

What is in the mirror?

The metaphysics of mirror images in Albert the Great and Peter Auriol

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Catoptrics, i.e. the optical study of mirrors and the phenomenon of reflection, is the main topic of an anonymous late ancient treatise, translated into Latin as *De speculis* in 1269 by William of Moerbeke who (falsely) ascribed it to Ptolemy.¹ In the introduction of this rather brief treatise, the author states that catoptrics is worth studying as it enables its practitioner to construct various kinds of mirrors, including odd ones, such as the one in which the observer’s face appears to have three eyes and two noses, and practical ones, such as the one that enables the observer to spy on people in the street.² Such a statement reveals, first, one important feature of the entire tradition of premodern optics: it is not a mere detached study of the propagation of light and its physical properties but chiefly a complex study of what is visible to a beholder, or the whole world of appearances.³ As such, premodern optics is primarily a theory of vision, involving—among others—analyses of psychological mechanisms and even what may be called a phenomenology of vision (first-person descriptions of visual experiences). Second, it testifies to the premodern fascination with mirror images and perceptual ephemera. Whereas modern catoptrics is content with the universal law of reflection, ancient and medieval catoptrical treatises abound with applications to various kinds of mirrors, including very peculiar ones, with the observer’s involvement being crucial in all cases. The question is: what appears *to them* in each mirror and how?

In the thirteenth century, the assimilation of Greek and Arab optical texts (mainly those by Euclid, Ptolemy, Al-Kindí, and Ibn al-Haytham or Alhacen)⁴ newly translated into Latin goes hand in hand with rethinking the optical ideas and theories by scholars well versed in Aristotelian philosophy. The inevitable result is that many so far understudied questions emerge among the philosophers, such as what is the ontological status of mirror images? And what is the place of mirror perception in the broader theory of vision? The present chapter is devoted to the former question, so pressing for medieval scholars. Thus, the key questions investigated here are: what is or what *appears* to be in a mirror, or, a little differently, what is the perceptual content of a visual experience of an object seen by means of a mirror?

¹ On premodern catoptrics (mainly Euclid, Ptolemy, and Alhacen), see, e.g., Smith (2015: 55–72, 92–108, 195–206).

² Pseudo-Ptolemy, *De speculis* 2, 153–154.

³ See, e.g., Simon (1987) or Smith (2004).

⁴ On these texts, see Smith (2015: 47–64, 76–129, 166–169, 181–227).

Why is such a question worth exploring? The mirror image, or the scene seen in the mirror, evinces a unique combination of properties not found in the images produced by other optical devices. The object seen by mirrors appears to be elsewhere than it really is. (Similar mislocation is present in photos and pictures but not in the images produced by a magnifying glass.) Unlike images by cameras and magnifiers, the mirror images are usually perceived as left–right reversed, and, unlike photos (but like images formed by magnifiers), they are not persistent—mirrors cannot “freeze” the scene appearing in them and make the image stable and fixed.⁵

Hence, the mirror image is a peculiar entity that seemingly defies a neat demarcation between the mind and the extramental physical world.⁶ On the one hand, the mirror image seems to be endowed with properties that are generally ascribed to ordinary material objects. For example, it is *localizable*, at least to some extent: it is possible to determine how far behind the mirror the image appears to be. Also, the image seems *public*, i.e. perceptually accessible to more than one observer; it does not seem to be a private mental entity. However, is there a single image appearing in the mirror for every observer? In fact, the image evinces some features commonly ascribed to mental entities. For example, it is mind-dependent at least to some extent, or rather observer-dependent: its location changes depending on the observer’s position; the whole scenery seen in the mirror is reconstituted every time the observer moves. Further, the mirror image is perceptible to one sense alone: unlike everyday objects, mirror images can be seen but cannot be touched.

To investigate the metaphysical nature of mirror images, we can begin with a simple example of mirror perception. An observer is standing in front of a plane mirror and looking into it. She sees her own face, which appears to be behind the surface of the mirror. Now, the question is, what does she see in the mirror? Or, to put it ontologically, what kind of entity does she encounter? Two possible solutions come immediately to mind: either she sees something different from her face, or her own face, albeit in a different place.⁷ Neither of these solutions is self-evident and both comprise some weaknesses.

The former, which may be called “the multiplication account,” suggests that, besides mirror and observer, two different entities are needed for mirror perception: first, the real object and, second, its image or reflection constituted by the mirror. However, this account has several problems. For one, its proponent must explain what kind of entity the image is. Is it a property of the mirror itself? Two, if the mirror image is observer-dependent, what is the exact “physical” way by which the observer “causes” the mirror image? Does it mean that the mirror itself suffers a change every time somebody looks into it? Further, the mirror image is

⁵ Physically speaking, there is no reversal in plane mirrors: every point of the object is directly opposite to its counterpart in the mirror image. However, from the psychological point of view, the mirror image is *perceived* as reverted since the right-hand person facing the mirror see the left-hand image. Such discrepancy, although often debated by contemporary scholars (see, e.g., Takano 1998 for a survey of possible explanations), was not problematized in medieval optics, and the latter, observer-involving attitude was preferred. See, e.g., Alhacen, *De aspectibus* VI.3, §3.7, 6, 163–164, 233.

⁶ See, e.g., Vendler (1991) who asserts that mirror images, albeit being outside us, are pure epiphenomena of the causal processes in our brains, projected outside us.

⁷ Such a setting of the problem is inspired by Casati (2012); the labels “multiplication” and “unification” account are borrowed from this paper. See also Steenhagen (2017).

obviously not a stable and fixed entity such as a color painting: it needs to be explained how the mirror image changes according to how the observer's point of view is adjusted every time she moves.

Alternatively, "the unification account" proposes an ontologically more parsimonious model of mirror perception—there is only the object seen which causally affects the observer, but the causal chain is distorted by the mirror with the consequence that the object of perception appears to be outside its proper place. This account also has some problems. For example, it is not clear how the real object and its appearance in the mirror can be identical if they are distinguishable regarding their position and, as a famous principle states, two entities are really identical only if they are mutually indiscernible. Further, there is an epistemic difficulty: the unification account seems to imply that every instance of mirror perception is *illusory*—the observer is deceived every time they view the mirror. However, we successfully use mirrors for practical purposes on an everyday basis (e.g., when driving a car) and are *not* deceived by them.

This chapter explores how the issue of mirror perception was treated by medieval philosophers. I argue that these two opposite accounts find their medieval expressions in two famous figures of the thirteenth and fourteenth century. While the Dominican thinker Albert the Great (c. 1200–1280) is introduced as a proponent of a version of the multiplication account, the Franciscan Peter Auriol (c. 1280–1322) advocated a version of the unification account.⁸ The main question is what kind of entity they deemed the mirror image to be. The consequences and troublesome features of both accounts are considered and the solutions to these are collected from their works. Also, the question of how their conceptions of mirror perception cohere with their general theories of perception is addressed.

