinal Harrach, the legate of the congregation De propaganda fide in the Czech Lands and Poland, an advocate of Galileo Galilei and a keen opponent of the Jesuit order and Jesuit philosophy. His own philosophy is viewed as being similar to that of René Descartes, although Magni himself never confirmed this affinity. Magni's metaphysics has even been recognized as an anticipation of the transcendentalism of Immanuel Kant. Cf. Sousedík, S., *Valerián Magni. Kapitola z kulturních dějin Čech 17. století*. Praha, Vyšehrad 1983; cf. the German version Sousedík, S., *Valerianus Magni, 1586–1661. Versuch einer Erneuerung der christlichen Philosophie im 17. Jahrhundert*. Sankt Augustin, Verlag Hans Richarz 1982; Sousedík, S., *Filosofie v českých zemích mezi středověkem a osvětcenstvím*. Praha, Vyšehrad 1997, pp. 139–161; cf. the German version Sousedík, S., *Philosophie der frühen Neuzeit in den böhmischen Ländern*. Stuttgart–Bad Cannstatt, Frommann–Holzboog 2009, pp. 114–139; Blum, P. R., *Philosophenphilosophie und Schulphilosophie. Typen des Philosophierens in der Neuzeit, Studia Leibnitiana Sonderheft*. Stuttgart, F. Steiner 1998, pp. 102–116.

ally prescribed in the documents of his order.³ But despite the obvious textual similarities between Magni's texts and the works of the authorities he praised, Magni differs from them in many points. This is apparent in his elaboration of the conception of sense perception. This paper aims to assess the function Magni attributes to sense perception and how he tries to harmonize it with his new metaphysics and natural philosophy influenced by contemporary non-Aristotelian physics, for Magni's philosophy in general was motivated by his criticism of Aristotelian philosophy and by his effort to incorporate certain achievements of the seventeenth-century science.⁴

2. Emphasis on seeing

Magni's first philosophical work entitled *On Light of Minds and its Image* (*De luce mentium et eius imagine*, 1642)⁵ seems to be a repetition of St. Augustine's and St. Bonaventure's philosophical approach. Indeed, at the very end of his book the Capuchin explicitly refers to the two Fathers and evaluates his own philosophy as merely a continuation of their thought.⁶ Lucas Wadding, the author of the "approbatio" introducing Magni's book, describes it as a mystical treatise derived from St. Bonaventure.⁷ Nevertheless, in his exposition Magni tries to proceed in a distinctive way. From the beginning of his book he constructs his arguments with no reference to any authority

3 Elpert, J. B., Kein Bruder soll sich anmassen, ein eigentliches Studium zu verfolgen. Die Kapuziner und die Philosophie – ein Streifzug durch die intellektuelle, philosophische Entwicklung des Kapuzinerordens im 16. und frühen 17. Jahrhundert. In: Ebbersmeyer, S. – Pirner-Pareschi, H. – Ricklin, T. (eds.), *Sol et homo. Mensch und Natur in der Renaissance. Festschrift zum 70. Geburtstag für Eckhard Keßler*. Paderborn, Wilhelm Fink Verlag 2008, pp. 349–393.

4 Magni's theory of sense perception has been analysed by Sousedík, S., *Valerían Magni*, op. cit., pp. 120–135; Sousedík, S., *Valerianus Magni*, op. cit., pp. 94–113, shortened in Sousedík, S., *Filosofie v českých zemích mezi středověkem a osvícenstvím*, op. cit., pp. 150–151; Sousedík, S., *Philosophie der frühen Neuzeit in den böhmischen Ländern*, op. cit., pp. 127–129. Sousedík's analysis focuses only on seeing in connection with Magni's metaphysics and the issue of self-awareness. In this context see also Blum, P. R., *Philosophenphilosophie und Schulphilosophie*, p. 105 ff. Cf. da Guspini, M., Il contatto dell'uomo con Dio nell'atto conoscitivo secondo Valeriano Magni, OFM Cap. (1586–1661). *Collectanea Franciscana*, 28, 1958, pp. 241–71, 374–96.

5 Published in Rome 1642, Antwerp 1643, and Vienna 1645. A modern critical edition of the Latin text with a Czech translation Magni, V., *O Světlo mysli a jeho obraze / De Luce mentium et eius imagine*. Ed. M. Kłosová – J. Bartoň – T. Nejeschleba. Praha, OIKOYMENH 2016.

6 *Ibid.*, cap. 23 and 24. Magni aims to underline his dependence on St. Augustine and St. Bonaventure in Magni, V., *De luce mentium et eius imagine ex Sanctis patribus Augustino et Bonaventura ad Bartholomaeum Nigrinum*. Viennae Austriae, Matthaeus Rictius 1645.

7 Magni, V., *De Luce Mentium et Eius Imagine*. Roma, Franciscus Caballus 1642, p. 4: "Argumentum continet non adeo novum, quin a S. Bonaventura, aliisque asceticis viris fuerit praemonstratum." Wadding, who preferred the Scotistic tradition, aimed to deal with Magni's book only as with a mystical treatise and neglected its philosophical meaning. Cf. Blum, P. R., *Philosophenphilosophie und Schulphilosophie*, op. cit., p. 109.

and aims to follow only the analysis of his own cognitive experience. After a short introduction explaining what light of minds means and how it accords with the Christian way of thinking, Magni strives to construct his philosophy independently of the indicated sources. He begins his exposition with a description of sense perception.

