

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 visu, 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 virtualem in organo corporeo existente, secundum hoc potest dici habere radium virtualem. 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 impendenda 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 impendenda 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 Scriptum*. Ed. R. L. Friedman; L. O. Nielsen; C. Schabel. URL: <<http://www.peterauriol.net/editions/electronicscriptum/>> (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 videri 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 radiorum 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 (*indistinguibilter 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: Giraldu 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 is it 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 intimitur 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 dicetur 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 aequè 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