The Multiplication Account: Albert the Great

The Dominican thinker Albert the Great, active especially in Paris and Cologne during his long and prolific intellectual career,⁹ devoted a whole question to the issue of mirror images as part of his discussion of visual perception, its objects and the nature of colors included in his early anthropological work *De homine* (written in early 1240s).¹⁰ The question also circulated as a separate treatise under the title *De forma resultante in speculo*.¹¹ Later, Albert also made digressions on mirrors and mirror images in some of his commentaries.¹²

The sources at Albert's disposal offered two opinions on the nature of mirror images. One relates to the so-called extramissionist theory of vision. According to such a theory (proposed,

⁸ It is worth noting that the motive for picking precisely these two thinkers is systematic, rather than historical: both present a philosophically interesting and relatively thought-out account of mirror images, regardless of whether it was historically influential or not. Also, there is no significant connection between these two thinkers, apart from the fact that Albert's Aristotelian commentaries were commonly studied in the schools and Auriol could have become acquainted with them quite easily.

⁹ On Albert's life and works see, e.g., Anzulewicz (1999: I, 4–17).

¹⁰ Albert's treatise, *De visu*, is in *De homine*, 145a–202b; the question on mirror images is on pp. 174a–179a.

¹¹ The treatise is edited by H. Anzulewicz in Anzulewicz (1999: I, 179–200).

¹² See, e.g., *Liber de sex principiis*, II.4, Borgnet I, 324b–326a; *De sensu et sensato*, I.8–10, 35a–45a; see also Albert, *De anima*, II.3.15, 121–122.

in Albert's view, by Plato, Empedocles, and Euclid), visual rays issue forth from the eyes, reflect from the surface of the mirror and strike the object. The mirror is perceptually grasped by the incident ray, the face of the viewer by the reflected ray; as both rays are connected in the mirror, the image of the face appears to be there.¹³ Hence, the mirror image is the object itself, incidentally appearing in the mirror. Another position is implied in the so-called intromissionist theory of vision which Albert ascribed to Democritus and Aristotle.¹⁴ According to this theory, vision occurs by the causal influence of the object's form on the sensory organ. Thus, a mirror image must be a form capable of exerting an influence on the observer's eyes.¹⁵

Considering Albert's Aristotelian-minded, persistent and long-term criticism of any hint of extramission in the visual theory, it becomes obvious that he would favor the latter account of the nature of mirror images.¹⁶ After all, the very title of his question on mirror images, *On the Form Reflected in the Mirror*, reveals tellingly which account Albert finds attractive. Thus, in his view, what is seen in the mirror is an accidental *form*—an entity like color or light—and, strictly speaking, not the material object itself. It is justifiable to read Albert as proposing a version of the multiplication account, according to which the mirror image is a more or less independent entity. His reasoning is quite simple: if something is able to perform an action, it is an actually existent entity—and the form in the mirror is able to act upon the visual power and alter the visual organ.¹⁷ In other words, the mirror image is causally efficacious, therefore it is an entity. Briefly, Albert proposes that mirror images are neither material bodies nor substances but *accidental forms* that are in the mirror as in their subject.¹⁸ Again, he presents a simple argument: the image is not distant from the mirror; hence, it is in it as in a subject.¹⁹

The initial intuition that what is seen in the mirror is a form of the object is compatible with Albert's understanding of the (external) sensory powers in general. In accordance with Aristotle, Albert believes that to each sensory power a proper sensible corresponds so that this sensible is not perceived by any other sense—thus, what is colored affects the sight but no other sense.²⁰ The external senses are distinguished and defined by their respective proper sensibles. Therefore, since to see is nothing else than to apprehend a visible form (color),²¹ and mirror perception is evidently an instance of vision (as it is not clear what else it might be), what is

¹³ *De sensu et sensato*, I.6, 29b–30a; on the proponents of extramission, see I.5, 26b–28a.

¹⁴ *De sensu et sensato*, I.5, 28a–b.

¹⁵ *De sensu et sensato*, I.10, 43a–44b.

¹⁶ See Anzulewicz (1998: 262–265) or Lička (forthcoming).

¹⁷ Albert, *De forma resultante in speculo*, 183: “quicquid actu agit aliquid immutando, actu est; forma illa actu agit immutando visum; ergo actu est.”

¹⁸ Albert, *De forma resultante in speculo*, 191, 192.

¹⁹ Albert, *De forma resultante in speculo*, 184: “unumquodque est in illo ut in subiecto, a quo non distat per situm et locum; forma speculi non distat per situm et locum a speculo; ergo est in ipso ut in subiecto.” Note that the claim about the image existing in the mirror as in its subject or, in other words, as a form inhering in it has several problematic consequences (see below). Albert is aware of (and deals with) them already in *De forma resultante in speculo*. In later works, he abandons the claim itself: the image exists in the mirror not as in a subject but only as in a point of reflection (“[imago] est in ipso [speculo] secundum punctum in quo fit reflexio”; *Liber de sex principiis*, II.4, Borgnet, 325b) or as in an instrument “representing by means of reflection” (“sicut in representante per reflexionem”; *Liber de sex principiis*, II.4, Borgnet, 325b, 326a).

²⁰ *De anima*, II.3.5, 103a.

²¹ Cf. *De anima* II.3.4, 101b: “omne apprehendere est accipere formam apprehensi.”

perceived in such a situation cannot be anything other than a form of color. Hence, a mirror image is a form existing in the mirror just as a color exists in a colored object.

Albert's tentative understanding of mirror images as forms was most likely common among his contemporaries, influenced ultimately by the Muslim thinker Al-Ghazali. Al-Ghazali proposes that to see an object means to have a form of that object impressed in the eye and that the impression of the form in the lens of the eye (or in the so-called crystalline humor) is analogous to the impression of the form in the mirror. Al-Ghazali even suggests that the mirror would *see* the object by means of the latter's form it receives—if only it were animated by a *spiritus*.²²

However, such a position, if understood as identifying the mirror image with a form *impressed* in the mirror, has several inconvenient consequences, as discussed above. Three of them are worth considering here.²³ First, if the mirror image were a real form inhering in the mirror, it would really affect the material structure of the mirror: just as the material structures of a green leaf and a yellow leaf differ so the matter of the mirror would be altered upon the impression of different images. However, such a claim seems counterintuitive, since, e.g., the mirror does not acquire a real, permanent color when reflecting a colored object. Second, when a color inheres in the surface of an object, it evinces a quantity and stable, measurable dimensions. Mirror images also appear to have a sort of width and length. However, if the mirror is broken, the mirror image is *not* divided into parts. On the contrary, a whole image appears in every piece of the broken mirror. Hence, it does not seem to inhere in the surface of the mirror as a color inheres in the surface of a colored object.²⁴ Third, if the mirror image inhered in the mirror as an accident inheres in a subject, it would be “attached” to the mirror and would move every time the mirror is moved. However, the opposite is the case: we experience that when the mirror moves, the image stays still. On the contrary, the movements of the image seem to depend rather on the movements of the reflected object.

Aware of these problematic consequences, Albert refines his stance with respect to the nature of the form in the mirror, its generation and its relation to the mirror. Concerning the first problem, he admits that the mirror image is not a full-fledged accidental form inhering in the subject in such a way as to affect it. How is that possible? The Aristotelian version of the distinction between so-called first and second qualities, introduced by Robert Pasnau in a recent paper (2011) may be elucidating here, as it was apparently advocated by Albert, too. Whereas many of the common sensible qualities (color, taste, odor, etc.) are second qualities, there are also four first qualities (warm, cold, wet, and dry, i.e. the qualities of the four elements: fire, water, air, and earth), and second qualities are grounded in the first ones.²⁵ The relation between these two kinds of qualities is a relation of supervenience.²⁶ Thus, color, when it is a real quality inhering in a subject, is a consequence of the combination of the first qualities of this subject

²² Al-Ghazali, *Physica*, IV.3.6, 65–66.