Magni's description of sense perception in his first philosophical work is quite short, comprising only one brief chapter.⁸ Despite its shortness, the chapter's position in the structure of the entire book is not negligible, for it enables Magni to differentiate between sensible and intellectual cognition by means of the distinction between their objects. While the object of sense perception are bodies (*corpora*), the object of intellection is being.⁹ In this common scholastic doctrine, following the classical enumeration of the five sense organs and the five sense faculties, Magni places an unusual emphasis on sight. Only by means of sight can one have cognition of bodies as such,¹⁰ i.e., of their mass, figure, and colour.¹¹ The other sense faculties, hearing, taste, smell and touch, do not cognize bodies as such but merely some of their qualities. Thus, they do not mediate cognition of things (*corpora*), but cause delightedness or displeasure in the cognizing person.¹²

Although Magni does not use this terminology, the differentiation between the objects of the sense faculties resembles the early modern distinction between primary and secondary qualities. Magni's use of this distinction has a specific impact on his philosophical system with important consequences. Firstly, the extension of bodies is underscored as their main feature,¹³ although Magni also adds colour to the list of data characterizing bodies as such. While in early modern philosophy colour is usually regarded as a secondary quality, Magni holds a different view, which displays his notion of sight and his metaphysics of light, as we will see later.

8 Magni, V., *O Světle mysli a jeho obraze / De Luce mentium et ejus imagine*, op. cit., cap. 2, pp. 46–49.

9 *Ibid.*, p. 46–50: “Corpora sunt totale subjectum cognitionis sensitivae ... Ens est totale subjectum intellectivae cognitionis.”

10 *Ibid.*, p. 46: “Corpora vero qua corpora, si non sint a luce illuminata, sunt invisibilia.”

11 *Ibid.*: “Speciem colouris..., et consequenter datae corporeae molis et figurae...”

12 *Ibid.*: “reliquas sensibiles qualitates sensu [i.e. sight] non cognoscimus, sed inde sentimus jucunditatem vel molestiam.”

13 The emphasis on extensionality seems to be similar to René Descartes, whose *Meditations* were published one year before Magni's first philosophical work. Indeed, Marin Mersenne, who read Magni's *De Luce mentium* and whom Magni met in Rome in 1645, recommended that he reads Cartesius, seeing certain similarities between the two authors. However, Magni was not interested. Cf. Blum, P. R., *Philosophenphilosophie und Schulphilosophie*, op. cit., p. 116. For Magni the extensionality of bodies is not a result of mental abstraction, as in Descartes's Second Meditation, but coincides with the main features of his metaphysics of light. Magni later followed corpuscular theories in the field of natural philosophy. In all probability, a crucial inspiration for his physics came from reading Galileo Galilei, William Gilbert and Jan Baptist van Helmont.

Secondly, the emphasis on sight and therefore on light is significant for Magni's approach to sense perception. This moment is even more important than the first one, not only for the topic of sense perception, but for Magni's philosophy in general. In sense cognition, light is the precondition of seeing, because bodies are not visible and thus not cognizable, if they are not illuminated by light. Without illumination by physical light or sensible light (*lux sensibilis*) one would only have knowledge of qualities of bodies and not of bodies as such.¹⁴

Magni does not go any further to analyse sense perception in greater depth, but quickly moves from the senses and physical light to the intellect and mental light. Later, in his treatise *Per se notis* of 1648,¹⁵ which also became a part of his last work *Opus philosophicum* of 1660,¹⁶ Magni devotes some chapters to a description of the senses and sense perception.¹⁷ The fundamental distinction between seeing and the other senses and sense faculties is attributed to a difference between soul and body. The senses of touch, taste, smell, and hearing are connected with the body, while the sense of sight, although it has a corporeal organ – the eye (*oculus*), is linked to the rational soul, which is of a luminous nature. Thus, the qualities of external bodies, grasped by the former four senses, cause delightedness or displeasure on the bodily level, while light as light cognized by seeing does not induce such affections. All bodily affections coming from light must be reduced to the sense of touch.¹⁸ It does not mean, however, that seeing could not cause pleasure or displeasure in the cognizing person. There is a difference, according to Magni, between the likes and dislikes associated with the centre of human nature, and the likes and dislikes related to the convenience or inconvenience of the human body.¹⁹

14 Magni, V., *O Světle Mysli a Jeho Obraze / De Luce Mentium et Ejus Imagine*, op. cit., p. 46: “Non tamen lux illuminat sonum, odorem, saporem, calorem, frigiditatem, humiditatem, siccitatem et alia ejusmodi: haec enim non sunt corpora, sed qualitates in corporibus, quae oculis clausis percipi possunt.”

15 Magni, V., *Tractatus de per se notis. Virgini Deiparae dicatus*. Warsawiae, Petrus Elert 1648. Published also as a part of Valerian Magni, *Philosophiae Virgini Deiparae dicatae pars prima, in qua tractatus de peripatu, de logica, de per se notis, de syllogismo demonstrativo*. Warsawiae, Petrus Elert 1648.

