CHAPTER 5

# Perceiving Many Things Simultaneously: Medieval Reception of an Aristotelian Problem

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## 1 Introduction

It seems phenomenologically obvious that we are able to perceive many things at the same time. While I am writing this text, I hear the rhythmic tapping of the keyboard, the low humming of the air conditioner, and discussions from the corridor outside my office. I obviously see the text on the screen, but I also see the keyboard and my coffee mug sitting on a pile of books on my desk. I feel the keyboard under my fingertips and I smell coffee. In general, I can simultaneously perceive distinct perceptual qualities of one object (the colour of the keyboard and the sound it makes) as well as several qualities that belong to the same sense modality (the colour of my mug and the colour of the keyboard).[1]

Aristotle admits that we have the ability to perceive many things simultaneously.[2] However, his theory of perception is based on theoretical premises that seem to entail that this should not be possible. First, he explains sense perception in terms of his general theory of change. According to him, we perceive an external object when its perceptual qualities (colour, sound, etc.) cause changes in our senses. The external senses are passive powers, and

1 A caveat is in order: the ability to perceive all these things simultaneously is obvious only under a certain description of 'perception.' It is less clear that we are able to consciously attend to many things at the same moment of time. Contemporary literature on the role of attention in perception is voluminous; one may begin with John Campbell, "Perceptual Attention," in *The Oxford Handbook of Philosophy of Perception*, ed. M. Matthen (Oxford: Oxford University Press, 2015), 587–601. For medieval views, see references in n. 20 below.

2 The phenomenological experience might also be accounted for by appealing to an imperceptible interval between distinct moments of time in which different objects are perceived. According to this interpretation, we do not really perceive several things at the same time but one after the other in quick succession, without noticing this. Aristotle rejects this possibility at *Sens.* 7, 448a19–31. Medieval question commentaries do not usually focus on this argument. See, however, Albert of Saxony(?), *Quaestiones super De sensu et sensato*, ed. J. Agrimi, in *Le 'Quaestiones de sensu' attribuite a Oresme e Alberto di Sassonia* (Florence: La Nuova Italia Editrice, 1983), qu. 19, 217.

when, say, a colour of an apple acts upon my eyes, it actualises my sight and I become aware of the apple. Perception is understood as assimilation: the sense power becomes like the object.[3] Second, Aristotle is committed to a realist presupposition that the world is divided into individual substances, each of which has its own set of perceptual qualities. From a metaphysical point of view, these qualities are perceptual forms (later they were classified as accidental forms) of the object, and they are responsible for actualising our sense powers.[4] These theoretical premises seem to entail that each act of perception corresponds to one and only one perceptual quality. When an external sense is actualised by an accidental form of the object, the potency to become like the object is actualised, and there is no potentiality left to be actualised by another quality. Hence, the power cannot be actualised by another object at the same time. Simultaneous perception of two distinct qualities seems to be metaphysically impossible.

On the basis of these presuppositions, it seems only natural to analyse perception as a relation between one perceptual quality and the corresponding sense power. If we understand how the colour of an apple actualises the sense of sight, and then give similar explanations for the other perceptual qualities and senses, we have a pretty good grasp of what it is to perceive. This is precisely the methodological approach that Aristotle and his medieval followers choose; they explain perception by focusing on the relation between a sense power and perceptual qualities of a single object.[5] This method can be praised for analytic clarity, but it comes at a cost. It focuses on an unrealistic situation

3 Arguably, the famous dispute between the literalist and spiritualist interpretation of Aristotelian philosophy of mind is not relevant here. Regardless of whether the eyes literally turn red when we see a red object, or whether the change is only "spiritual," the actualisation of the power by one object prevents it from being actualised by another object. However, as we shall see below, medieval authors think that the spiritualist interpretation can be used to solve the problem of simultaneous perception. For a summary of the dispute, see Mark A. Johnstone, "Aristotle and Alexander on Perceptual Error," *Phronesis* 60 (2015): 310–38; Vicor Caston, "The Spirit and the Letter: Aristotle on Perception," in *Metaphysics, Soul and Ethics: Themes from the Work of Richard Sorabji*, ed. R. Salles (Oxford: Oxford University Press, 2004), 245–320; see also the contributions in Martha Nussbaum and Amelie Oksenberg Rorty, eds., *Essays on Aristotle's De anima* (Oxford: Clarendon Press, 1995), esp. 15–73.

4 A useful overview of Aristotle's theory of perception and its medieval reception is Simo Knuuttila, "Aristotle's Theory of Perception and Medieval Aristotelianism," in *Theories of Perception in Medieval and Early Modern Philosophy*, ed. S. Knuuttila and P. Kärkkäinen (Dordrecht: Springer, 2008), 1–22.

5 This methodological approach can be seen, e.g., in *de An.* 2.5, 418a3–6; 2.12, 424a17–24; Thomas Aquinas, *Sentencia libri De anima*, ed. R.-A. Gauthier (Rome: Commissio Leonina / Paris: Vrin, 1984), 2.15, 132b75–134a135; ibid., 2.24, 168a27–b75; id., *Sentencia libri De sensu et sensato*, ed. R.-A. Gauthier (Rome: Commissio Leonina / Paris: Vrin, 1985), cap. 16, 90a98–91b198.

in which there *is* only one quality that acts upon one external sense – as if the perceiver were placed in a deprivation tank with only one perceptual stimulus available. All other factors that figure in our everyday engagement with the world are set aside for methodological reasons, and so are alternative possibilities for conceptualising perception. As a consequence, Aristotle and medieval philosophers (who by and large follow his approach[6]) do not analyse perception as a process by which we come to know our entire surroundings. They concentrate on the perception of individual objects.

Aristotle notices that his theory renders simultaneous perception problematic. He sets out to solve the problem in chapter seven of his *De sensu et sensibilibus*, but his argumentation is convoluted and his final answer remains philosophically challenging. Thus, John Buridan's (c.1295–1361) remark is not entirely unfair when he writes that: "This question is somewhat difficult because it is not usually discussed much, and because Aristotle resolves only what is obvious almost by itself, namely, that we perceive many things simultaneously."[7] Buridan's point is that although Aristotle accepts simultaneous perception, he does not explain properly how it takes place. Buridan exaggerates, but it is true that Aristotle's argumentation leaves room for further clarification and development.

Medieval authors seized the opportunity to clarify Aristotle's view, and the present chapter aims to make sense of their interpretations. The main focus is on medieval commentaries on *De sensu*, written roughly between 1250

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Aristotle's analysis is of course motivated by earlier accounts of perception (Plato, atomists) and he is responding to more focused philosophical problems.

6 To be sure, not all medieval theories of perception were Aristotelian in the strict sense, but since the focus here is on commentaries on *De sensu*, we can set aside theories that differ significantly from his view. It is notable, however, that traditional versions of the intromissive theory hold that perception begins with emission of visual rays from each point of a surface of *an object* (David C. Lindberg, *Theories of Vision from al-Kindi to Kepler* (Chicago: The University of Chicago Press, 1976), 58–60; cf. Roger Bacon, *Liber de sensu et sensato*, ed. R. Steele (Oxford: Clarendon Press, 1938), cap. 24, 122). Likewise, at least some versions of extramissive visual ray theories were thought to hold that the base of the visual cone is *one object*, not the whole visual field (cf. Albert the Great, *De sensu et sensato*, ed. S. Donati (Münster: Aschendorff, 2017), 1.5, 26b56–27a5; ibid., 1.14, 52b39–50).

7 "Ista questio est aliquantulum difficilis, quia non solet multum tractari et quia Aristoteles de ea non determinat nisi illud quod est quasi per se manifestum, scilicet quod plura sentimus simul […]" (John Buridan, *Quaestiones super librum De sensu et sensato*, ed. J. Toivanen, in "Medieval Commentators on Simultaneous Perception: An Edition of Commentaries on Aristotle's *De sensu et sensato* 7," *Cahiers de l'Institut du Moyen-Âge Grec et Latin* 90 (2021), qu. 21, 220.6–8).

and 1350.[8] However, since the question is tangential to what Aristotle writes in *De anima* 3.2 and 3.7,[9] I draw on commentaries on these sections when they help to illustrate the philosophical points made in relation to the *De sensu*. The aim is to clarify the way medieval authors understood the problem posed by Aristotle's theory and the argumentative strategies they used to solve it. As is typical of medieval commentaries on Aristotle, most authors repeat the same stock arguments, which were partially drawn from Aristotle himself, partially from other sources. The most important doctrinal innovations were made by Alexander of Aphrodisias. They were transmitted to Latin authors in Michael Scot's(?) translation of Averroes' epitomes on *Parva naturalia*, and after the 1260s they were directly accessible in William of Moerbeke's translation of Alexander's *De sensu*.[10] Thirteenth and fourteenth century Latin authors used these works, but they ended up also suggesting new ideas in addition to received ones. This chapter discusses Albert the Great, Thomas Aquinas, John Felmingham(?), Radulphus Brito, John of Jandun, Albert of Saxony(?), John Buridan, and a couple of anonymous commentaries.[11]

## 2 Four Versions of the Problem

The general structure of Aristotle's argument in *De sensu* 7 can be outlined as follows. Aristotle begins by arguing dialectically that (1) two perceptual qualities of the same genus (e.g, white and black) cannot be perceived

8 For a general overview on Latin translations and reception of the *Parva naturalia*, see Pieter De Leemans, "Parva naturalia, Commentaries on Aristotle's," in *Encyclopedia of Medieval Philosophy: Philosophy between 500 and 1500*, ed. H. Lagerlund (Dordrecht: Springer, 2011), 917–23.

9 *De An.* 3.2, 426b9–427a14; 3.7, 431a20–b1.