²³ Variants of the second and third objection are mentioned by Albert in the context of ways a proponent of extramission may argue against an intromissionist theory of vision. See *De sensu et sensato*, I.6, 30a.

²⁴ *De forma resultante in speculo*, 186.

²⁵ Albert, *De generatione et corruptione*, II.1.1, Borgnet IV, 417b: “*primae qualitates [...] causae sunt omnium aliarum sensibilium qualitatum [...] sunt quatuor qualitates primae, scilicet calidum, humidum, frigidum, et siccum.*”

²⁶ Pasnau (2011: 45–46).

and makes this thing really colored.²⁷ However, the form of color can be abstracted from its proper bearer, transmitted through a medium and received in the visual power of a sentient being. In this case, the form of color does not meet a corresponding combination of first qualities (the material structures of air or eyes are different), and, consequently, it does not make its subjects colored but has, as Albert calls it, a mere “spiritual” being in them.²⁸

Albert also uses this conceptual tool in the issue of mirror images. He insists on the claim that a mirror image is a form; however, it is a form with a special kind of being that does not alter the material structure of the subject it inheres in. Hence, the nature of the mirror image is similar to the way a form of color exists in a medium. It is not a color or image in a strict, full-fledged sense but rather a *species* or representation of the color: it contains and transfers information about the color, but it does not actually affect its subject and does not make it really colored.²⁹ Later, Albert calls this special kind of being “spiritual” and presents a more detailed description of the process resulting in an image appearing in the mirror. He notes that light (which as such also has spiritual being) has the power to abstract a color or an image from its material realization, transfer it and give it a special spiritual kind of being. Since the ray of light cannot penetrate the mirror and carry the image through it, it reflects from it, and the image remains in the mirror.³⁰ Hence, what the beholder sees in the mirror is an entity different from the material object, a form of its color existing in the mirror, not physically (as a color of the mirror) but spiritually (as a representation of the object seen). Albeit existing in a diminished way, the mirror image is still a color and, hence, has the power to affect the sense of sight.

Yet, how is the *species* of color seen in the mirror but not when propagating through the air? Albert does not address the issue explicitly; however, he allows that colors are not generated only in solid objects (where they follow a certain combination of the first qualities) but also in the indeterminate bodies such as clouds, with the rainbow being the most obvious example. Briefly, these apparent and unstable colors are brought about by the workings of light (mainly, its refraction) when it encounters (optically) denser objects (water drops in the air).³¹

Albert may point to an analogous process that takes place in the mirror. The glass surface is transparent just like air and thus capable of transmitting light and *species* of colors. However, unlike air, the mirror also has a solid lead layer in the back that obstructs the propagation. The *species* of color somehow get stuck in the mirror and become manifest to the eye, with the mirror image formation being the result.³² According to Albert, the *species* also receive some of the properties of the subject they are received in. So, as the air is shapeless, the *species* received in it do not take on any determinate shape whereas in the mirror, which is only partially

²⁷ Albert, *De homine*, 168b: “Color [...] secundum quod alterat corpora, videtur generari a primis qualitibus.”

²⁸ Albert, *De homine*, 183b: “[Color] non abstrahitur cum causis generantibus ipsum in subiecto, quae sunt calidum, frigidum, humidum, siccum [...] Sed abstractio fit in propria specie coloris tantum sine omni parte materiae et sine omni causa materiali; et hoc est, quod vocat Averroes [...] spirituale esse.”

²⁹ *De forma resultante in speculo*, 193, 194.

³⁰ Albert, *Liber de sex principiis*, II.4, Borgnet I, 324a–b; see also *De sensu et sensato*, I.10, 43a–b.

³¹ *De homine*, 173b; *De meteoris*, III.4.14, Borgnet IV, 682b–683b.

³² *De forma resultante in speculo*, 195–198.

transparent and has a determinate shape, the *species* acquire a determinate figure and appear to have proportions.³³

But does the image in the mirror have the proportions it appears to have? This question addresses the second problem pertaining to the quantitative properties of mirror images. Again, Albert uses a similar strategy. Quantity is a property of a compound of form and matter. Thus, dimensions can be attributed to a form only *in so far as* the form inheres in matter. However, the mirror image is not a form in-forming the matter of the mirror—it exists in it as a mere *species* having immaterial being. Therefore, the dimensions it appears to have are only properties it represents.³⁴ (Albert also speaks about an “intentional” quantity.³⁵)

In fact, the image is received not in the whole surface of the mirror but only in one point.³⁶ The exact position of the point of reception depends on the position of the object represented in the mirror image and can be determined by geometrical optics. Albert can also utilize this claim to explain the fact that the mirror image sometimes appears to be far behind the surface of the mirror, sometimes near to it (a fact often used against a naive impression-theory of mirror images).³⁷ He emphasizes that not only the image is represented in the mirror but also, somehow, the distance between the observer and the mirror. The depth in which the mirror image appears corresponds to the distance between the observer and the mirror.³⁸ Furthermore, as the form appearing in the mirror is received in a point and not in the mirror’s whole surface, the image is not divided into parts when the mirror is broken. Rather, every piece of the broken mirror becomes a new mirror, and the image of the object is received in a point in every of these fragments.

Finally, the third objection to understanding the mirror image as a form concerns the special nature of the image’s movements. Being an accident of the mirror, the image ought to move dependently on the movements of the mirror; however, its movement depends rather on the movements of the object it represents.³⁹ The objection presents a dilemma for a proponent of the multiplication account of mirror images: he must deny either the understanding of the image as a form in the mirror or the possibility of its movement. Albert deals with the dilemma by making concessions to both of its horns. First, he again emphasizes that the image is not a full-fledged form *inhering* in the mirror and consequently need not move with the movements of the mirror. Second, the image does not *move* in the strict sense at all. Rather, it is generated

³³ *De sensu et sensato* I.10, 43b.

³⁴ *De forma resultante in speculo*, 193: “[Forma in speculo] non proprie est longa vel lata, sed habet speciem longitudinis et latitudinis.”

³⁵ *Liber de sex principiis*, II.4, Borgnet I, 325b: “Et quantitas imaginis quae apparet, quantitas est intentionalis et non quantitas distensa per mensuram.”

³⁶ *De forma resultante in speculo*, 194–195; *Liber de sex principiis*, II.4, Borgnet I, 325b.

³⁷ Cf. *De sensu et sensato*, I.6, 30a.

³⁸ *De forma resultante in speculo*, 198–199. Albert was probably not acquainted with the ancient rule of localization of mirror images (the image appears to be in the intersection of an extension of the visual ray and a line drawn through the object perpendicularly to the surface of the mirror), on which see, e.g., Turbayne (1959).