16 Magni, V., *Opus Philosophicum*. Lithomisslii, Joannes Arnold 1660, as a part of “Metaphysica Valeriani Magni”, tractatus 10 “Per se nota ex sui conscientia”.

17 Magni, V., *Tractatus de per se notis*. Lib. 2, cap. 19–24, pp. 128–154; Magni, V., *Opus Philosophicum*, pars 3, tr. 10, cap. 19–24, pp. 66–82.

18 *Ibid.*, 71: “Lux qua lux, nullam iucunditatem, aut molestiam inducit in ullam partem mei corporis, imo nec in pupillam ipsam. Sane afficit, ut est calefaciens, aut dissipans visivos in oculo: qui affectus reducuntur ad sensum tactus. Ut vero est lux, nullo modo afficit meum oculum, nullam enim affectionem a luce, qua est lux, experior in oculo.”

19 *Ibid.*: “Distinguo enim vivacissime illa, quae mihi placent, aut displicent respective ad meam intimam naturam, ab illis, quae mihi placent, aut displicent, velut quae conveniant, aut disconveniant meo corpori.”

Cognition of external bodies by means of sight arouses love, provided that the object is beautiful and therefore pleasant, or hate, if the object is ugly (*deformitas*) and consequently annoying (*molestus*). Loves and hates are not related to the body, says Magni, but are rooted in human nature, which is an image of Reason and is animated by light.²⁰ These “vital” affections are the result of a twofold illumination. One is coming from outside, from external bodies, and we are naturally immersed in this light. The other one is the illumination of immanent light, which is the light of minds enabling us to judge all things.²¹

Thus, sense perception with respect to sight has a twofold origin, as it was appropriately described by Stanislav Sousedík.²² An external body, provided it is illuminated by physical light, sends a sensible image to the eye, which is grasped by our very nature, i.e., by the soul. By means of this process the soul becomes an image very similar to the external object, which is the source of the light. Simultaneously the soul itself becomes this light, which is received by the soul. The soul, which has become light, cognizes by means of this light and also comes to cognize its own nature and therefore attains self-awareness.²³ Visual sense cognition leads to the knowledge that the cognizing person existed before the sense cognition.²⁴ Magni stresses many times that he does not want to dwell on sensible light, but intends to move forward to intelligible light. This is precisely why seeing, being the most excellent kind of sense cognition, plays a crucial role in Magni’s philosophy and analysing it leads to the core of his thought. It fulfils Magni’s main goal, which consists in the ambition to create a philosophical system alternative to Aristotelian philosophy with the help of the metaphysics of light.

20 Ibid., 72: “... ii affectus vitales radicanur in mea ipsissima natura, quatenus est vel imago Rationis, vel parturiens indeficienter molem infinitam, vel vivificabilis a luce.”

21 Ibid., 65–66: “Id vero est pote parturire ex se, non solum lumen mihi immanens, vicarium apud me ipsius Rationis, regulamque censendi de omni ente, verum et parturio sphaeram infinitam molis indivisibilis, tribuentem mihi imaginari molem corpoream... Id vero meae entitatis, est natum tingi a luce, quae viatiur in gremio molis corporea, nec simpliciter tingor, sed evado in lumen, vicarium apud me eius lucis, a qua sui tinctus, et eatenus nosco colourata, seu lucida.”

22 Sousedík, S., *Valerían Magni*, op. cit., p. 120; Sousedík, S., *Valerianus Magni, 1586–1661*, op. cit., p. 94.

23 Magni, V., *O Světle mysli / De Luce mentium*, op. cit., cap. 20, pp. 122–127.

24 Magni, V., *Opus Philosophicum*, Pars III, tr. 10, cap. 3, p. 21. “Animadverto autem, quod ego mutatus de illis tenebris ad illa lumina, non puto, me mutari de mera non entitate ad illam entitatem luminosam; sed sic mutor, conscius, me praeexistere illi illuminationi.” Cf. Blum, P. R., *Philosophenphilosophie und Schulphilosophie*, op. cit., p. 107.

3. Anti-Aristotelianism and metaphysics of light

Anti-Aristotelianism is a recurrent motive in Valeriano Magni's philosophy²⁵ culminating in his *Opus philosophicum*. The emphasis on seeing can also be ascribed to Magni's disagreement with Aristotelian philosophy. Aristotle places the sense of touch in the centre of his epistemology, on the grounds that it is the most basic of the senses and the only one common to all animals (*De Anima* 413b 4-10), and even the only sense connected with existence as such, while the others are good for well-being but an animal can exist without them (*De anima* 3.13).²⁶ Magni, as a critic of Aristotle, changes the perspective and highlights the sense of sight for its cognitive power. The touch and the other three senses do not mediate cognition of things.

The reason why Magni accentuates sight and marginalizes the other sense faculties consists in his Platonic metaphysics. Magni holds that the mind flies through two realms: the realm of existing external things, i.e., bodies, and the realm of ideas.²⁷ Since bodies are characterized by extension (mass and figure) and colour, they can only be cognized by sight.