10 De Leemans, "Parva naturalia," 918–19; Börje Bydén, "Introduction: The Study and Reception of Aristotle's *Parva naturalia*," in *The Parva naturalia in Greek, Arabic and Latin Aristotelianism: Supplementing the Science of the Soul*, ed. B. Bydén and F. Radovic (Dordrecht: Springer, 2018), 18–23.

11 For catalogues of medieval commentaries on *De sensu*, see esp. Sten Ebbesen et al., "Questions on *De sensu et sensato*, *De memoria* and *De somno et vigilia*: A Catalogue," *Bulletin de Philosophie Médiévale* 57 (2015): 59–115; and Jozef de Raedemaeker, "Une ébauche de catalogue des commentaires sur les *Parva Naturalia*, parus aux XIII$^{e}$, XIV$^{e}$ et XV$^{e}$ siècles," *Bulletin de Philosophie Médiévale* 7 (1965): 95–108. The authorship of the commentaries attributed to John Felmingham and Albert of Saxony are uncertain: see Jole Agrimi, "Les *Quaestiones de sensu* attribuées à Albert de Saxe: Quelques remarques sur les rapports entre philosophie naturelle et médecine chez Buridan, Oresme et Albert," in *Itinéraires d'Albert de Saxe, Paris – Vienne au XIV$^{e}$ siècle*, ed. J. Biard (Paris: Vrin 1991), 191–204.

simultaneously unless they form a mixture (7, 447a29–b21); he argues that (2) *a fortiori*, it is impossible to perceive two heterogenous qualities (e.g, white and sweet[12]) simultaneously (7, 447b21–448a19); he proceeds to his own position and proves that (3) white and sweet *can* be perceived simultaneously by the common sense (*koinȅ aísthēsis*); finally, he (4) extends the same solution to two qualities that affect the same external sense (7, 449a18–20).[13] Each step in the argument contains difficult elements, and the last step especially remains rather elusive. Medieval authors usually do not elaborate on it and, although the philosophical solutions that they offer to the general problem are not particularly complex, their argumentation can be tangled at times, mainly because there are several different issues at stake. There are many different ways to understand what the problem is about, and some solutions pertain only to certain aspects of the general question. Arguments tend to mix, and the authors do not clearly indicate which problem they are addressing in each step. In order to understand medieval discussions, it is important to be clear about this structural complexity.

In what follows, I present a heuristic framework of four different scenarios of how two objects or qualities could in principle be perceived simultaneously, and point out the main problems that medieval authors saw in them. The framework is anchored in Aristotle's dialectical approach at the beginning of *De sensu* 7, but it is important to remember that usually medieval commentators did not present their arguments in an orderly manner. The following should be understood as an effort to systematise medieval arguments rather than as a reflection of the way medieval authors actually proceeded.

The four scenarios are based on two major divisions. The first division is between homogenous and heterogenous qualities. Simultaneous perception may be about two qualities of *the same* genus, such as two colours; or it can be about two qualities that belong to *distinct* genera, for instance white and sweet. The second division concerns the various powers of the soul: two perceptual

12 The white and sweet substance was sometimes identified with milk (as Aristotle probably did): "Item, sicut album et dulce in lacte sunt idem subiecto et differunt formaliter, sic dicunt de sensu communi" (Anonymous of Paris, *Quaestiones super librum De sensu et sensato*, ed. J. Toivanen, in "Medieval Commentators," qu. 37, 186.20–22). Some Latin authors were thinking of sugar instead: "[…] possibilia simul esse in eodem, ut album et dulce in zuc[c]aro" (Albert the Great, *De homine*, ed. H. Anzulewicz and J. R. Söder (Münster: Aschendorff, 2008), 268b70–269a1). The example is peculiar because we do not see the thing while we are eating it. John of Felmingham(?) improves it by placing sweetness (*dulce*) under smells (*odor*), not flavours (John Felmingham(?), *Expositio in librum De sensu et sensato*, ed. J. Toivanen, in "Medieval Commentators," cap. 9, 190.25–191.2).

13 For a detailed analysis of Aristotle's argumentation, see Pavel Gregoric, *Aristotle on the Common Sense* (Oxford: Oxford University Press, 2007), 129–62.

qualities may be perceived by *one external sense*, by *two external senses*, or by *the common sense*.

The first scenario looks like this:

(A) Two homogenous qualities form a mixture, which is perceived by one external sense.

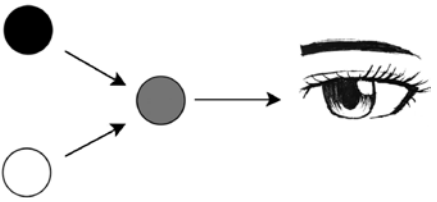

FIGURE 5.1

There are two ways in which this scenario can be understood. Either the two qualities form a real mixture in which the original qualities are not preserved, or they are just mixed in such a way that small particles of each are juxtaposed and the original qualities remain distinct in the mixture. In the first case, the scenario is unproblematic. It is also trivial and begs the question because it is not a case of perceiving two things simultaneously; the mixture is only one quality.[14] The second case, by contrast, looks like a promising candidate for a case of simultaneous perception of two qualities. Aristotle has this kind of scenario in mind when he puts forth a dialectical argument according to which only the stronger of the qualities present in the mixture can be perceived, and when they are equally strong, neither is perceptible as such.[15] Aristotle does not accept this view. Neither do medieval authors, who think that when two

14 "[…] ex utroque sensibili fiat compositum tertium, tunc enim neutrius sensibilis sensus erit per se. Unum enim obscurat alterum (per secundam suppositionem), quare aut nihil sentietur omnino, vel sentietur unum sensibile commixtum ex utroque et neutrum in se […]." (Adam of Buckfield, *Commentarium in Aristotelis De sensu et sensato* [*Recensio II*], ed. J. Toivanen, in "Medieval Commentators," 153.2–5.) This issue is related to Aristotle's discussion of colours in *Sens.* 3, 439b20–440b23.

15 See, e.g., Thomas Aquinas, *Sent. Sens*, cap. 16, 89a35–46, 90a119–23. This argument seems to presuppose that the stronger quality remains perceptible until the qualities are equal, and only then does a third quality (a mixture of the two) emerge. Thus, black coffee tastes like coffee, and pure milk tastes like milk. Adding a splash of milk to coffee does not remove the taste of coffee – the taste just becomes a bit milder. However, if one prepares a mixture that contains an equal amount of coffee and milk, the mixture acquires a new taste (say, the taste of café au lait), and then neither coffee nor milk can be tasted anymore.

substances are really mixed together, the mixture always acquires new perceptual qualities (we will come back to this below).

Medieval authors do not always distinguish scenario *A* from another case in which two distinct objects act upon one external sense. However, some of them write about movement that is caused by two objects in one external sense instead of (or as an alternative to) the perception of a mixture. Their idea is that two external objects may cause distinct movements directly in the power of the soul.[16] Thus, we may discern the second scenario:

(B) Two distinct homogenous qualities affect one external sense simultaneously.

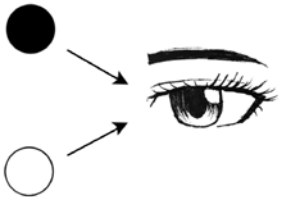

FIGURE 5.2

This scenario is problematic for metaphysical reasons. As already mentioned, the fundamental starting point in Aristotelian theories of perception is that external senses are in potentiality with respect to their proper objects. When an external object is present to the senses, its perceptual quality actualises the corresponding potentiality, and the power is "informed" (i.e., it receives the accidental form) of the object. Moreover, the power is actualised fully – it becomes like the object, and as long as the object is present, there is no potentiality to another object left. Thus, when the power of sight is actualised by the perceptual form of the black ball, it cannot perceive the white ball.

The reason why it seems plausible to think that the potentiality is used up by one quality is that if one power could be simultaneously actualised by two forms, it would be similar to two qualities at the same time. This seems problematic, especially when the qualities are contraries, such as black and white, or sweet and bitter. Nothing can have two contrary properties in the same respect at the same time.[17] As it is impossible for an apple to be both red and

16 These two scenarios are not always clearly distinguished, but medieval authors are aware that they are different: see Thomas Aquinas, *Sent. Sens.*, cap. 16, 89b62–77; John Felmingham(?), *Exp. Sens.*, cap. 9, 189.5–13.

17 Thomas Aquinas, *Sent. Sens.*, cap. 16, 90a123–b158; cap. 17, 92a6–93a34. Gregoric notes that Plato used this principle to justify the tripartite division of the soul in *Republic* 4, 436b8–9, and he shows that the full strength of this problem was recognised by Alexander of

green (barring the sophism that it may be half red and half green), so external senses cannot be informed by contrary qualities because they become similar to what they perceive.

Another problem in this scenario is related to the dialectical argument according to which only stronger of two movements/qualities can be perceived. However, this time the two qualities are not mixed into one. They simultaneously cause changes in one external sense, but only the stronger of the two changes is perceived while the other remains unnoticed – for instance, the flame of a candle cannot be seen in bright sunlight, even though it affects the sense of sight in exactly the same way it would in a dark room. If the two movements happen to be equal, neither of them is properly perceived. For instance, it may be impossible to hear what people are saying if the background music is very loud, and it is equally impossible to hear the lyrics if people are speaking loudly over them.[18]

These two scenarios together seem to entail that two objects are either mixed together, in which case perceiving them is perceiving a mixture; or they act on the sense separately, in which case it is not possible to perceive both of them. The stronger object prevents noticing the weaker because the sense power cannot be fully actualised by two perceptual forms at the same time.