³⁹ The source of this *dubium* is most likely *Liber sex principiorum* (an anonymous twelfth-century treatise on the final six categories in Aristotle’s list). See pseudo-Gilbertus Porretanus, *Liber sex principiorum*, II.19, 39. Albert refers to this passage already in *De forma resultante in speculo*, 181–184, 193, and comments on the passage in *Liber de sex principiis*, II.4, Borgnet I, 324b–326a.

anew successively in a different place in every moment. Although it appears to be in the mirror, its cause or “producer” (*generans*) is the observer playing the role of the reflected object. The point where it is generated is determined precisely by the positions of the observer and of the object reflected. When the mirror moves, the point of reflection remains stable and hence the mirror image does not seem to move. But when the observer moves, the point of reflection is adjusted anew in every instance and, consequently, the mirror images seems to move.⁴⁰ Since the continuous generation of mirror images is immensely fast (immediate, actually, as the propagation of light takes no time according to Albert), the mirror image appears to the observer as if it were in motion.⁴¹

To sum up, Albert can respond to the general objections against the multiplication account of mirror images. A mirror image, albeit not identifiable with the object reflected in the mirror, is not a stable and fixed quality impressed in the mirror like an ordinary image painted on canvas. A mirror image is an entity having a kind of diminished being and resulting from the mutual relations between the mirror, the object reflected in it, and the observer. The scenery seen in the mirror is reconstituted every time the observer moves.

Nevertheless, Albert’s account of mirror perception does not fare particularly well in one crucial aspect: it is hardly compatible with his general account of perception. Albert embraces an Aristotelian theory of perception, modeling vision as a causal process between the visible object (the real quality of color) as an active cause and the visual power that passively receives the influence of the object. As the object and the eye are not spatially connected, a causal intermediary is needed, namely, a *species* or a form having spiritual or intentional being. The object alters first the medium between itself and the observer, and then the observer’s eye, creating a similitude or *species* of itself in the observer’s visual power.⁴²

Although he rarely specifies his theory in such terms, Albert tends toward a direct realist understanding of *species*. The direct object of perception is the external material thing, not its *species*. The *species* is rather an instrument, an intermediary transferring information about the object or a “principle of cognizing” the object.⁴³ The *species* mediates cognition but only in so far as it functions as an information-transmitter not as a consciously cognized representation. In other words, the relation between the cognitive power and the *species* is causal, not cognitive.

Yet, as Albert mentions, mirror images, like pictures or (mental) representations stored in the memory, can be understood in two different ways. On the one hand, grasped in themselves, the images function as independent entities catching the observer’s attention. On the other hand, however, these images can be grasped as mere representations or signs, as something that—although it plays the role of a primary object of cognition—shifts the observer’s attention to what it represents, namely the thing reflected, drawn, or remembered.⁴⁴ Evidently, the ways *species* and (mirror) images function in cognition are different and perhaps incompatible.

⁴⁰ *De forma resultante in speculo*, 191–193; *Liber de sex principiis*, II.4, Borgnet I, 325b–326a.

⁴¹ *De homine*, 180b. Strictly speaking, the propagation of light is not locomotion (as light is not a body) but an instantaneous alteration of the diaphanous medium; see also *De anima*, II.3.13, 117b–118a.

⁴² See, e.g., Steneck (1980), esp. pp. 270–272; on the notion of the spiritual being see Dewan (1980).

⁴³ *De homine*, 185a.

⁴⁴ *De homine*, 304b–305a.

Albert, seemingly unaware that his account of mirror perception is implausible within an Aristotelian framework, faces the following dilemma: either abandon the idea that the mirror image is a form having spiritual being (i.e. the *species*) leaving the metaphysical nature of mirrors images undecided; or admit that *every species* can become a primary object of perception.⁴⁵ However, in the latter case it would not be obvious why we are not aware primarily of the *species* in our eyes and only then of the thing that generated the *species* (just as we are primarily aware of a mirror image and only then of the thing reflected). There is no indication that Albert recognized the tension in his theory of perception, as expressed in the dilemma, or that he attempted to resolve it.

The Unification Account: Peter Auriol

Since acknowledging *species* as direct and primary objects of cognition (i.e. the second horn of the dilemma) was not attractive for Albert's contemporaries (chiefly due to the representationalist consequences of such a claim), some thirteenth-century thinkers tended to embrace the first horn of the dilemma. They abandoned (Albert's) intuition that what is seen in the mirror is a form and endeavored to think the whole issue through anew. For example, adherents of *perspectiva* (or optics), such as Roger Bacon or John Pecham, calling Albert's position "common" or "vulgar," asserted that what is seen in the mirror is the material thing itself and that the alleged mirror image is nothing more than a mere appearance of the thing outside of its place.⁴⁶

Indeed, the perspectivists favor a *unification* account of mirror images (i.e. the mirror image is not a really existing entity different from the material object). However, investigating the metaphysical nature of mirror images was not among the major objectives of the perspectivist inquiry. They focused rather on the issue of determining the *location* of an image in each of the various kinds of mirror using geometry. A genuine interest in the metaphysical dimension of mirror images may be found in the philosophy of perception of the early fourteenth-century Franciscan thinker Peter Auriol.⁴⁷

Peter Auriol was active especially at the Parisian Faculty of Theology in the decade before 1320; hence, his works are mostly theological in their nature. He wrote a commentary on the *Sentences* (preserved in several versions) and held one *Quodlibet*.⁴⁸ His interesting account of sensory perception (and theory of cognition generally) is always presented in a broader

⁴⁵ Admittedly, an acknowledgment of the contrast between the notions of *species* and image is present in an early theological work by Albert. Here he states that whereas the image (*idolum*) in the eyes (i.e. the *species*) is something "by means of which" (*per quod*) but not "in which" (*in quo*) we see the thing, the image (*idolum*) in the mirror is something "in which" (*in quo*) we see the thing. It may be inferred that, unlike the former, the latter case includes a primary grasping of the image itself. See Albert, *De resurrectione*, IV.1.9.3, 331a. However, from his *De homine* onwards, Albert apparently did not employ this neat contrast between *species* and image any more.

⁴⁶ See Roger Bacon, *Perspectiva*, III.1.2, 258; or Pecham, *Perspectiva communis*, II.19: 168–170.

⁴⁷ Auriol was definitely acquainted with perspectivist literature, as suggested already by Tachau (1988: 97–98).

⁴⁸ An up-to-date summary of Auriol's life and works is provided by Wöller (2015: 17–25).

theological context. Hence, his account of mirror perception is also not introduced in a single passage devoted primarily to the topic but dispersed in several places of his *Scriptum*.⁴⁹

A consideration of the nature of mirror images is included in Auriol's famous list of sensory experiences, which has been advocated to justify his conviction about the active nature of sensory powers.⁵⁰ The reason why Auriol includes mirror perception in the list is that such an experience (alongside others) reveals the active involvement of the visual power in processing visual information and modeling the perceptual content. Therefore, Auriol's primary objective is to deny any account implying the reification of appearances and rendering them as independently existing and causally efficacious entities that would on their own elicit visual acts in the observer, without the latter's active involvement in such a process. Thus, the most emphasized feature of mirror images is not their causal efficacy, as Albert advocated, but their observer dependency.