The priority given to sight is also a result of Magni's endorsement of the Augustinian ontological superiority of the soul, which he literally and not only analogically understands as light. The Augustinian conception of the light of minds constitutes the background of his theory of sense cognition.²⁸ In this point was Magni also influenced by St. Bonaventure and his metaphysics of light. Magni explicitly states that his philosophy was inspired by reading Bonaventure's *The Journey of the Mind into God* (*Itinerarium mentis in Deum*). God, as Magni summarizes St. Bonaventure's approach, is the light of minds and is known to the human intellect *per se*, while humans are its image.²⁹

25 Magni was not the only scholar in the Czech Lands to criticize Aristotelianism in the given period. Jan Marcus Marci of Kronland, a Czech physician and philosopher connected to Prague Archbishop Harrach, like Magni, tried to replace Aristotelian philosophy with an alternative philosophical system. Contrary to Magni, Marci's philosophy is based on hylozoism, cf. Sousedík, S., *Philosophie der frühen Neuzeit in den Böhmischesen Ländern*, op. cit.; Giglioni, G., Panpsychism versus Hylozoism: An Interpretation of Some Seventeenth-Century Doctrines of Universal Animation. *Acta Comeniana* 35, 1995, pp. 25–43.

26 Cf. Freeland, C., Aristotle on the Sense of Touch. In: Nussbaum, M. – Rorty, A. (eds.), *Essays on Aristotle's de Anima*. Oxford, Oxford University Press 1992, pp. 227–248; Massie, P., Touching, Thinking, Being: The Sense of Touch in Aristotle's *De Anima* and Its Implications, *Minerva – An Internet Journal of Philosophy*, 17, 2013, p. 74–101.

27 Magni, V., *O Světlem mysli / De Luce mentium*, op. cit., cap. 10, pp. 66–71.

28 Magni adopts the term *lux mentium* from St. Augustine, who uses it as an equivalent for God, see Augustin, *Confessiones* XI,11,13 (CCL 27,200).

29 Magni, V., *O Světlem mysli / De Luce mentium*, op. cit., cap. 24, pp. 148–161.

But Magni did not follow Bonaventure in his exposition of sense perception, since regarding sense cognition the Franciscan master had followed Aristotle. For Bonaventure, Aristotle was the main authority on cognition of the external world. Bonaventure praises Plato as a master of wisdom (*sapientia*), since he directed his gaze to the realm of the immutable ideas in heaven, while disregarding the world of sensible variety. Aristotle, in contrast, is for Bonaventure a master of “science” (*scientia*), because he dealt with the empirical world while at the same time failing to grasp the realm of unchangeability.³⁰ For Magni, on the contrary, Aristotle cannot be an authority in any field, not even epistemology or natural philosophy, because he is essentially an atheist.³¹

Although the Capuchin professes to be an implacable opponent of Aristotle, he actually adopts certain aspects of Peripatetic philosophy. Following the Aristotelian tradition, Magni bases the connection between the senses and the intellect in the scholastic theory of *species intelligibilis*. According to Magni, cognition is strictly intentional in character. It is impossible, Magni states, for things as such to come to the human mind and become identical with it. Cognition only proceeds by means of images. There is a difference between the light (*lumen*) of the object in the pupil and the light of the object in the soul, because of the difference between the pupil and the soul.³² Who does not know this distinction, does not know philosophy, Magni adds in his first philosophical work *De luce mentium*. In his last philosophical work *Opus philosophicum* Magni once again emphasizes the intentionality of the object of sense cognition. The object of sense cognition is not an actual lion, but an image of it which represents the actual lion. The soul is in a certain sense identical with this image and this is the way we cognize actual things.³³

30 Bonaventure ultimately exalts St. Augustine as the Church Father who transcended the two traditions by connecting them. Nonetheless, Bonaventure incorporated many features of Aristotelian philosophy into his thought. Bonaventura, Sermo IV. Christus Unus Omnium Magister. In: S. Bonaventurae Opera Omnia, vol. 5, Quaracchi, Collegium S. Bonaventurae 1891, p. 572.

31 Magni, V., De Atheismo Aristotelis. In: Magni, V., *Admiranda de vacuo et Aristotelis philosophia, Valeriani Magni demonstratio ocularis de possibilitate vacui*. Warsaviae, Petrus Elert 1547, pp. 62–70. Cf. Ochman, J., Walerian Magni (1586–1661) jako krytyk ateizmu Arystotelesa. *Euhermer – Preglad Religioznawczy*, 89, 1973, No. 3, pp. 25–34.

32 Here Magni refers to the old physiological notion that an image of the body is transmitted by light from the body to the observer’s pupil. At the time when Magni’s book was published this concept had already been superseded by Johannes Kepler’s optics, which advanced the idea that the image of the body is formed at the retina. Magni evidently did not adopt this conclusion of Kepler’s new optic theory, although he probably knew Kepler personally, since they could have met in Linz, cf. Bloth, H. G., *Der Kapuziner Valerian Magni und sein Kampf gegen den Jesuitenorden. Materialdienst des Konfessionskundlichen Instituts Evangelischer Bund – Konfessionskundliches Institut Bensheim* 7, 1956, No. 5, pp. 81–86.