The third scenario differs from the previous two by involving perceptual qualities that belong to distinct genera. In order to perceive them, we need to add more external senses to the picture:[19]

(C) Two heterogenous qualities (e.g., sound and colour) affect two different external senses simultaneously.

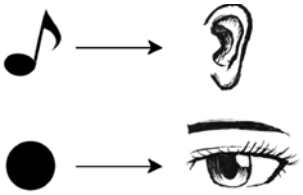

FIGURE 5.3

Aphrodisias (Pavel Gregoric, "Alexander of Aphrodisias on the Common Sense," *Filozofski vestnik* 38:1 (2017): 47–64).

18 Thomas Aquinas, *Sent. Sens.*, cap. 16. 89a49–b77; John Buridan, *Quaest. Sens.*, qu. 21, fol. 39rb.

19 Two heterogenous qualities, such as white and sweet, may belong to one object, but that does not make them one perceptual quality, "wheet" or "swite." See, e.g., Thomas Aquinas, *Sent. Sens.*, cap. 16, 89b78–91.

Although this scenario seems unproblematic at first sight, many authors were ready to admit that perception involves something more than just passive reception of perceptual qualities of external objects; it requires that the perceiver becomes aware of these qualities. Following a suggestion made by Aristotle (and later emphasised by Augustine and Avicenna), medieval authors pointed out that one needs to pay attention in order to perceive. If someone focuses intensely on listening, she may fail to see things in front of her eyes.[20] Thus, even though there is no metaphysical reason to question simultaneous actualisation of two external senses by two objects,[21] it is still possible that their objects are not perceived due to a psychological incapability to concentrate on many things at once.

In this context, the attention of the soul is usually framed in terms of a stronger and weaker movement that different perceptual qualities cause in the external senses. When two senses are acted upon simultaneously, the stronger movement prevents the perceiver from noticing the weaker. At the same time, the weaker movement diminishes the stronger as if by subtracting the weaker from the stronger in such a way that if the movements were to be equal, neither would be perceived.[22] Some authors also draw from the Augustinian/Avicennian tradition and point out that the internal attention of the soul (instead of the strength of the input from without) may explain why one object is perceived instead of another.[23] In both cases the result is the same: two qualities cannot be perceived simultaneously, since (1) they belong to different genera and cannot be mixed into one perceptual quality; (2) if they are unequal, only the stronger is perceived; (3) if they are equal, neither is perceived.

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20 *Sens.* 7, 447a14–16. Aquinas argues that both external and internal movements (loud sound, emotion) may prevent the perception of other things (Thomas Aquinas, *Sent. Sens.*, cap. 16, 89a25–33). The idea that one needs to pay attention to perceive was a central feature in medieval theories of cognition, and in addition to Aristotle's remarks, Augustine and Avicenna influenced the development of this idea. See, e.g., Deborah Brown, "Augustine and Descartes on the Function of Attention in Perceptual Awareness," in *Consciousness*, ed. S. Heinämaa et al., 153–75; Robert Pasnau, *Theories of Cognition in Later Middle Ages* (Cambridge: Cambridge University Press, 1997), 125–58; Juhana Toivanen, *Perception and the Internal Senses: Peter of John Olivi on the Cognitive Functions of the Sensitive Soul* (Leiden: Brill, 2013), 163–91.

21 See, e.g., Radulphus Brito, *Quaestiones super librum De sensu et sensato*, ed. J. Toivanen, in "Medieval Commentators," qu. 25, 178.5–11.

22 Thomas Aquinas, *Sent. Sens.* cap. 16, 89b78–90a97; see also Albert the Great, *De sensu* 3.3, 100b51–101a4.

23 Albert the Great, *De sensu* 3.3, 101a6–11.

Medieval authors also repeat Aristotle's dialectical argument from *locus a maiori apparentia*, which states that it should be easier to perceive simultaneously two colours than a colour and a flavour because two colours are more similar to each other than two heterogenous qualities. In other words, given that scenario *B* has been shown to be impossible, also scenario *C* must be rejected.[24] As Pavel Gregoric has pointed out, the argument is basically valid but not very convincing – one easily thinks that scenario *C* is less problematic than scenario *B* because the latter entails the metaphysical difficulty mentioned above (one power can be actualised by only one thing at any given time) but the former does not.[25] Convincing or not, Aristotle puts forth this dialectical argument and medieval authors often follow suite, but since they eventually reject it, the order of difficulty is in the end of no importance to them.

The final scenario of the heuristic framework gives us the main ingredient of the solution to the original problem, as it adds the common sense to the picture.[26] This unifying power of the sensory soul is responsible for perceiving all perceptual qualities of the five external senses, combining them, and apprehending their diversity:

(D) Two perceptual qualities are simultaneously perceived by the common sense. There are two versions of this general view:
($D_1$) Two heterogenous qualities are transmitted to the common sense via two external senses.

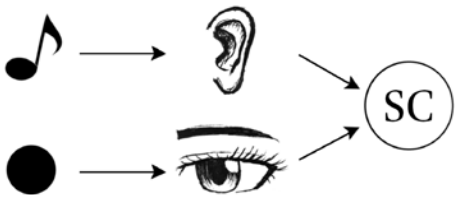


FIGURE 5.4

24 *Sens.* 7, 447b21–448a19; Thomas Aquinas, *Sent. Sens.*, cap. 16, 90a98–b162.

25 Gregoric, *Aristotle on the Common Sense*, 134–35.

26 Medieval authors occasionally suggest that the common sense differs from external senses because it has a primitive ability to perceive many qualities simultaneously: "Arguitur quod non, quia sensus unus est unius primae contrarietatis (secundo *De anima*); sensus communis non est huiusmodi; ergo etc. […] Ad rationes. 'Unus sensus unius etc.' Philosophus intellegit de exterioribus, non de interioribus, quia interiores sensus ad plura se extendunt." (Anonymous of Paris, *Quaest. Sens.*, qu. 37, 185.21–22, 188.5–6.)

($D_2$) Two homogenous qualities are transmitted to the common sense via one external sense.


FIGURE 5.5

Medieval authors usually focused on the scenario *D* (both versions). The main reason for positing the common sense is that there has to be a power that is able to compare two different kinds of perceptual qualities (typically, white and sweet) to each other and distinguish them. As Averroes puts it in an argument, which is based on *De anima* 3.2 and became extremely popular in the subsequent commentary tradition:

> If the final percipient were in the eyes, or in the case of taste in the tongue, then it would be necessary to judge by two different [powers] when we judge sweet to be different from white. [...] For if it were possible to judge these two to be different through two different powers, each of which individually apprehends one of those two, then it would be necessary that when I would sense that a thing is sweet and you that it is white, and I did not sense what you sensed nor you what I sensed, that I apprehend my sensible to be different from yours, although I do not sense yours [...]. This is clearly impossible.[27]

The ability to perceive two heterogeneous qualities simultaneously (= $D_1$) was unanimously accepted, but it is not entirely without problems. First, the metaphysical problem that one power can be actualised by only one perceptual

27 "Si ultimum sentiens esset in oculo, aut in lingua in gustu, tunc necesse esset, cum iudicaremus dulce esse aliud ab albo, iudicare per duo diversa. [...] Si enim esset possibile iudicare hec duo esse diversa per duas virtutes diversas quarum utraque singulariter comprehenderet alterum illorum duorum, tunc necesse esset ut, quando ego sentirem hoc esse dulce et tu illud esse album, et ego non sensi quod tu sensisti neque tu quod ego, ut ego comprehenderem meum sensibile esse aliud a tuo, licet non sentiam tuum [...]. Et hoc est manifeste impossibile." (Averroes, *Commentarium Magnum in Aristotelis De anima libros*, ed. F. S. Crawford (Cambridge, MA: The Medieval Academy of America, 1953), 2.146, 350–51; trans. R. C. Taylor, in Averroes, *Long Commentary on the De anima of Aristotle* (New Haven: Yale University Press, 2009), 267–68, translation slightly modified.)

quality at a time was raised also in relation to the common sense. Second, even when the ability of the common sense to perceive many qualities simultaneously is considered unproblematic, its dependence on the external senses means that some problems remain. In particular, $D_2$ runs into the problems of scenario *B* because it presupposes that one external sense can transmit two perceptual qualities to the common sense at the same time.[28] Likewise, $D_1$ depends on *C* and raises the question concerning the attention of the soul. Is the common sense able to perceive simultaneous movements of the external senses equally well? As a matter of fact, adding the common sense to the picture makes this problem more acute. If there was no need to unite the two perceptual qualities somewhere, the view that one power can pay attention to only one thing would not be so central.

## 3 Strategies for Solving the Problem

Like Aristotle, medieval authors acknowledge without hesitation that we have the ability to perceive several things simultaneously. Their starting point is our phenomenological experience, and sometimes they settle for that. A radical example is an anonymous commentator, who squeezes his entire response into a terse statement:

> It must be said that one sense can discriminate contrary [qualities], and it is pointless to demonstrate this, because this is experienced by everyone. And it is pointless to give reason to those things that we experience by the senses.[29]

Given that Aristotle devotes almost one fifth of *De sensu* to this philosophically challenging issue, the paucity of this answer is next to hilarious. However, it shows how important phenomenological experience was for medieval authors.