Inquiring into the nature of mirror images, Auriol proceeds by eliminating implausible opinions.⁵¹ First, he focuses on the opinions presupposing that the image is (1) a real entity and, consequently, (2) different from the material object itself. It is worth premising that Auriol uses a rather broad notion of *real* being—existing really (or having *esse reale*), unlike existing intentionally (or having *esse intentionale*), means existing independently of being grasped by the cognitive act of a living cognizer.⁵² Therefore, even *species* of color abstracted from the colored object and existing “spiritually” in a medium, as Albert asserts above, are propagated through the medium without the intervention of any cognizer. Therefore, *species* of colors are *really* existent entities in Auriol's view.⁵³

Auriol sketches three different suggestions as to what the mirror image as a real entity may amount to. The first option is a version of the multiplication account we encountered in Albert—the mirror image is understood as a *species*, a real (i.e. observation-independent) quality existing in the mirror as in its subject.⁵⁴ However, such an account is not viable according to Auriol, since no accident can exceed its subject, but images can sometimes be larger than the mirror (when it mirrors a tower or the heavens). As argued above, Albert would be able to face this objection: in his view, the *species* is not an actual accident inhering in the whole surface of the mirror, and it has no real dimensions but only represents the dimensions

⁴⁹ See especially *Scriptum* I.1.6.4.102, Buytaert I, 366–367; I.3.14.1.31, Buytaert II, 697, and *Scriptum* I.35.2.2, ES, II, 490–499. Cf. also Davenport (2006: 63–65) and Lička (2017: 116–118).

⁵⁰ *Scriptum* I.3.14.1.31, Buytaert II, 697; for the list see pp. 696–697 and, e.g., Tachau (1988: 90–93).

⁵¹ Auriol's strategy is obviously inspired by the perspectivists—although Auriol mentions “*Perpectivus libro IV*,” referring to Alhacen (see Alhacen, *De aspectibus*, IV.4, 37–38), some of his arguments here are very similar to the ones proposed by Pecham in the passage referred to in [note 48](#) above. (A possible influence of Pecham's *Perspectiva communis* in this passage was suggested already by Wood 1982: 223.)

⁵² “*esse reale et fixum extra in rerum natura absque omni apprehensione*”, *Scriptum* I.23.2.50, De Rijk, 711.

⁵³ Such a semantic broadening of “real being” is to be dated into the early fourteenth century and relates to a shift in understanding intentional being: whereas older authors conceived *esse intentionale* as the mode of being of forms abstracted from matter, some later authors (chiefly those influenced by Scotus) understood it as the kind of being an object has in so far as it is cognized. Such a terminological move (and Auriol's role in it) was uncovered already by Tachau (1999). However, her account evinces several minor deficiencies, e.g., her reading of Auriol's notion of intentional being identifies dependency on the cognitive act with intrumentality—a claim doubted already by Pasnau (1997: 72–73).

⁵⁴ *Scriptum*, I.3.14.1.31, Buytaert II, 697.

of the object. Nevertheless, Auriol points out another deficiency of the view: if the image were a real quality, it would have to penetrate the solid lead substrate of the mirror, since the image appears to be beneath the mirror. Auriol seems to be implying that the physical description of reflection (i.e. the propagation of the *species* and their interactions with media and solid objects) and the phenomenological description of mirror perception (i.e. what *appears* to an observer), although often confounded in Albert's account, are to be differentiated.

Another option is to deny that what is seen is different from the real material object and suggest a naive unification view. The mirror image would then be the really existing thing itself.⁵⁵ Although the view tries to preserve the basic unification intuition, that what we see in mirrors are the real material objects around us, it has highly implausible consequences when the case of self-observation is considered. When someone looks in a mirror, they see their own face beneath the mirror. However, it does not make good sense to infer that this face *really* exists beneath the mirror—it only *appears* to be there.

It may be added that, if the consequences are fully thought out, insisting on the real being of mirror images and reifying these appearances would eventually lead to a bizarre *multiplication* account: the scene seen in the mirror would be an alternative space occupied by really existing *replicas* of the things around us. Speaking about their face seen in the mirror, the observer would in fact refer to a face really existing behind the mirror. Further, mirror perception would be like a normal visual experience albeit grasping objects from the other side of the mirror, and the mirror itself would be a window into another world.

The last option returns to the claim that the image is different from the object but tries to preserve its real being. It points out the “fluid” nature of the mirror image and its partial dependency on the observer and proposes reducing it to something in the observer, namely, their visual act or an entity existing in their eye: a real quality inhering in their sensory soul.⁵⁶ Being identical to the observer's cognitive act, the mirror image would be both a real entity and dependent on observation. Further, the theory would evince the simplicity of the unification account, as nothing more than the material object, and the cognizing subject would be included in the mirror perception. Nevertheless, this notion does not appeal to Auriol, either. His objection refers to the perspectivist practice of investigating the image position in different types of mirrors.⁵⁷ Depending on the type of mirror, the image is formed beneath, on, or in front of its surface, always *outside* the observer and near the mirror. If the mirror image were a mere entity in our eyes, we would not perceive it as if it were in the outer environment, Auriol thinks.

All three options are based on the primary assumption that the mirror images must be entities endowed with real being. However, as mentioned above, a property common to entities existing *realiter* is their independence of being observed. Thus, if mirror images were real entities, they would exist whether someone was watching or not. Consequently, all appearances would have

⁵⁵ *Scriptum*, I.3.14.1.31, Buytaert II, 697.

⁵⁶ *Scriptum*, I.3.14.1.31, Buytaert II, 697. Note that Auriol is not speaking about a mental *content* of mirror perception but only about the respective visual *act*—roughly, the physical realization of the visual experience which is, at least in principle, observable from the third-person perspective.

⁵⁷ See the principle mentioned in [note 40](#) above.

to be reified.⁵⁸ Yet denying that in some cases our cognitive acts are focused on mere appearances without solid ontological foundations (a position Auriol ascribes to some ancient relativists criticized by Aristotle in *Metaphysics* IV) is philosophically problematic. Strictly speaking, for all possible appearances, whether veridical or false, there would be a special ontologically describable entity, resulting in the coincident real being of mutual contradictories.⁵⁹

The only possible defense against such an “overpopulation” of reality Auriol proposes is to embrace a pluralist conception of being: some entities, such as stones, exist really, i.e. even when nobody is looking at them; while other entities, such as rainbows, exist only in a diminished, observer-dependent way. Mirror images are examples of the latter—they are mere *appearances* of the things reflected in the mirror or the things themselves in so far as they have an “apparent being” (*esse apparens*) in the mirror.⁶⁰

Auriol further asserts that veridical visual acts (even, for that matter, all instances of cognition) also grasp the material object only *in so far* as it appears to them or, in other words, are focused on the “apparent being” of their objects. Thus, one and the same object can appear differently depending on several conditions (e.g., the quality of illumination, or the sanity of the observer’s sensory organs); also, it appears differently to various cognitive powers (e.g., as colored to vision, or as universal to the intellect). The mechanism of cognition consists in receiving a *species* of the object and processing it by the respective cognitive power. The result is a conscious cognitive (perceptual or conceptual) content (or, putting the cognized thing into *esse apparens*), which is based on the information included in the *species*. The *species* then, in turn, becomes a cognitive act inhering in the cognitive power, grasping the respective content.⁶¹

Yet Auriol is not completely clear as to what this *esse apparens* amounts to, and a whole generation of Auriol scholars are unable to agree on a single correct interpretation of the theory.⁶² The point of departure usually is the question whether *esse apparens* is something mental or extramental. In fact, textual evidence for *both* may be derived from Auriol’s works. On the one hand, the *esse apparens* of an object occurs only when it is constituted by a cognitive act. Hence, it is mind-dependent and, *eo ipso*, within the soul.⁶³ On the other hand, Auriol stresses that appearances are *outside* observers in exactly the place where they appear to be. Appearances are the things themselves in so far as they appear to us.⁶⁴ In normal

⁵⁸ *Scriptum*, I.3.14.1.31, Buytaert II, 697: “aliqui imaginantur quod imagines sint in speculo [...] sive videantur sive non videantur, hoc utique falsum est. Tunc enim sequeretur quod haberent verum esse reale.”