33 Magni, V., *Opus Philosophicum*, op. cit., tr. 10, p. 30.

Magni distinguishes between sensible images and intelligible images: sensible images are representations of things. They are available not only to humans but also to animals. But animals are not able to differentiate between a sensible image and the thing which is represented by the image. As opposed to sensible images, intelligible images are only accessible to humans. In contrast to animals, humans are able to compare a sensible image with an intelligible image and judge its veracity. Thus, there are two types of cognition. One is simple apprehension, which consists in an image representing the cognizable thing, while the other type is only characteristic for humans and consists of affirmation and negation.³⁴

Light plays a specific role in sense cognition, as we have seen. The meaning of light is underscored in the second type of cognition, which Magni sometimes calls judgement (*judicium, dijudicare*). Humans are able to judge because they are images of God described as the light of minds. By means of an intelligible image, a human mind judges the veracity of a sensible image as a representation of a thing as such. Was this image created by the human mind or is it somehow innate? Magni gives the example of the cognition of Peter. If we see a man who looks like Peter, we cannot compare his image with Peter himself, but have to create a new image and then compare it with another one which we already had in mind. Magni holds that this image has the function of an idea, by means of which we judge.³⁵ It still does not mean, however, that the idea of Peter was innate. It could have been and probably had been created by the human mind.

Magni eventually specifies a third type of cognition, after apprehension and judgment. He calls this type 'definition', which consists in the knowledge of a perfect thing, through which we define the participation of things in their perfection.³⁶ Definition is therefore a different kind of cognition than judgment, since by means of definition we do not cognize things but the

34 Magni, V., *O Světle mysli / De Luce mentium*, op. cit., pp. 52–54: “Porro imago, quam cognoscenda imitantur, vel est sensibilis, vel est intelligibilis. ... Quid vero intersit cognitionem, quae fit per imaginem supponentem pro imaginato et per imaginem, cui comparamus, quae illi similia videntur, liquido constat ex dictis: nimirum, illa cognitio est apprehensio simplex; haec vero est affirmatio et negatio. Illa convenit brutis, haec est illis impossibilis: Nos vero homines cognoscimus ut bruta per speciem supponentem; et cognita comparamus cum imagine, unde censemus de rei veritate et falsitate.”

35 Ibid.: “Porro imago necessario ponitur ve[l]ut idea, ex qua censemus v. g. hunc hominem esse Petrum.”

36 Ibid., cap. 6, pp. 54–57: “Demum est tertius modus humanae cognitionis; cum videlicet ex notitia rei perfectae definimus omnia illa, quae eam perfectionem participant: v. g. si sit censendum de corporali pulchritudine multarum personarum, id fieri nequit citra errorem, nisi praecognoscamus perfectam pulchritudinem, ex qua definimus, quid pulchritudinis participet...”

degree of their participation in their perfection.³⁷ Magni gives the example of perfect beauty, which does not represent a beautiful thing, in contrast to sensible and intelligible images, which we can identify with things as such.

To explain it better one would have to return to Magni's concept of light derived from St. Augustine's and St. Bonaventure's metaphysics of light, which the Capuchin thinker tries to elaborate into a comprehensive system. For Magni there is an analogy between physical and mental light, since both enable a kind of cognition, either an act of sense cognition or mental acts of cognition. Physical light is a condition of the sense cognition of bodies, i.e., of apprehension. Bodies are visible only in light. Analogically, mental light is a condition of judgment and definition. Humans can judge or define only in the light of the mind. Both lights are connected by the Augustinian conception of God as the light of minds. Finally, Magni argues for an identity between the light of sense cognition and the light of intellection. They both have one source, God as light, who is the creator of external things.

4. Presence or absence of Augustinian sense perception

With respect to the influence of St. Augustine, one can ask if Magni also follows Augustine's theory of sense perception. It is known that Augustine did not elaborate his conception of sense perception systematically. Two main tendencies can be found in his approach and both were discussed in medieval philosophy. First, it seems that, due to the ontological superiority of the soul, sense cognition is not passive. An external body causes changes in the human body which the soul actively apprehends. The alternative Augustinian theory is a theory of extramission: the soul sends out visual rays which reach external objects.³⁸

As for the latter, Magni does not seem to follow the explanation of sense perception by means of extramission. On the contrary, it is the external object which emits its image. The image is visible provided that it is illuminated by physical light. The quality of visual sense perception changes according to the intensity of light, for instance of the sun's rays.³⁹

37 *Ibid.*, p. 56: "Porro censere ex notitia perfecti in aliquo genere perfectionis de iis, quae eam perfectionem non adaequant, sed participant; dixi esse non tam cognoscere, quam definire: id enim cognoscendo definitur, de quo scitur id, quod est, et ea, quae eidem desunt."

38 On Augustinian theories and their reception in the Middle Ages see Toivanen, J. – Silva, J. F., *The Active Nature of the Soul in Sense Perception: Robert Kilwardby and Peter Olivi*. *Vivarium*, 48, 2010, No. 3, pp. 245–278.

39 Cf. Magni, V., *O Světle mysli / De Luce mentium*, op. cit., cap. 9, pp. 62–65.

Nevertheless, the theory of extramission does echo in Magni's so called thought experiments.⁴⁰ In the book *De luce mentium* Magni forms the hypothesis that light is emitted from the eyes. Then, if a man were in a cell illuminated by no light, his eyes would emit light illuminating everything in the room. This thought experiment does not serve to confirm or refute the theory of extramission. Its goal is to show that light is a condition of cognition, but is not cognizable as such. The man in the cell whose eyes would emit light would see the cell and the objects inside it but not the light of his eyes, Magni concludes.⁴¹

But the other Augustinian theory of sense perception, which assumes that the soul is active resonates in Magni's philosophy, although he explicitly describes sense perception as passive. A body emits an image which is passively received by the eyes.⁴² On the other hand, by means of sense perception the soul not only passively receives an image, but it simultaneously actively becomes light, as pointed out above. Thus, sense perception, reduced to seeing, has both a passive and an active aspect.