Thus, instead of questioning the phenomenon, the main challenge for medieval authors was to solve the aforementioned problems in a way that is compatible with the general philosophical assumptions of Aristotelian theory of perception. Different strategies were used, and in what follows I shall divide them into two groups: the metaphysical and the psychological. It should be

28 Albert of Saxony(?), *Quaest. Sens.*, qu. 19, 218.

29 "Dicendum quod unus sensus potest simul iudicare contraria, et istud est frivolum demonstrare, quia illud quilibet experitur. Et de eis quae ad sensum experimur frivolum est dare rationem." (Anonymous of Paris, *Quaest. Sens.*, qu. 35, 182.1–3.)

noted that medieval authors usually combined these strategies. They used several arguments to support the position that simultaneous perception is possible, and in their discussions the arguments tend to mix together in such a way that it is often difficult to see what the main point is. The division into two groups of arguments should therefore be taken as a way to analyse medieval discussions in a systematic way rather than as a summary of any medieval author's position.

### 3.1 *Metaphysical Strategies*

As I already mentioned, scenario *A* represents a case of perceiving two things simultaneously only if the perceptual qualities of the original ingredients remain distinct from each other in the mixture. Medieval theories of elemental composition are rather complicated, and we cannot go into the details here. Suffice it to note that the basic idea, which medieval authors inherited from Aristotle, is that the ingredients and their original qualities remain only potentially distinct in a real mixture. The exact manner in which this potentiality should be understood was a philosophical discussion of its own, and medieval authors debated also whether composition pertains to the ingredients or only their qualities.[30] What is crucial from our point of view is that when two elements form a mixture, their original qualities do not remain actual.

This theory is about elemental composition, and it is not clear whether it applies also to mixtures that are made of non-elemental ingredients. Medieval authors think that colours behave in this way; the mixture of white and black is a new colour. However, the mixture of wine and water – or, to use another example, coffee and milk – may not be similar in this respect.[31] Aristotle distinguishes real mixtures from cases where the ingredients are only blended together, and in some cases it is not possible to tell whether the combination is a blend or a mixture; juxtaposition of small dots of white and black appears grey from a distance, and likewise the blend of coffee and milk tastes *café au lait* even if it may not be a real mixture metaphysically speaking.[32]

30 See, e.g., Rega Wood and Michael Weisberg, "Interpreting Aristotle on Mixture: Problems about Elemental Composition from Philoponus to Cooper," *Studies in History and Philosophy of Science* 35 (2004): 681–706.

31 The example of coffee and milk is more illustrative because water has no taste of its own.

32 *GC* 1.10, 327b33–328a15. Note that Aristotle seems to think that wine mixed with water is a real mixture; *GC* 1.10, 328a23–31. He argues in *Sens.* 3, 440b1–17 that the combination of two colours does not preserve the original qualities. Thus, when he raises the argument in *Sens.* 7, 447a11–22 that it is not possible to perceive both wine and water, it is likely that he is using the example of diluted wine without really accepting its basic premise, that the taste of wine remains unchanged in the mixture and is only made less strong by the presence of water (see also *Sens.* 4, 442a13–18). Albert the Great points out that in scenario *A*,

When medieval authors raise the argument that only the stronger of two perceptual qualities can be perceived, they sometimes point out that scenarios *A* and *B* should not be treated identically. Most of them focus on scenario *B*, and even when they pose the original problem in terms of *A*, their final answers tend to discreetly shift to *B*. This shows that they consider scenario *A* somewhat trivial and mention it only because Aristotle does. However, there may also be a more fundamental reason for this move: if the ingredients remain distinct and the perceived object is not a real mixture but formed by a juxtaposition of small particles, the scenario is not *A* but *B*. The fact that coffee and milk happen to be blended in the same mug does not make a relevant difference to a case in which two perceptible objects are side by side. The size of the particles is insignificant. Thus, scenario *A* is trivial because it is either a case of perceiving one thing (real mixture) or a case in which two distinct qualities act on one sense simultaneously, which is scenario *B*.

One of the most widely used strategies to solve the metaphysical problem of scenarios *B* and *D* (that no power can be actualised by more than one object at any given time) was to make a distinction between two modes of being. A perceptual quality has a material or natural mode of being in the object, and a spiritual or "intentional" mode of being in the medium and in the sense organ. Intentionality here should not be understood in its modern sense, that is, as a distinctly mental phenomenon (cf. Brentano's theory in chapter eight below). Rather, the term refers to a special way in which perceptual forms exist in the medium and in the sense organs. One external object cannot be both white and black in same respect, because the colour has a material mode of being in the object. However, since neither the air between the object and the perceiving subject nor the eyes of the subject change their colour when they receive the sensible species of a colourful thing, they can receive the species of two colours simultaneously. Thus, Thomas Aquinas argues:

> For a natural body receives forms according to their natural and material being, according to which they have contrariety, which is why the same body cannot simultaneously receive whiteness and blackness. But the senses and the intellect receive the forms of things spiritually and

two qualities do not remain distinct but make up a new quality; perception of mixture is perception of a single quality. He mentions colours and sounds, but not other proper sensibles. (Albert the Great, *De sensu* 3.3, 102a18–27.)

> immaterially according to an intentional being, in such a way that they have no contrariety.[33]

As is well known, the idea of an intentional existence of the sensible species is central to medieval theories of perception. It goes back to Alexander of Aphrodisias, and it was communicated to the Latin world through Averroes, among others.[34] Most medieval authors accept it, and they use it to argue that neither the sensible species nor the movements caused by them in the senses exclude or are contrary to each other – not even when the qualities are contrary in their material mode of being.[35]

This strategy can be used to solve the metaphysical problem but even there its scope is limited. In the Aristotelian tradition, sight was typically taken to be the paradigmatic sense, but there are medieval authors who point out that in certain respects sight is a special case. For instance, Radulphus Brito argues:

> [...] those senses, which undergo a real change with respect to the organ, and a spiritual change with respect to the power that exists in the organ – such are touch, taste, and smell [...] – cannot perceive different perceptual qualities simultaneously, because in those senses two changes take place: a real one with respect to the organ, and a spiritual one with respect to the power. And therefore, if these powers perceived different perceptual qualities, they would be [in] contrary [states] simultaneously.[36]

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33 "Corpus enim naturale recipit formas secundum esse naturale et materiale, secundum quod habent contrarietatem, et ideo non potest idem corpus simul recipere albedinem et nigredinem; sed sensus et intellectus recipiunt formas rerum spiritualiter et immaterialiter secundum esse quoddam intentionale prout non habent contrarietatem." (Thomas Aquinas, *De sensu*, cap. 18, 99a191–b210, trans. K. White, in Thomas Aquinas, *Commentaries on Aristotle's On Sense and What Is Sensed and On Memory and Recollection* (Washington DC: The Catholic University of America Press, 2005), 156.)

34 Richard Sorabji, "From Aristotle to Brentano: The Development of the Concept of Intentionality," *Oxford Studies in Ancient Philosophy*, supplementary volume (1991): 227–59.

35 Illustrative passages can be found, e.g., in Albert the Great, *De hom.*, 181a21–b41; Peter of Auvergne, *Quaestiones super De sensu et sensato*, ed. K. White, in *Two Studies Related to St. Thomas Aquinas' Commentary on Aristotle's De sensu et sensato together with an Edition of Peter of Auvergne's Quaestiones super Parva naturalia*, PhD diss. (Ottawa: University of Ottawa, 1986), vol. 2, qu. 56, 111–12; "Istud autem est quia colores non causant colores medios, nisi quia causae eorum commiscentur ad causandum colores quantum ad esse reale eorum. Sed istae species albi et nigri habent esse in medio spiritualiter solum. Ideo non commiscentur." (Radulphus Brito, *Quaest. Sens.*, qu. 25, 178.17–21.)

36 "[...] illi sensus, qui immutantur immutatione reali ratione organorum et immutatione spirituali ratione potentiae existentis in organo – sicut est tactus et gustus et odoratus

Sight and hearing are the only external senses that can receive many sensible species simultaneously because the other three senses require a material change in the organ.[37] Our flesh becomes hot when we touch a hot object, our tongues are covered with a sweet liquid when we taste honey, and our nostrils are filled with odour in a material mode of being. In each of these cases the organ changes and cannot receive another quality any more. This means that scenario *B* yields different conclusion depending on what sense we are talking about.

Given that scenario *D* also depends on the ability to receive many species simultaneously, it seems clear that the common sense must be similar to sight in this respect. Brito does not explicitly say whether the organ of the common sense undergoes a material change when it receives the sensible species from the external senses, but at least Albert the Great thinks that it does not: also touch and taste transmit the cognitive information to the common sense in a spiritual form.[38] Of course this does not help us to taste two distinct flavours simultaneously, since if the bottleneck is in the sense of taste (scenario *B*), only one species can be transmitted to the common sense. In spite of these limitations, the idea of the intentional mode of being was a handy device to overcome the main metaphysical problem.

Some medieval authors raise a further issue by asking how many acts the common sense needs in order to perceive many qualities. For instance, Albert the Great argues that it has only one act, which brings together information from different external senses. When the colour of a swan actualises my sense of sight and its cry does the same to my sense of hearing, I can perceive both of these qualities simultaneously either by becoming aware that the

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[…] – non possunt simul sentire diversa sensibilia, quia in talibus fit dupliciter immutatio: realis ratione organi et spiritualis ratione potentiae. Et ideo si simul sentirent diversa sensibilia, contraria essent simul." (Radulphus Brito, *Quaest. Sens.*, qu. 25, 178.21–27.) The same point is made by the Anonymous of Merton: "Et ideo, quia odor et sapor multiplicant se materialiter, immutatio unius odoris impedit immutationem alterius. Sed non est sic de albo et nigro, nam album et nigrum multiplicant se spiritualiter, et ideo immutatio unius non impedit immutationem alterius." (Anonymous of Merton, *Quaestiones super De sensu et sensato*, ed. J. Toivanen, in "Medieval Commentators," qu. 15, 175.12–16.)