⁵⁹ *Scriptum*, I.9.1.1, ES, II. 312–315: “Et breviter, qui negat quin actus visionis possit ad apparentias terminari, cogitur confiteri quod omnia vera sunt quae videntur, contra quos disputat Philosophus, IV Metaphysicae, quia contradictoria essent vera, cum uni videatur sic, et alteri aliter.”

⁶⁰ *Scriptum*, I.3.14.1.31, Buytaert II, 697: “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”; see also *Scriptum*, I.1.6.4.102, Buytaert I, 366.

⁶¹ For details of such a reading of Auriol’s cognitive theory, see Lička (2016: 56–69) (here also on Auriol’s identification of *species* with cognitive acts); Lička (2017: 111–115); see also Friedman (2015).

⁶² Recently, some interpretations were summarized and assessed by Pasnau (2017): 274–276.

⁶³ See especially Tachau (1999: 349–350) for this line of reasoning.

⁶⁴ *Scriptum*, I.23.2.55, De Rijk, 712: “rerum apparitiones obiectivas [...] sunt realiter eedem cum hiis que existunt extra.”

circumstances, appearances are indistinguishably united (*indistinguibiliter adunatum*) to the things,⁶⁵ and the observer does not even notice that there is an appearance of the thing created by their cognitive activity.⁶⁶

This discrepancy could be solved by denying an initial assumption of drawing a sharp distinction between the mental realm and the extramental world, one probably inherited from modern philosophers whose “corpuscularian physics and ... Augustinian psychology pushed them toward magnifying the difference between inner and outer” and who, unlike scholastics, “want to *accentuate* the distinction between inner and outer, not conflate it.”⁶⁷ However, for many medieval scholars, and for Auriol especially, there is not the extramental physical world on the one hand and the mental realm of conscious subjects governed by different principles on the other. Rather, there is an environment exerting causal influences on the cognitive powers of living beings such that some potential features of the environment are actualized only dependently on the cognitive actions of these cognizers.⁶⁸ *Esse apparens* is, then, an apt expression of the mutual interdependence of world and cognizers, a property of the really existing things which, in turn, evince appearances only in so far as they are cognized.

The case of mirror images is perfectly illustrative here. A mirror image, as Auriol infers, is to be identified with the *esse apparens* of the appearing thing. The thing appears in the mirror with the phenomenal properties it can evince only once it has become the object of a visual experience. It is precisely the *esse apparens* due to which there is more to a mirror image than the mere reflections of lines of *species* of light and color propagating through the medium and rebounding from the mirror. Being the *esse apparens* of the thing reflected in the mirror, the mirror image is, on the one hand, external to the mind and localizable (usually) behind the mirror. Yet, on the other hand, the image is to some extent an outcome of the cognitive activity enabling the object seen to deploy its phenomenal properties. Being observer-dependent, the image is also reconstituted as the observer’s position changes.

Note that Auriol’s account is openly intended as a version of the unification account: what is seen in the mirror is the object itself, not an entity different from it. All the talk about its “apparent being” is meant as an expression of the dual dependence of mirror appearances on both the observer and the object. However, it is not ontologically committing: *esse apparens* does not have enough reality to be a full-fledged entity.⁶⁹ Therefore, Auriol’s account provides an intuitive and elegant solution to the conundrum concerning the image movements. While

⁶⁵ *Scriptum*, I.27.2.2, ES, ll. 583–598.

⁶⁶ *Scriptum*, I.3.14.1.31, Buytaert II, 698: “non distinguitur imago seu res in esse apparenti ab esse reali, quia simul coincidunt in vera visione.”

⁶⁷ Pasnau (2017: 277).

⁶⁸ Take the example of universals or relations: Auriol, as a conceptualist, believes that only individual things exist really in the world; yet they have the potentiality to *appear as* universal or related to other things when appropriately grasped by an intellect. The intellect then has the power to actualize these potentialities and fulfil or complete the being of universals or relations. Scholastics owe this doctrine of the intellect as “completer” of reality to Averroes; see Kobusch (2009: 253–255).

⁶⁹ Auriol points out that *esse apparens* is “nothing in itself” and must be reduced to something real, namely, the cognitive act. See *Scriptum*, I.9.1.1, ES, ll. 364–369; *Quodlibeta sexdecim* 8.1, fol. 81bC, and Friedman (2015: 144–145, 151). In *Scriptum*, I.9.1.1, ES, ll. 513–518, Auriol even says that *esse apparens* is merely metaphorical (*nihil est in se nisi deminute et metaphorice*).

Albert had to propose a complete *physical* recasting of all the *species* involved in mirror perception with each movement of the object, Auriol can solve the problem by saying that what is seen in the mirror is always the object. Since it is not a form in the mirror (and, thus, not a property of the mirror), its movements depend on the movements of the object and not on the mirror—they *are* the movements of the object itself in so far as appearing in the mirror.

A further merit of Auriol's account is that his explanation of mirror images is, unlike Albert's, coherent within his general theory of sensory perception, proving that there is an appearance of the thing involved in every perceptual act (albeit indistinguishable in veridical perception).

Nevertheless, Auriol's account cannot evade criticism. Earlier authors and especially Albert had emphasized the pivotal problem of every unification account. If we held that what is seen in the mirror is the real object itself and there is no real entity in the mirror, then every instance of mirror perception would be utterly deceptive. For "uneducated people who follow the judgment of sense rather than of reason," as Albert the Great states, speaking about an image in the mirror is an "irresistible error," since their "sight announces to them that there is an image in the mirror."⁷⁰ In other words, the unification account conflicts with common notions of mirror perception, which are saved only by accepting the multiplication account.

Was Auriol willing to admit that every mirror perception is illusory in a radical sense? He included the mirror example in his famous list of experiences which is often read as a list of visual illusions.⁷¹ Further, in one place Auriol mentions that when a thing is seen by a direct line and *without any error*, its apparent and real being coincide, whereas when it is seen by a reflected or refracted line, the appearance "stands apart" from the actual place of the object seen, implying that the latter case is illusory.⁷² But the claim that mirror perception is illusory is rather counterintuitive as people use mirrors as useful instruments every day, providing further support for a multiplication theory.