The soul's activity in sense perception can also be deduced from Magni's conception of judgement. St. Bonaventure in his *Journey of the Mind into God* considers judgement (*dijudication*) as an activity producing sensible species, which are received by the senses, to enter the intellectual power.⁴³ Bonaventure's notion had been adopted by certain Renaissance philosophers⁴⁴ and

40 Magni characterizes the analysis of cognition generally as a "mental experiment" (*experimentum mentale*), meaning an experience of thinking, cf. Magni, V., *O Světle mysli / De Luce mentium*, op. cit., cap. 19, p. 120, but he also designs thought experiments in the modern sense. The word "experimentum" is ambiguous in the early modern period, it can signify experience as such, i.e., how things happen in nature, or physical experiments with manifold definitions. Valeriano Magni used both the word "demonstratio ocularis", see below in the text, and "experimentum" to describe his "experience" and "experiments", cf. Magni, V., *Experimenta de Incorruptibilitate Aquae. Ad Peripateticum Cosmopolitam Virgini Deiparae Ex Voto Dicata*. Warsawiae, Petrus Elert 1648.

41 Magni, V., *O Světle mysli / De Luce mentium*, op. cit., cap. 12, p. 78: "Cogita ergo, Francisce, quid foret, si homo propagaret lumen ex oculis propriis; isque foret constitutus in conclavi, in quo nullum sit lumen praeter illud, quod manat ab oculis hominis illius. Hic suis lucentibus oculis illuminaret conclave et illae in eo continentur: puta parietes, fenestras, januas, mensam, scabella, vasa, libros et alia ejusmodi; quae omnia videret ac discerneret beneficio illius lucis, quam emittit ex propriis oculis: nec tamen is posset eam lucem suis oculis insidentem intueri; sed duntaxat ea, quae per illam redduntur visibilia."

42 Magni, V., *Opus Philosophicum*, op. cit., Pars 3, tr. 10, cap. 1, p. 18: "Corpus lucens, obiectum meo oculo, producit in illum lumen sibi simile, quod passive suscipitur in oculo."

43 Bonaventura, *Itinerarium Mentis in Deum*. In: *S. Bonaventurae Opera Omnia*, vol. 5, Quaracchi, Collegium S. Bonaventurae 1891, cap. 2, 6, p. 301. "Dijudicatio igitur est actio, quae speciem sensibilem, sensibiliter per sensus acceptam introire facit depurando et abstrahendo in potentiam intellectivam."

44 Leen Spruit has identified Francesco Piccolomini and Jacopo Zabarella as followers of Bonaventure's doctrine, Nicolas of Cusa also shared a similar view. Spruit, L., *Renaissance Views of Active Perception*. In: Knuuttila, S. – Kärkkäinen, P. (eds.), *Theories of Perception in Medieval and*

Magni also evidently borrowed it from his master. But Magni did not radicalize the conception of judgement as his Renaissance predecessors did, who even held judgement to be an activity by which species are produced.⁴⁵ For Magni, judgement is an activity of the human soul which compares the image of a thing with a similar image⁴⁶ and distinguishes between the different aspects of the cognized body, which are contracted in one object seen by the eyes.⁴⁷ Only by means of this activity is the human soul able to differentiate between figure and colour, longitude and latitude, air and water, etc.

5. Certitude of sense perception

Magni's theory of cognition comprises strong subjectivist tendencies, stemming from the ontological superiority of the human soul and culminating in his conception of "I-ness" (*egoitas*). Magni points out that he is doing his own philosophy by means of an analysis of his own cognitive activities. This approach can lead to "soloeicism", as Magni calls his own position stressing that he is an image of God.⁴⁸ This approach could give rise to a question concerning the existence of the external world.⁴⁹ Valeriano Magni did not explicitly ask this question, although the object of sense cognition is actually not an external thing itself, but its image. In any case, Magni did not doubt the existence of the external world, and he even had no doubts concerning the correctness of the data coming from the sense organs and sense activities. Unlike his contemporary Descartes, sensory illusions do not occupy any place in his philosophy. In his first philosophical work *De luce mentium* Magni indicates that the credibility of information derived from the senses does not, in his view, originate in the senses, but in the activity of the human mind, which considers their truthfulness in the light of mental light.

Several years later Magni had an opportunity to elaborate his theory of sense perception from this point of view. The challenge appeared in the context of his experiments with a vacuum in 1648, which provoked great

Early Modern Philosophy. Dordrecht, Springer 2008, p. 205. As concerns Paduan Aristotelianism, the archive of the Capuchin order in Vienna, housing Valeriano Magni's manuscripts, contains an excerpt from Jacopo Zabarella's *Compendium naturalis philosophiae*. The manuscript documents that Magni was interested in Zabarella's theory of cognition including the concept of *species intelligibilis*.