37 Brito differs from Aquinas, who thinks (1) that the only completely spiritual sense is sight, and (2) that the material change of the organ applies only to touch and taste, while in smell and hearing it applies to the object (Thomas Aquinas, *Summa Theologiae*, ed. P. Caramello (Turin: Marietti, 1948–50), 1.78.3). The objects of smell and hearing interfere with each other in the medium and can be affected by material changes of the medium, such as wind. For an analysis of medieval discussions concerning the material change in perception, see Thomsen Thörnqvist's chapter in this volume (chapter six).

38 Albert the Great, *De sensu* 3.6, 110b32–40; id., *De hom.*, 262b61–67.

sound is not the colour, or by attributing both the sound and the colour to the same external object. Albert seems to suggest that simultaneous perception is possible only when the common sense combines or compares many perceptual qualities to each other. Simultaneous perception is an act of judgement.[39]

A similar strategy is used by John of Jandun in his commentary on *De sensu*. He compares perceptual powers of the soul to the intellect and claims that in both cases cognising many things simultaneously is possible only if it takes place by one act of the soul. This claim is in a sharp contrast to what he writes in his commentary on *De anima*. Michael Stenskjær Christensen shows in his contribution (volume three, chapter six) that when Jandun develops his monopsychist theory of intellectual cognition, he acknowledges that both the intellect and the sensory part of the soul are able to have several distinct cognitive acts at the same time. At this stage it is not possible to say whether the disparity between the two commentaries indicates that Jandun changed his mind after finishing the commentary on *De sensu*, or whether it boils down to contextual issues.[40] At any rate, he argues in the earlier commentary that the act that brings together two distinct qualities is a judgement concerning their difference or concurrence (*diversitas et convenientia*). One of his arguments concerns scenario $D_2$ and it goes as follows:

> Someone might doubt about one particular sense in relation to different proper sensibles (such as sight in relation to white and black), whether it comprehends them simultaneously by a single act. And it can be briefly said that yes, insofar as they concur (*conveniunt*) or differ. However, the judgement concerning this concurrence or difference is in the particular sense initially and incompletely, and it is in the common sense by way of completion.[41]

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39 Albert the Great, *De sensu* 3.6, 110a13–20. Peter of Auvergne seems to think that senses can have only one act at a time, but that it is possible to make a conceptual distinction between seeing black and seeing white (Peter of Auvergne, *Quaest. Sens.*, vol. 2, qu. 56, 111).

40 The commentary on *De sensu* dates from 1309, and the commentary on *De anima* is written between 1317–19 (Jean-Baptiste Brenet, "John of Jandun," in *Encyclopedia of Medieval Philosophy*, ed. H. Lagerlund, (Dordrecht: Springer, 2011), 627).

41 "Sed aliquis posset dubitare de uno sensu particulari respectu diversorum sensibilium propriorum, ut est visus respectu albi et nigri, utrum comprehenderet ea simul unica actione. Et potest breviter dici quod sic, secundum quod conveniunt aut differunt. Tamen illud iudicium de illa convenientia vel differentia est initiative et minus complete in sensu particulari, completive autem in sensu communi." (John of Jandun, *Quaestiones super librum De sensu et sensato*, ed. J. Toivanen, in "Medieval Commentators," qu. 34, 208.6–11.) See also John of Jandun, *Quaestiones super librum De anima* (Venice: Hieronymus Scotus,

Judgement (understood as an act of comparison) is the fundamental explanatory component that makes simultaneous perception possible. This interpretation has an important advantage. Defining perception as reception of sensible species would entail the problematic consequence that one power must be simultaneously actualised by two contrary qualities – which seems impossible because one thing cannot have opposite properties at the same time. An act of judgement concerning opposites as opposites does not entail this contradiction.[42]

John Felmingham(?) suggests a different theory. He argues that already the external senses may have separate acts by which they perceive many qualities at the same time:

> [...] many perceptual qualities of one external sense can be simultaneously perceived by one external sense – in a confused way with one act, and distinctly by different acts. And many perceptual qualities that belong to different genera can be simultaneously perceived by one common sense, as it has been said.[43]

In a similar vein, an anonymous author (hereafter Anonymous of Paris) dedicates a separate question to the issue, and his main argument is that the common sense can have either one or many acts, depending on whether it perceives two qualities in relation to each other or separately:

> [...] these perceptual qualities [...] can be considered absolutely or in comparison with each other, [i.e.] according to their differences. And then I say that if these perceptual qualities are cognised by asserting the difference between them in that way, then they are cognised [by one sensation]; but if not, not. The first claim is clear, because a sense that asserts the difference between certain things, cognises them under the aspect of

1587), 2.36, 211–12. The analogy between the intellect and the senses was often used to illuminate how several objects can be cognised simultaneously. The intellect can understand many things only if they are connected to each other (for instance, the premises and the conclusion of an argument), and likewise the common sense must bring different sensible species together in a judgement. See, e.g., Thomas Aquinas, *ST* 1.85.4; John Buridan, *Quaest. Sens.*, qu. 21, 219.10–14.

42 Thomas Aquinas, *Sent. Sens.*, cap. 18, 99b219–20.

43 "[...] plura sensibilia unius sensus particularis possunt simul sentiri ab uno sensu particulari modo confuso una actione, et distincte per diversas actiones. Et sensibilia plura diversi generis simul pos⟨sunt⟩ sentiri ab uno sensu communi, ut dictum est." (John Felmingham(?), *Exp. Sens.*, cap. 9, 193.2–5.) Here and elsewhere, the angle brackets indicate my additions.

> difference; but this aspect is one, and from it one cognition is received. […] It can be said in another way that they are cognised absolutely and not in comparison to each other, because […] the common sense, which perceives diverse perceptual qualities, is one in substance but many in account (*diversus in ratione*) in relation to the various perceptual qualities it perceives; but this would not be the case if it cognised them by one sensation; therefore, it does not cognise them by one sensation. Likewise, Aristotle says that just like we see that white and sweet are the same in subject but are different in thought and formally, so the common sense is different in thought when it perceives these qualities. And this would not be so, if it perceived them by one sensation; wherefore etc.[44]

The author accepts that the comparison between white and sweet must be done by one act. However, he argues that the common sense can also perceive these qualities without relating them to each other. In this case it needs two acts, one for each object. Thus, while Albert claimed that the common sense is capable of perceiving two qualities simultaneously only because it makes a unity out of them, Anonymous of Paris and John Felmingham(?) accept the possibility of tasting sweet and seeing white without judging that they are not the same quality, and apparently also without judging whether or not they belong to the same object in the external world.

The final argument in the quoted passage is related to Alexander of Aphrodisias' explanation of how the common sense can perceive many qualities simultaneously. Alexander uses the famous illustration of the centre of a circle, which is connected to the circumference by several lines. On the one hand it is numerically one and indivisible point; on the other hand, it can be understood as an end-point of one line, and as such, it is different from its

44 "[…] ista sensibilia […] possunt considerari absolute, vel ut habent comparationem ad alterum, ut unum est differens ab altero. Et tunc dico quod si ista sensibilia cognoscuntur sic, ponendo differentiam inter ipsa, sicut cognoscu⟨n⟩tur ⟨una sensatione⟩; sed si non, non. Primum patet, quia sensus, qui ponit differentiam inter aliqua, cognoscit illa sub ratione differentiae; sed illa ratio est una ex qua sumitur una cognitio. […] Aliter potest dici quod cognoscantur absolute et non in comparatione[m], quia […] sensus communis sentiens diversa sensibilia est unus substantia sed per comparationem ad illa diversus est in ratione. Sed hoc non contingere[n]t si illa una sensatione cognosceret; ergo non una cognoscit. Item, dicit quod sicut videmus quod album et dulce sunt idem subiecto, differentia autem secundum rationem et formam, sic sensus communis est diversus secundum rationem, ut illa sentit. Et hoc non esset si sensaret {*sic*} illa una sensatione; quare etc." (Anonymous of Paris, *Quaest. Sens.*, qu. 36, 183.20–184.14.) The square brackets indicate letters and words which are present in the MS but which I consider to be scribal errors.

role as the end-point of another line.[45] Medieval authors typically accept this idea and use the illustration, but the Anonymous of Paris gives it an interesting twist. He argues that unless the common sense is able to have many simultaneous acts that are distinct from each other, there is no reason to say that it is diversified in any way.

The author proposes also another argument for his view that the common sense can have several acts simultaneously. He points out that cognitive acts of the sensory powers of the soul are not substantial but accidental.[46] Since there is nothing inherently problematic in having two or more accidental qualities at the same time, the common sense can perceive simultaneously white and sweet – and the author's point is that these accidental properties are not one but two acts. This argument cannot be applied to the case of homogenous qualities, such as black and white (scenario $D_2$). The author solves it by appealing to the intentional mode of being (*esse intentionale*). He argues that even contrary qualities can inhere in the same power insofar as they do not cause a material change in the organ. The sense of sight is similar to the common sense (scenario *B*). It undergoes only a spiritual change and can have several perceptual acts simultaneously, for instance, when it perceives white and black.[47]

So far so good. But how about the other external senses? Is it possible to taste, smell, feel, or hear many things at the same time? One might expect the answer to be negative, because these senses function only if their organs undergo a material change. However, the author thinks otherwise. When addressing a typical objection – which states that since the intellect is not able to have many simultaneous acts, *a fortiori* the senses must lack this ability[48] – he answers that: "I say that this does not follow, because senses receive [species] by the mediation of material organs, which are divisible. Therefore, they can receive

45 Gregoric, "Alexander of Aphrodisias," 56–62. The illustration is used also by Averroes, *Comm. magnum in De an.* 2.149, 355–56; *Long Commentary*, 271–72.