Auriol seems to *both* hold that mirror perception is *not* illusory in a strict sense *and* preserve his unificationist account. The alleged delusiveness of mirror perception is relativized by advocating its practical usefulness. Take the example of seeing one's own face in the mirror. Even if the face appearing in the mirror were a real entity distinct from the real face (which is not the case, as the image exists in the mirror only apparently), or, in other words, if the multiplication account were right, it would *not* imply that the actual face would be seen to a lesser extent. For Auriol, this is justified by practical consequences: the observer would be able to act upon their own face by virtue of its mirror image: touch it, make it up, clean a stain on it, although their eyes would be primarily focused on the mirror image of the face. The

⁷⁰ Albert, *Liber de sex principiis*, II.4, Borgnet I, 325a: "Si autem dicatur in speculo non esse imago, quamvis hoc aliquo modo verum sit, tamen apud imperitum vulgus, quod iudicium sensus sequitur potius quam rationem, erit hic error intolerabilis, quia visus nuntiat imaginem esse in speculo." See also *De sensu et sensato*, I.9, 39a–b and pseudo-Gilbertus Porretanus, *Liber de sex principiis*, II.19, 39 who speaks about an "incredible error."

⁷¹ See, e.g., Wood (1982: 220–223).

⁷² *Quodlibeta sexdecim*, 8.3, f. 87bE.

possibility of discerning the face with all its features would be equally good as if the real face were behind the mirror.⁷³

Furthermore, the observer is not deceived if the unification account holds—they see the reflected thing itself. Hence, our practical ability to make use of mirrors reveals that mirror perception is not always deceptive. When the observer is speaking about what they see in the mirror, a considerable number of their statements are *true* propositions, since they are speaking about the real objects themselves. Whereas the information about the object’s color, look, shape, parts, etc., available to the observer in mirror perception is roughly the same as in direct vision, only the information about the object’s position and its right–left orientation presented to the senses seems distorted.

Hence, although Auriol admits mirror perception is not as accurate as normal veridical vision,⁷⁴ it is not illusory in general.⁷⁵ In my opinion, Auriol would suggest that mirrors (at least, everyday plane mirrors) do not deliver perfect and completely veridical perceptual information to us; nevertheless, they do not force us to hold false beliefs. In other words, we get used to handling mirrors: we are aware of the mirror as such and prepared for the fact that some properties of the thing seen are not presented to us with complete accuracy. We are not fooled by mirrors when we are aware of them, and, as some contemporary philosophers say, we are usually not *epistemically innocent* in mirror perception.⁷⁶ Since mirrors intervene in the perceptual process only in a systematic and thus predictable way, we are entitled to say that they do not deceive us and that mirror perception is not illusory in the strict sense.

Auriol’s other strategy against the alleged global delusiveness of mirror perception is the emphasis he puts on the claim that what is seen in the mirror (the mirror image or the thing in *esse apparens*) is the very real object itself. He is convinced that when we speak about what we see in the mirror, we are talking about the object itself and not about a kind of entity different from the object and somehow present in the mirror.⁷⁷

⁷³ *Scriptum*, I.35.2.2, ES, ll. 492–499. In that place, Auriol makes a concession to the multiplicationist view *only* in order to illustrate the theological claim that God cognizes primarily his essence and, by means of that, secondarily but *equally perfectly* his creation. Emphasizing that in the case of God, cognizing *x* by means of grasping something different *realiter* does not mean that the former is cognized less perfectly, Auriol alludes to the case of mirror perception but reshapes it as if the mirror image were a real entity to make it analogous to the case of God.

⁷⁴ *Scriptum*, I.9.1, ES, ll. 299–300.

⁷⁵ The argument that he includes mirror perception in his famous list is not decisive: the list is not intended primarily as a list of illusions but as a group of visual experiences revealing the active nature of the senses in perception.

⁷⁶ Casati (2012: 197–200); Steenhagen (2017: 1229–1230, 1239–1241). Note that Auriol was prepared to account for our awareness of the mirror in mirror perception. He stresses that mirror perception is a more complex instance of cognition than a normal one, since there are *two* visual acts in our eyes simultaneously—both the *species* of the mirror and the *species* reflected by the mirror are received and processed at the same time. See *Scriptum*, I.35.2.1, ES, ll. 305–309; *Quodlibeta sexdecim*, 10.4, f. 106bC.

⁷⁷ It may be objected that Auriol uses the notion of mirror image too often, which opens the door for the multiplicationist view; however, he stresses that *imago* is a technical term borrowed from the perspectivist tradition that signifies nothing but the thing itself as appearing in the mirror—see *Scriptum*, I.27.2.3, ES, ll. 1100–1103.

A fictional scenario by Auriol supports this unificationist intuition based on common descriptions of mirror images. Imagine there are two kinds of eyes. The first kind of eyes can gaze at nothing but mirror images conceived in a multiplicationist way, where the mirror image is different from the objects reflected but the observer cognizes the thing through its image (even, for that matter, equally well). The second kind of eyes always sees things in themselves, unmediated by any representation. Although both kinds of eyes may cognize the thing equally well, it would be counterintuitive, in Auriol's view, to say that the first kind has the things themselves as the object of vision.⁷⁸ If the multiplication account held, then observers would commonly talk primarily about the images and the things reflected only derivatively. Since it is more common to talk about the things themselves, mirror perception is more like normal direct perception than multiplicationist mediated perception in Auriol's view, unification accords better with our common intuitions and mirror perception (like the direct one) belongs to the second kind of eyes in Auriol's fictive scenario.

There is also a phenomenological justification for the claim that a mirror image is the thing itself. When sight is gazing at a mirror image, visual attention (*intuitus visionis*) is fixed upon it; it does not extend behind the image or bounce from it toward the thing.⁷⁹ Auriol is convinced that if mirror images were mere representations, seeing them would shift the direction of our attention somehow and would not leave us unaware of such a shifting.⁸⁰

However, Auriol's unificationist claim is also problematic for seemingly asserting that the real object and its image in the mirror are *identical*. But identity presupposes indistinguishability; which, apparently, is not the case: the positions of the real thing and its image are distinguishable and, thus, the two items are different. However, on a closer look, this objection is based on a misunderstanding of Auriol's theory. What it asserts is that a real object and its mirror image are *distinguishable* based on their different positions, but distinguishing A from B presupposes (1) cognitively grasping A and B independently of each other and (2) comparing A and B with regard to a certain feature. However, in the case of mirror perception, the real object and its image are not grasped independently. To grasp the real object "as it is," i.e. without its *esse apparens* (the mirror image), simply does not make good sense in Auriol's theory since every cognitive grasping *necessarily* involves posing the thing grasped into *esse apparens*.⁸¹ As (1) the real object and its appearance are not grasped separately, (2) the two cannot be compared in a single act of mirror perception.

⁷⁸ *Scriptum*, I.35.2.4, ES, ll. 1167–1172: "Certum est enim quod, si poneretur duplex genus oculi—unum quidem quod non posset nisi imagines in speculo contueri, et per hoc omnia quorum essent illae imagines aequipollenter cognoscere diceretur [...]; alterum vero quod ipsas res aspiceret in se ipsis—si sic utique poneretur, nullus <diceret quod primus oculus, qui> [...] imagines cerneret, haberet pro obiecto res ipsas, sed potius aliquid aequipollens" (Emendation by editor).

⁷⁹ *Scriptum*, I.1.6.4.102, Buytaert I, 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." See also *Scriptum*, I.35.2.2, ES, ll. 545–548.

⁸⁰ Such a conception of mirrors as attention-switchers is elaborated by Auriol's earlier confrère, Peter Olivi; see Lička (2017: 108–110).