45 This is Francesco Piccolomini's conception, cf. *ibid.*, 220.

46 Magni, V., *O Světle mysli / De Luce mentium*, op. cit., cap. 5, p. 54.

47 *Ibid.*, cap. 9, p. 62: "Unde habemus, mi Francisce, quod tot entia invicem distinguamus, quae brutum convoluit in unicum objectum oculo corporali visum?"

48 *Ibid.*, cap. 22, p. 134: "Deum intelligo citra illationem; sed per speciem, quam (indulge soloeicismo) ego ipse sum."

49 Cf. Sousedik, S., *Valerianus Magni, 1586–1661*, op. cit., pp. 95–99; Sousedik, S., *Valerian Magni*, op. cit., pp. 121–124.

discussion and Magni published first a description of his experiment proving the existence of a void, and then also his answers to various objections.⁵⁰ With respect to the present topic, two aspects of his vacuum treatises need to be mentioned. First, Magni saw the philosophical foundation of void experiments in his book on the light of minds. Second, Magni speaks not of experiments, but of a demonstration accessible to the sight (*demonstratio ocularis*).

By means of the sight, Magni demonstrated three different truths: the existence of a vacuum in a tube, the slow movement of a body in a void, and finally the existence of light in a place where there is nothing but a void. These three facts contradict Peripatetic natural philosophy and prove the untenability of Aristotelianism. One of Magni's opponents from the camp of Aristotelian philosophers, Johannes Broscius of Krakow, speculates about the extent in which Magni trusts sense observation. Is he aware of the fact, Broscius asks, that the senses can be erroneous, as Rene Descartes and Johannes Kepler have persuasively shown?⁵¹

In his response, Magni does not attempt to justify the senses as a source of truth, but maintains that he does not demonstrate the existence of a void by means of the senses, but through the intellect. A corporeal eye cannot grasp a void, only the light of the mind can come to the conclusion that what is observable in a tube is a void.⁵² The experiments proving the existence of a void primarily helped Magni to emphasize the crucial significance of light. They demonstrate that light is not only an epistemological and ontological principle, but also a fundamental principle in nature. They indicate that the light existing in a void is not an accident of body and is not dependent on matter.

50 Magni, V., *Demonstratio ocularis Loci sine locato: Corporis successive moti in Vacuo: Luminis nulli corpori inhaerentis*. Warsawiae, Petrus Elert 1647. The treatise was republished eight times. Cf. Dear, P., *Discipline and Experience: The Mathematical Way in the Scientific Revolution*. Chicago, University of Chicago Press 1995, pp. 187–90; cf. Gorman, M. J., 'Jesuit Explorations of the Torricellian Space: Carp-Bladders and Sulphurous Fumes', *Mélanges de l'École Française de Rome. Italie et Méditerranée*, 106, 1994, No. 1, pp. 7–32; Nejeschleba, T., 'Valerian Magni (1586–1661) o vakuu. Dějiny vědy a techniky', 48, 2015, No. 3, pp. 135–150; on the dissemination of Magni's experiments with the void see Blum, P. R., 'In Fugam Vacui – Avoiding the Void in Baroque Thought. Quaestio – Yearbook of the History of Metaphysics', forthcoming; Leinsle, U. G., 'In Agro Norbertino-Thomistico'. P. Dominicus Aurhammer OP als Professor in Marchtal 1652–1653. *Annalecta Praemonstratensia*, 88, 2012, pp. 42–67.

51 Cygan, J., 'Der Streit Jan Brozeks, Professor der Krakauer Akademie, mit Valerian Magni, Kapuziner, zu der Möglichkeit des Daseins der Leere in der Natur', *Monumenta Guericiana*, 83, 2002, No. 9/10, pp. 92–100.

52 Magni, V., *Demonstratio ocularis Loci sine locato*. Venetiis, Typis Herzianis 1649, p. 26: "Fateor, inquam, vacuum non esse visibile oculo corporali, ac visibile est oculo mentis hominis illius, qui oculo corporis intuetur meam fistulam."

Provoked by polemics concerning the vacuum, Magni returned to the issue of sense perception in the treatise *Per se notis*,⁵³ in which he follows up on the expositions of his first philosophical work *De luce mentium*. “Per se notum” is a traditional label applied to a proposition or a principle which is evident without a proof. In medieval philosophy the discussion about “per se notum” focused on the issue of the existence of God.⁵⁴ Valeriano Magni also paid attention to this problem,⁵⁵ but his notion of “per se notum” was broader and included also the issue of sense perception. Magni enumerates four types of “per se nota”, based on the difference between two kinds of cognition, which he calls direct and reflexive.⁵⁶ Another difference comes from the distinction between sense cognition and intellectual cognition. In sum, there are direct “per se nota” of the senses and of the intellect, and reflexive “per se nota”, which are movements of sensation and of intellection. Magni gives examples of every kind of “per se notum”: “I see the sun” is a direct per se notum of the senses, and “I am aware that I see the sun”, i.e., “I am aware that I have an image of the sun”, is a reflexive per se notum of sensation. The proposition “every whole is greater than its part” is known per se as an example of a direct per se notum of the intellect and “I am aware that I know that every whole is greater than its part” is a reflexive per se notum of intellection.⁵⁷

While the certitude of the senses is limited to seeing, by which humans cognize the essential features of external bodies, their extension (longitude, latitude, figure, mass) and colour,⁵⁸ the certitude of sensation includes not only sight, but also touch, taste, smell, hearing, and the affections caused by them, of which one is aware.⁵⁹ On the part of intellection there is a certitude of the traditional principles known per se and thus immutable,⁶⁰ and a certi-

53 Cf. above, note no 15 and 16.

54 Cf. Tuninetti, L. F., “Per se notum”. *Die logische Beschaffenheit des Selbstverständlichen im Denken des Thomas von Aquin*. Leiden, Brill 1996.