46 "Ad rationes in oppositum dico quod unus actus substantialis est un⟨i⟩us tantum. Sed istae sensationes non sunt substantiales sed accidentales, et ideo [in] plures possunt ibi esse." (Anonymous of Paris, *Quaest. Sens.*, qu. 36, 185.5–7.)

47 "Et sicut dico de sensu communi, sic possum dicere de sensu particulari, quia visus cognoscens album et nigrum cognoscit album et nigrum ut sunt colores et ista etiam sencundum se. Tunc arguitur: sicut se habent album et nigrum ad immutationem medii, sic se habent ad immutationem organi; sed in medio sunt diversae intentiones; ergo et in organo. Sed si sint diversae sensationes simul, ut sic non una sensatione percipientur […]." (Anonymous of Paris, *Quaest. Sens.*, qu. 36, 184.14–20.)

48 Cf. *de An.* 3.4, 429a15–24, where Aristotle argues that the intellect is nothing before it thinks. When it does think, it is fully actualised and cannot have another act at the same time. See Michael Stenskjær Christensen's contribution in volume three. Cf. also Roger Bacon, *Liber De sensu*, cap. 24, 126.

many [species] [...]."[49] Unlike the intellect, the senses have the advantage (or drawback) that they are actualisations of bodily organs. This feature makes them extended in space, divisible, and according to this author, able to receive one species in one part of the organ and another species in another part.

This idea cannot be found in Aristotle – as a matter of fact, he seems to reject it explicitly, as does also for instance Aquinas[50] – but it is not original because it was first proposed by Alexander of Aphrodisias.[51] Anonymous of Paris does not explicitly say why he adopts this view, but his motivation may be to try and find a way to explain how those senses that undergo material changes (touch, taste, smell, and perhaps hearing) can also be informed simultaneously by contrary qualities. The explanation makes perfect sense in the case of touch, but since the author gives it in the form of a general rule, he may have meant to apply it to all cognitive powers of the sensory soul, including sight and possibly even the common sense. However, if this is the case, he ends up overdetermining his explanation, because appealing to the spiritual mode of being of the species already suffices to solve the original problem with respect to these two powers.

Few medieval authors used this explanation, but the Anonymous of Paris is not the only one. Radulphus Brito argues that sensory powers of the soul can apprehend many things simultaneously precisely because they are actualised in a bodily organ and divisible.[52] However, he also makes use of the idea that the sensible species have a spiritual mode of being, and he appeals to the common sense and its ability to apprehend different perceptual qualities by combining them in a single act of cognition. Arguably, these strategies alone solve the initial problem and Brito would not actually need to appeal to the divisibility of the organs at all. From this perspective it may be noteworthy that he uses it in order to counter a *quod non* argument. Since he explicitly argues that only those senses that do not undergo a material change (sight and hearing) can perceive many things simultaneously, as we have seen, his appeal to the extension of the organs is perhaps meant to be nothing but a possible strategy to ward off the counter-argument.

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49 "Et si dicas: intellectus actu non potest habere plures intellectiones, ergo neque sensus plures sensationes; dico quod non oportet, quia sensus recipit mediante organo corporali, quod est divisibile. Ideo potest plura recipere [...]." (Anonymous of Paris, *Quaest. Sens.*, qu. 36, 185.7–10.)

50 *Sens.* 7, 448b20–49a2; Thomas Aquinas, *Sent. Sens.*, cap. 18, 97a40–b79.

51 Whether it follows from this that the sense power can have two distinct acts is another matter. See Gregoric, "Alexander of Aphrodisias," 57–58.

52 Radulphus Brito, *Quaest. Sens.*, qu. 25, 179.11–15.

Only few authors raised the question concerning the number of acts. Those who defended the possibility of having many simultaneous acts of perception were in the minority, and even some of those who considered it worth asking ended up defending the view that the sensory powers of the soul need only one act to perceive many things (e.g., John of Jandun, on the assumption that his commentary on *De sensu* represents his considered view). Nevertheless, it is significant that there were opposing views concerning this question. An interesting offshoot of the one-act-view can be found in a question commentary on *De sensu* from the latter half of the fourteenth century. The commentary is tentatively attributed to Albert of Saxony, who squarely rejects the possibility of having several distinct acts in one cognitive power at a given time. Interestingly, he does not base his rejection on metaphysical grounds. Rather, his argument stems from a different conception of what the object of vision is. He does not use the notion of 'field of vision,' but he comes very close to claiming that we primarily see the whole visual field, instead of seeing individual objects in it.

This claim may sound far-fetched, but I think it can be justified. First, the author argues that there is no reason to say that we have as many acts of perception as there are perceived objects; all that we see, we see by one act.[53] This argument is not based on the idea that there is one act that compares two perceptual qualities to each other. Albert argues that a simple perception of two perceptual qualities is less perfect than a perception that involves a judgement. This means that a simple perceptual act that grasps all the objects in the visual field does not by itself include any judgement concerning these objects (we shall come back to this below).[54] Second, Albert thinks that the scope of the perceptual act is in principle without limits. The same arguments that prove the ability to perceive two objects can be used to prove the ability to perceive an infinite number of them. This suggestion is put forth as a *quod non* argument (that is, as an argument that will be later disproved), but Albert rejects only the consequence that this would allow external senses to perceive infinitely many objects. We are unable to see many objects equally well, but otherwise the only restriction is the number of objects that are present at any given time. We may suppose that this argument applies, *mutatis mutandis*, to

53 Albert of Saxony(?), *Quaest. Sens.*, qu. 19, 219.
54 Albert of Saxony(?), *Quaest. Sens.*, qu. 19, 221.

the other senses. Third, he argues that seeing an object $\varphi$ means seeing the constitutive parts of $\varphi$, simply because these are the same thing.[55]

These arguments indicate that the theoretical framework is no longer that of individual objects actualising the sense power. The perceptual act can be about all the objects that are present at a given moment, and thus the strict metaphysical connection between an individual object and an act of perception is loosened. The flexibility goes both ways: all objects within one's surroundings and all parts of each single object can be perceived, and this does not depend on the ability to form a judgement that brings the objects together. Whether this counts as a visual field theory is a complex question, but Albert's analysis shows that certain important steps towards such a theory have been taken.

### 3.2 *Psychological Strategies*

The doctrine of the intentional mode of being, coupled with the idea that the common sense functions as a centre in which different sense modalities come together, allows medieval philosophers to say that the soul is able to receive several sensible species simultaneously. However, we may still ask whether this entails that we have the ability to *perceive* many perceptual qualities at the same time. Is it possible to be equally aware of two or more qualities at the same time? This question lingers at the background in many commentaries, but it is posed with exceptional clarity when an anonymous commentor (hereafter Anonymous of Merton) discusses scenario *B*:

> It must be said that a sense can perceive contraries simultaneously. This is so because when an agent is drawn near and the patient is [suitably] disposed, it is necessary that the former acts and the latter is acted upon; but white [colour] has a natural aptitude to act on sight, and so does black [colour]; therefore, when these [colours] are drawn near in the same part of the medium – or in such a way that they multiply their species through the same part of the medium – and when the power of sight is present, it is necessary that sight is simultaneously moved by both of them. However, it must be understood that although a sense can be simultaneously moved by contrary [qualities], nevertheless it cannot judge both of them distinctly at the same time, but only in a confused way.[56]

55 Albert of Saxony(?), *Quaest. Sens.*, qu. 19, 219 and 222. The latter argument is taken from Buridan (*Quaest. Sens.*, qu. 21, 220.13–17), although Buridan does not raise the question concerning the number of sensations.

56 "[…] dicendum quod sensus potest percipere contraria simul. Et hoc quia agente approximato et patiente disposito necesse est hoc agere et illud pati. Sed album est natum agere in visum et similiter nigrum. Ergo istis approximatis in eadem parte medii – vel sic quod

It is a natural necessity that two perceptual qualities act on an external sense simultaneously if the conditions are right. However, this does not yet entail that these qualities are perceived in a similar way, because external senses cannot make a distinct judgement of them. There are two key elements in this argument: (1) the author distinguishes the *reception* of sensible species from the *judgement* that the senses make concerning their objects; and (2) he appeals to an idea that perception or perceptual judgement comes in degrees. Let us take a closer look at these ideas, starting with the first.

Aristotle argues in *De anima* 3.2 that sight discriminates (*krinein*) between white and black, and that the common sense is needed for cross-modal discrimination of heterogenous qualities.[57] Medieval authors accept Aristotle's view in principle, but they prefer the translation 'judgement' (*iudicare*, *iudicium*),[58] and they often claim that the judgement of external senses is somehow incomplete, with the result that the common sense is also needed in the case of homogenous qualities. So, for instance, Radulphus Brito argues that:

> [...] although judgement concerning perceptual qualities is preliminarily (*inchoative*) in the external senses, nevertheless it is only in the power of the common sense by way of completion, because the common sense is the primary sensory power, while the other senses are by participation. For it is true that distinct species of white and black can be received in the organ of sight, since the species of white and black have a diminished spiritual being in the medium and in the organ, and as such they are not contrary to each other. But simultaneous judgement concerning them can take place only in the power of the common sense.[59]

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per eandem partem medii multiplicent species suas – et visu praesente necesse est visum ab utroque immutari simul. Sed intelligendum est, quod etsi sensus simul possit immutari contrariis, non tamen potest simul iudicare de utroque distincte, sed modo confuso." (Anonymous of Merton, *Quaest. Sens.*, qu. 15, 174.12–18.)

57 *De An.* 3.2, 426b8–16. Aquinas, for one, accepts this view and mentions it also in relation to the problem of simultaneous perception (*Sent. de An.* 2.27, 182a1–183b65; *Sent. Sens.*, cap. 16, 90b163–91b198), but judgement is not central to his solution.