⁸¹ See Tachau (1988: 94). After all, to cognize *x* is *defined* as posing *x* in *esse apparens* by Auriol; see Friedman (2015: 145–150); Lička (2016: 56, 61–62), and Pasnau (2017: 274).

In fact, the objection is *not* about comparing the real object and an apparent one in the *same* instance of perception but about comparing the objects (or, rather, the contents) of two different perceptual *acts*, namely, direct perception and mirror perception. Indeed, the object as appearing in direct perception and the object as appearing in mirror perception *are* distinguishable regarding their (apparent) positions. In the latter case, a mirror intervenes in the perceptual process and distorts the causal process of information transmission, the result being that the object appears to be somewhere other than it is. (Similarly, when we look at a thing with a magnifying glass, the image of the thing, or the thing as appearing due to the magnifier, is bigger than the same thing perceived directly.)

In other words, the two instances of *esse apparens* (albeit of the same object) are distinguishable (and thus different), which is not surprising since the causal processes generating them are different. Nevertheless, this does not imply at all that the *esse apparens* and its real object included *in a single act of vision* are distinguishable (and hence non-identical).

After all, this is the point Auriol himself stresses: when gazing at a mirror image, the observer encounters two items: the thing that appears and the appearance by means of which it appears. However, his perceptual content is not structured—the observer is not aware of what is from the thing and what is somehow added to the thing (and, definitely, something *is* added, allowing, for example, multiplied images in some kinds of mirrors, although the thing reflected remains single). On the contrary, the observer sees the whole thing and the whole appearance indistinguishably, as something simple.⁸²

The question remains: why does the mirror image appear to be located behind the mirror? Why does it not appear to be co-located with the real object? Auriol does not address the issue explicitly. However, he seems to imply that it is an outcome of the following two facts. First, mirrors are specific kind of media and are thus included in the process of cognitive information transmission, but they mediate information about a different part of the environment than the observer would expect. In other words, they change the direction of the propagation of *species* from the object to the observer's eye.⁸³ Second, it is a general phenomenological fact that everything seen is seen directly, as if located on a straight line directed from the eye.⁸⁴ Auriol acknowledges the fact and even puts a special emphasis on it. Unlike Albert, he defines sensory powers not by their proper object but by their own “mode of appearing” (*modus apparendi*), i.e. the way the objects grasped by a certain power appear to it. The essential feature of the

⁸² *Scriptum*, I.1.6.4.102, Buytaert I, 366–367: “In imagine [...] existente in speculo [...] in esse apparenti [...] et est res quae apparet et apparitio qua apparet, et tamen totum videtur apparitio et totum videtur res. Non enim intellectus distinguit imaginem in id quod est in ea de re, et in id quod est quasi additum illi rei, quia imago videtur sola res, et imago etiam videtur sola apparitio rei. [...] Quod autem imago illa includat aliquid ultra rem patet, quoniam imagines multiplicari possunt, eadem re inmultiplicata. Res igitur, ut apparens [...] videtur includere aliqua, puta rem et apparitionem, quae quidem videntur eadem per omnimodam indistinctionem [...] ut quid simplex.”

⁸³ *Scriptum*, I.35.2.1, ES, II, 336–337; *Quodlibeta sexdecim*, 10.4, f. 106bC.

⁸⁴ Such an a-priori feature of vision was emphasized already by ancient optics, see especially Simon (1987: 319–321) and Smith (2015: 92–93).

senses (and of sight in particular) is that objects appears to them as spatially localized by an imaginary straight line drawn from the eye.⁸⁵

With these two facts in mind, Auriol can explain mirror perception in the following way. When a *species* of the object reflected from the mirror enters the eye, it is processed by the observer's visual power. However, as sight is unable to account for the mirror's intervention in the propagation of *species*, it works as usual and generates the *esse apparens* (according to the information in the *species*) somewhere in the direction from which the *species* came. Hence, the object seen in the mirror seems to be on the prolongation of an imaginary straight line drawn from the eye outwards.

To sum up, Auriol is able to substantially weaken the objections against his unification account of mirror images: mirror perception is not universally illusory as the images seen in mirrors are the material objects themselves, with the further advantage over Albert's account that his explanation of mirror perception is compatible with his general theory of perception.

Conclusion

As a recent paper says, the worth of philosophical catoptrics (the philosophical study of special instances of perceptual experience involving mirrors) consists in that it “enables us to recast familiar issues in the philosophy of perception.”⁸⁶ The present chapter aimed to demonstrate that some issues included in this intellectual inquiry were anticipated by medieval philosophers. Neither of the two medieval stances on this issue introduced here went beyond the rudimental intuition that what is grasped by perception is an *object* and, consequently, what is seen in the mirror is also a kind of object. However, Albert the Great and Peter Auriol elaborated on this initial intuition in different ways. Albert stresses the (alleged) causal efficacy of the mirror image: it acts on the observer's eye; thus, it is a real entity. For Albert, these images are accidental forms, namely, qualities like colors, or rather *species* of colors existing in a special “spiritual” way, that enables them not to change the material structure of the mirror and make it colored. On the contrary, Auriol puts more stress on the observer dependency of these mirror images, a consequence being that what is seen in the mirror is the actual material object itself, albeit appearing behind the mirror. Explaining what it means “to appear,” Auriol postulates a special ontological layer of appearances that is dependent both on the real objects and on observers but not reducible to either of these.

Albert's multiplicationist attitude is more “metaphysical”: the appearance is reified and understood as a categorizable entity. The mirror image is something almost physical: it is an outcome of the physical process of light propagation and color abstraction in which the mirror has intervened. By contrast, Auriol embraces a more “phenomenological” attitude: as a unificationist, he cannot rely on a special entity in the mirror playing the role of the content of mirror perception. What is seen in the mirror is the object itself. However, as every object of perception, it is grasped only *in so far as it is appearing*—and, in this situation, the appearance of the object is behind the mirror.

⁸⁵ *Scriptum*, I.prooem.2.119, Buytaert I, 208; *Scriptum*, I.35.1.1, ES, ll. 385–388; see also Lička (2016: 53–54).

⁸⁶ Steenhagen (2017: 1242).

Auriol is also more cautious than Albert in delineating between the physical description of the propagation of *species* and their reflection from the mirror on the one hand and the phenomenological description of the appearances seen in the mirror as partially resulting from the observer's own perceptual activity on the other. These two perspectives are confounded in Albert's theory: the mirror image is a *species* in the mirror playing the role of *both* the causal vehicle of mirror perception and its content. Consequently, a discrepancy sneaks into Albert's account of vision: *species*, usually casted as mere causal intermediaries in the visual process, suddenly become the true *object* of perception.

While Albert's explanation of mirror perception is weakened by being incoherent with his general visual theory, Auriol's theory perhaps pays too much for its compatibility with the rest of his theory of perception. It includes several perplexing claims, for example, "Auriol owes us an explanation for how" a cognitive act "can help us put the extramental object itself into a different type of being."⁸⁷ Would he really subscribe to the idea that our cognitive activity somehow *completes* reality? Is it really plausible to read his theory of cognitive activity, which although performed within us has important results outside in the environment, as defying the boundary between mind and world, so self-evident for us? The medieval accounts of some perceptual ephemera place us before freshly conveyed but traditional philosophical questions.

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⁸⁷ Friedman (2015: 164).

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