55 Sousedík, S., *Valerian Magni*, op. cit., pp. 139–144; Sousedík, S., *Valerianus Magni, 1586–1661*, op. cit., pp. 118–122; da Guspi, M., La conoscenza di Dio in Valeriano Magni. Possibilità di una conoscenza intuitiva? *Collectanea Franciscana*, 30, 1960, pp. 264–297.

56 Magni, V., *Opus Philosophicum*, op. cit., Pars III, tr. 9, p. 8: “Noscuntur autem actu directo vel reflexo.”

57 Ibid.: “Nos cognoscimus et sensu et intellectu. Hinc quattuor differentiae per se notorum, scilicet, primo-nota per sensum, v. g. Sol visus. Primo-nota per intellectum, ut Totum est maius sua parte. Meae sensationes mihi per se notae, v. g. Sum conscius, me videre Solem, sum conscius, me imaginari Solem. Demum meae intellectiones; sum conscius, me intelligere, quod Totum sit maius sua parte.”

58 Ibid.: “Ad primo-nota referuntur Corpora, eorumque longitudo, latitudo, profunditas, moles, figura, lux, colour, et si quae sunt alia eiusmodi.”

59 Ibid., p. 9: “Ad motus sensitivos spectant videre, audire, olfacere, gustare, tangere, imaginari, amare, odisse, gaudere, tristari, irasci et alii eiusmodi affectus.”

60 Ibid.: “Ad primo-intellecta spectant per se notae propositiones incommutabiles.”

tude of the movements of intellections and affections referring to the object as it is intelligible: speaking, judging, reasoning, loving, hating etc.⁶¹

6. Conclusion: Sense perception and metaphysics of light

From the point of view of 17th-century philosophy, Valeriano Magni seems to follow neither empiricism nor rationalism, but rather to independently combine the two approaches. Magni attributes certitude to both sensible data and intellections. However, the credibility of sense perception, in which seeing is emphasized, is founded in Magni's metaphysics of light developed from the medieval Platonism of St. Augustine and St. Bonaventure. The certitude of sight ultimately stems from a reflection derived from the Augustinian introspection.⁶²

The core of Magni's philosophy is grounded in the Augustinian conception of the soul as an image of God. Since God is described as the light of minds, the human soul is of a similar nature and its intellections can be characterized by means of light and illumination. Introspection, or reflection in Magni's terminology, discloses this innermost nature of the human being. In addition, since God the creator of souls and bodies is light, not only intellection but also sense perception somehow has to do with light. This is a way of emphasizing sight among the other senses. Since bodies are characterized by extension and colour, one can grasp their main features only by means of seeing. The certitude of seeing is guaranteed by God the light, for light is an epistemological, ontological, and ultimately also physical principle, as the experiments with a vacuum have proved. With respect to the cognition of external objects, light is not used as a metaphor, but becomes an explanatory principle stemming from Magni's metaphysics.

Vice versa, the analysis of sense perception plays a crucial role in Magni's philosophy. It enables him to describe human cognitive and mental activities by means of the concept of light. From sensitive light via the light of minds the "I" attains self-awareness.

61 Ibid.: "Ad motus intellectivos spectant Dicere, Judicare, Ratiocinari, Intelligere, amare, odisse, gaudere, tristasri, irasci, velle, nolle, et alii eiusmodi motus seu actus circa objectum, ut est intellectibile."

62 Ibid., p. 10: "Sine accurata notitia motuum sensitivorum et intellectivorum nemo Philosophus. Porro harum notitiarum nulla tibi utilior, nulla necessaria magis reflexione tua super tuos motus sensitivos et intellectivos."

ABSTRACT

The Capuchin monk Valeriano Magni tried to create a new Christian, anti-Aristotelian philosophy, which also includes an alternative concept of sense perception. The main source of his approach is St. Augustine's and St. Bonaventure's theory of illumination and the metaphysics of light. Magni emphasizes the seeing is the only sense by means of which one can attain cognition of bodies, i.e., their extension and colour. At the same time, through an analysis of the inner processes of sensation, cognition and intellection, seeing leads to self-awareness. Cognition is intentional in character. The object of sense perception is not an actual external object but an image of it originating from the object, received by the sense organ and grasped by the soul vitalizing the sense organ. Despite that Magni regards the sense data provided by seeing as *per se nota*, which is made possible by the metaphysics of light. For Magni, light is an epistemological, ontological, and physical principle. His emphasis on seeing is a part of his ontological programme.

Keywords: Valeriano Magni, senses, seeing, light, metaphysics of light, early modern philosophy, 17th-century philosophy

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