58 Anselm Oelze, *Animal Rationality: Later Medieval Theories 1250–1350* (Leiden: Brill, 2018), 102–3.

59 "Ideo dicendum quod licet inchoative iudicium de sensibilibus sit in sensibus particularibus, tamen hoc non est nisi in virtute sensus communis completive, quia ille est primum sensitivum et alii sensus participatione. Verum enim est quod diversae species albi et nigri possunt recipi in organo visus, quia species albi et nigri in medio et organo habent esse spirituale[m] diminutum. Modo ut sic non contrariantur. Sed iudicium de ipsis simul non est nisi in virtute sensus communis." (Radulphus Brito, *Quaest. Sens.*, qu. 25, 178.5–11.) See also Peter of Auvergne, *Quaest. Sens.*, vol. 2, qu. 56, 110. Aquinas mentions this idea in *Sent. de An.* 2.27, 186a229–b236.

Judgement is a process that begins with the external senses but is completed by the common sense. Both Anonymous of Merton and Brito emphasise that mere reception of sensible species does not suffice to make us aware of things around us. The organ of sight can be affected by spiritual species of white and black, but these qualities (and the objects to which they belong) are perceived only if the soul forms a judgement concerning them.

This means that judgement is not an act of comparison that brings together or discriminates between two qualities. Although medieval authors use the concept of 'judgement' also when they refer to a cognitive operation, which compares two distinct qualities and makes us aware of their difference ("white is not sweet") or allows us to perceive them as belonging to one external object ("this white thing cries"), in many cases this does not seem to be the primary meaning of the term. Unfortunately they do not usually give a precise definition, so we have to do some philosophical work to find out what this judgement actually means. The first thing to note is that the term is used in discussions concerning the internal senses – mainly the common sense and the estimative power – and it is attributed not only to human beings but also to non-human animals. Since animals are irrational, the judgements of the internal senses (let alone external ones) do not refer to propositional and conceptual thoughts.[60] Rather, the judgement of the common sense is a perceptual act, and it makes the perceiver aware of external objects in a way that simple reception of sensible species does not.

Latin authors found this idea in Avicenna's *De anima*. He writes: "But the common sense and the external senses discern and judge in some way, because they say that 'this moving [thing] is black' and 'this red [thing] is sour.'"[61] The latter example can be understood in terms of scenario $D_1$, because the common sense combines two heterogenous qualities with each other.[62] However, the first example suggests that judgement can also be about one proper sensible. In Avicenna's formulation the common sense attributes the proper sensible 'black' to an external object that is perceived also as moving, but many Latin authors seem to think of cases where only one proper sensible is perceived.

60 See, e.g., Oelze, *Animal Rationality*, 100–129.

61 "Sensus vero communis et sensus exteriores discernunt aliquo modo et diiudicant: dicunt enim hoc mobile esse nigrum et hoc rubicundum esse acidum" (Avicenna, *Liber de anima seu Sextus de naturalibus*, ed. S. van Riet (Louvain: Éditions orientalistes / Leiden: Brill, 1968), vol. 2, 4.1, 6).

62 The example may also refer to incidental perception, if sourness is not actually perceived at the moment. See José Filipe Silva and Juhana Toivanen, "Perceptual Errors in Late Medieval Philosophy," in *The Senses and the History of Philosophy*, ed. B. Glenney and J. F. Silva (New York: Routledge, 2019), 106–30.

The judgement made by the common sense results in a kind of perceptual (non-propositional) awareness that things are in a certain way in the external world. This awareness can be expressed in a propositional form, for instance, by saying: "There is a black thing right there" – but of course irrational animals do not think like this. Thus, when medieval authors write about perceptual judgement of the common sense, they do not mean that it has a propositional structure or content. Rather, they are trying to carve out a middle ground between reception of sensible species by the external senses and propositional judgement that belongs to the intellect.

Understood in this way, judgement is not necessarily an act of comparison between two or more qualities. This is what the Anonymous of Merton seems to have in mind when he writes (in the text quoted above) that: "although a sense can be simultaneously moved by contrary [qualities], nevertheless it cannot judge both of them distinctly at the same time, but only in a confused way." Sight can be actualised by sensible species of white and black, but this alone does not provide distinct awareness of two things. Perception of white and black as distinct objects requires the judgement of the common sense. But the power of sight can perceive one object distinctly by its own judgement, which suggests that judgement is equal to what might be called perceptual awareness. The species of white actualises the sense of sight, but we can be said to perceive white colour or a white object only when we form a distinct judgement concerning it.

Admittedly, medieval authors are hopelessly vague when it comes to details about how the psychological dimension of judgement should be understood. However, there are reasons to believe that at least some of them have this model in mind. For instance, John Felmingham(?) writes that:

> [...] just as two eyes concur with each other via two nerves in a place which is towards the brain, in which place the principal organ of vision is, and in that place one visual judgement occurs; because if they did not concur in this way, a human being, who sees with two eyes, would not see one thing by one vision but by two visions – which is inconvenient.[63]

63 "[...] sicut duo oculi per duos nervos concurrunt ad invicem in uno loco versus cerebrum, in quo loco est principale organum visus, et in illo loco fit unum iudicium visuale – quia nisi sic concurrerent, homo in videndo per duos oculos unam rem non videret una visione sed duabus visionibus, quod est inconveniens." (John Felmingham(?), *Exp. Sens.*, cap. 9, 192.1–6.)

If judgement took place in the eyes, we would perceive two images of one object, but because it takes place in the node of visual nerves (which is the primary organ of sight), we see only one image. Judgement is clearly a distinct operation from the reception of the species, and it does not necessarily operate on two different qualities. The power of sight does not discriminate between white and black when it receives the species of white in both eyes. Judgement is just an act of perceiving white in such a way that we become aware of it – our phenomenological experience results from the judgement at the node, not from the acts in the two eyes (at least if we suppose that the mentioned "inconvenience" refers to phenomenological implausibility).

This interpretation is corroborated when John Felmingham(?) explains how perception understood as reception of sensible species differs from judgement:

> [...] it must be said that several perceptual [qualities] of one genus or of one contrariety, such as white and black, can be simultaneously perceived by one external sense. The reason for this is that the species of such [qualities] can inform the organ of sight simultaneously, and vision takes place by a visible species. However, it cannot judge these distinctly but [only] in a confused way, because a distinct judgement is only about one distinct [thing].[64]

Just like Anonymous of Merton, Felmingham(?) argues that sight can be actualised by species of white and black simultaneously, and it can make a confused judgement about them (scenario *B*). Probably this means that the two qualities are somehow present in the visual field, but sight alone cannot discriminate between different objects or qualities that are present to it. When I see a white swan against green grass, my sight does not distinguish that there is one white object that is distinct from the green background. In order to judge that 'this white' is one thing, I need my common sense to pass a distinct judgement concerning that particular white object. The idea that "a distinct judgement is only about one distinct thing" means that judgement is a more perfect type of perception, not an act of comparison – although typically we have many things in our visual field, and focusing on one of them requires distinguishing it from

64 "[...] dicendum quod plura sensibilia unius generis sive unius contrarietatis, ut album et nigrum, simul possunt percipi ab uno sensu particulari. Cuius ratio est, quia species talium simul possunt informare organum visus, et per species visibilis fit visus. Tamen distincte de talibus non potest iudicare sed modo confuso, quia distinctum iudicium est circa unum distinctum." (John Felmingham(?), *Exp. Sens.*, cap. 9, 191.3–8.)

the rest; the swan can become an object of distinct judgement only if I distinguish it from the grass and see that 'this white' is not 'that green.'[65]

In a way, perceptual awareness is like "picking out" one perceptual quality and making it appear in all its particularity and as attributed to an external object in a certain location and so forth (perhaps it also involves some kind of non-conceptual recognition of the object as the kind of object it is, but let us keep clear of that morass here[66]). At any rate, this "picking out" entails some sort of non-propositional awareness that things are in a certain way in the external world. Even non-human animals are able to form a distinct judgement that there is something that is relevant for their well-being out there, and this judgement leads to action – a hen picks out (and up) a seed but does not care about small stones.

The distinction between confused and distinct judgement leads us to the second key element in the quotation from the Anonymous of Merton, namely, degrees of perception/perceptual judgement. As we have seen, several authors use this distinction. Radulphus Brito explains that external senses can make only an initial judgement and that the common sense is needed to complete it, and John Felmingham(?) argues that external senses make only confused judgements and that only the common sense judges distinctly. They do not specify what the difference between these two levels amounts to, but if we turn to the commentaries on *De anima* by John Buridan and Nicole Oresme, we may find some clues. These authors argue that there are different degrees of judgement. The most general judgement provides awareness of the genus of the perceived quality – for instance when we judge that what we see is a colour or what we hear is a sound – and in this judgement we never err. However, the perceptual power as a whole can make a more specific judgement that the colour is red, that it is of a certain hue, that it belongs to a certain object in a certain location, and so forth, and in this case we are more easily deceived.[67]

65 The common sense has a capacity to pass a distinct judgement concerning many objects at the same time: "Et ideo, sicut simul possumus videre et audire colorem et sonum per diversos sensus particulares, sic possumus per unum sensum communem simul iudicare de istis" (John Felmingham(?), *Exp. Sens.*, cap. 9, 191.25–27).

66 An illuminating discussion about this issue is Jari Kaukua, "Avicenna on the Soul's Activity in Perception," in *Active Perception in the History of Philosophy: From Plato to Modern Philosophy*, ed. J. F. Silva and M. Yrjönsuuri (Dordrecht: Springer, 2014), 106–11. See also Juhana Toivanen, "Perceiving As: Non-Conceptual Forms of Perception in Medieval Philosophy," in *Medieval Perceptual Puzzles: Theories of Sense Perception in the 13th and 14th Centuries*, ed. E. Băltuță (Leiden: Brill, 2020), 10–37.

67 John Buridan, *Quaestiones super De anima*, ed. P. Sobol, in *John Buridan on the Soul and Sensation*, PhD diss. (Indiana University, 1984), 2.11, 166–67; Nicole Oresme, *Expositiones in Aristotelis De anima*, ed. B. Patar (Louvain: Peeters / Paris: Éditions de l'Institut

The idea in some medieval commentators that distinct judgement gives perceptual awareness of these details of external objects suggests that they are trying to capture a phenomenological difference between two different ways in which we perceive our surroundings. On the one hand, we can be said to perceive our surroundings because in our waking state the perceptual field is never completely empty. Colours, sounds, smells, and so forth, are present to us – we would notice if we became blind, if complete silence suddenly fell upon us, and so forth – but usually they are at the periphery of our awareness and we perceive them only in what medieval authors call the "confused" or "general" way. On the other hand, when the common sense makes a distinct judgement, we become explicitly aware of a certain object in our visual (auditory, etc.) field. We grasp what a certain perceptual quality is, that it exists in a precise place, and so forth.

Here it might be useful to recall an illustrative example that was used in a debate about the structure of consciousness between William Ockham, Walter Chatton, and Adam of Wodeham. According to the example, a person is having a walk and comes across a river and a bridge. She is not fully aware of seeing the bridge because she is deeply immersed in her thoughts, but she uses it to cross the river nevertheless. The crucial point in this example is that the person sees the bridge (under some description of 'seeing') but does not register seeing it. All three authors agree that these levels or degrees of awareness exist, although their theories of the psychological process that accounts for them are different.[68] According to them, it is possible to be aware of the bridge without being explicitly aware of seeing it. Had the hiker paid more attention to the perceptual contents in her mind, she would have become explicitly aware of seeing the bridge, and her phenomenological experience could be described in

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Supérieur de Philosophie, 1995), 2.10, 192–93; Peter G. Sobol, "John Buridan on External and Internal Sensation," in *Questions on the Soul by John Buridan and Others: A Companion to John Buridan's Philosophy of Mind*, ed. G. Klima (Dordrecht: Springer, 2017), 98–99; Christophe Grellard, "Attention, Recognition, and Error in Nicole Oresme's Psychology," in *Philosophical Problems in Sense Perception: Testing the Limits of Aristotelianism*, ed. D. Bennett and J. Toivanen (Cham: Springer, 2020), 223–38; José Filipe Silva, "Activity, Judgment, and Recognition in Nicole Oresme's Philosophy of Perception," in ibid., 239–53.

68 Ockham and Wodeham argue that explicit awareness of seeing the bridge is caused by a distinct second-order cognitive act; Chatton argues that the distinct second-order act is unnecessary. For discussion, see Susan Brower-Toland, "Medieval Approaches to Consciousness: Ockham and Chatton," *Philosopher's Imprint* 12:17 (2012): 1–29; Mikko Yrjönsuuri, "The Structure of Self-Consciousness: A Fourteenth Century Debate," in *Consciousness: From Perception to Reflection in the History of Philosophy*, ed. S. Heinämaa, V. Lähteenmäki, and P. Remes (Dordrecht: Springer, 2007), 141–52. The example is inspired by Augustine's *De trinitate* 11.8.15.

a propositional form: "I am seeing a bridge there." But she does not have that experience because her attention is elsewhere.

The details of this dispute and its implications to the issue at hand are too complex to be analysed here. What I want to underline is that medieval authors accepted the idea of different levels of awareness. Even when the hiker does not pay attention to her surroundings, she does not need to grope her way around.[69] Applying this example to the distinction between confused and distinct perception (or judgement), we may say that she perceives her surroundings only in a confused way and fails to use her common sense to make a distinct judgement about the bridge. The distinct judgement of the common sense differs from the acts of perception because it allows one to be explicitly aware of the thing one sees; that there is a certain colour in a certain location etc. The difference between confused judgement and the distinct judgement is like the difference between 'not groping in the dark' and 'being aware of *this black there*.' The latter awareness is more distinct, it isolates individual objects – and, importantly, it requires that one pays attention to what one sees things in her surroundings. In this way, perception comes in degrees.

One may find this idea in the texts of Anonymous of Merton and John Felmingham(?), who argue that confused and incomplete perception (even of many things at the same time) is possible for the external senses but that the common sense is needed to make it perfect and distinct. The common sense makes us fully aware of two objects or qualities as two – as distinct from each other etc.

However, the most detailed discussion of the degrees of perception comes from John Buridan. He frames the whole question concerning simultaneous perception in terms of degrees of distinctness and clarity. According to him, it is an experiential fact that we can perceive many things at the same time. The question does not concern this ability as such, but the ability to perceive two things clearly and distinctly.[70] The tentative answer that Buridan puts forth in the *quod non* section is negative:

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69 "[…] non percepimus nos videre dum vidimus, et tamen vidimus; aliter palpassemus sicut in tenebris […]" (Adam of Wodeham, *Lecura secunda in librum primum Sententiarum*, ed. R. Wood (St. Bonaventure: St. Bonaventure University, 1990), vol. 1, Prol., qu. 2, 59).

70 "[…] experimur enim quod plura sentimus simul et diversis sensibus et eodem sensu, tam contraria quam similia. Sed dubitatio est utrum simul quodlibet eorum *aeque perfecte* sentimus sicut possemus sentire unum eorum." (John Buridan, *Quaest. Sens.*, qu. 21, 220.9–12, emphasis mine.) Buridan uses similar approach when he argues that the intellect can think many things simultaneously (Jack Zupko, "Intellect and Intellectual Activity in Buridan's Psychology," in *Questions on the Soul by John Buridan and Others: A Companion to John Buridan's Philosophy of Mind*, ed. G. Klima (Dordrecht: Springer, 2017), 190).

> Moreover, it is said that a stronger [quality] obscures a weaker, which is why stars cannot be seen in the daytime, although both are shining, namely, both the sun and the star. And thus, when one [quality] is stronger and the other weaker, the weaker is not perceived perfectly. And if they are equal, it is likely that each diminishes the other, and thus neither is perceived equally perfectly [as they would be perceived alone]. And it is also argued in this way about different senses: it seems that they obstruct each other, because when we pay much attention to sight, we do not discern audible [qualities] equally well, and the other way round.[71]

Buridan accepts this argument to the extent it proves that we cannot perceive many qualities perfectly at the same time. Paying attention to one thing allows us to perceive it better, but in most cases other things are perceived to a lesser degree.[72] It is important to note that Buridan is not focusing on judgement understood as discrimination between several perceptual qualities. He does not argue that we can compare different objects to each other in varying degrees but that we perceive them in varying degrees.

There are some traces of the so-called perspectivist theory of perception, which was developed by Alhazen, among others, and discussed in the Latin world especially by Roger Bacon, John Peckham, and Vitello. These authors were interested in explaining why sight functions better when sensible species enter the centre of the eye perpendicularly, and why objects that fall outside the centre of the visual field are seen less clearly.[73] Buridan echoes this discussion in a passage that is fraught with perspectivist terminology:

> The fifth conclusion is that it is not possible to perceive many things simultaneously and each one of them as perfectly as one of them can

71 "Et iterum dicebatur quod maius obfuscat minus, propter quod astra non videntur de die, licet utrumque sit lucidum, scilicet tam sol quam astrum. Et sic, ubi unum est maius et alterum minus, illud quod est minus non perfecte sentitur. Et si sint aequalia, verisimile est quod utrumque remittit de reliquo et sic neutrum aeque perfecte sentitur. Et ita etiam arguitur de diversis sensibus, quia apparet quod se invicem impediunt, quia multum attenti ad visum non ita bene distinguimus audibilia et econverso." (John Buridan, *Quaest. Sens.*, qu. 21, 218.12–19.)

72 Buridan does not reply to this argument, but he emphasises that the attention of the soul explains why some qualities are perceived better than others: "Alia ratio erat quod albedo et dulcedo possunt simul perfecte esse in eodem subiecto extra; ergo similiter species possunt simul esse perfecte in sensibus. Concedatur, tamen anima non potest ita perfecte attendere ad utramque simul sicut posset ad unam." (John Buridan, *Quaest. Sens.*, qu. 21, 224.9–12.)

73 See, e.g., Roger Bacon, *Liber De sensu*, cap. 24, 127–28; Lindberg, *Theories of Vision*, 104–46.

> be perceived. This is proved as follows: it is possible that some one thing is in optimal proportion to the sense, both with respect to its intensity/weakness, magnitude/smallness, and location, or rather distance/closeness. And then, if the perceiver directs his attention to it successfully, it will be perceived perfectly (that is, as perfectly as that sense can perceive that thing). But in this way it is not possible that each and every item in a plurality of simultaneously perceived things is in optimal proportion to the sense. Therefore, it is not possible that every one of them is perceived equally perfectly.[74]

The argument is again based on the strength of the movement: a perceptual quality that causes a stronger movement in the soul hinders but does not prevent the perception of another quality that causes a lesser movement. The strength of the movement is related to the position etc. of the object with respect to the sense power. This applies to scenarios *B* and *C* (two qualities affecting one sense and two qualities affecting two senses).

However, Buridan's explanation is not only or even primarily based on the object's position etc. in relation to the senses. Even if all the conditions are right, the subject still has to pay attention to the object:

> Likewise, a focused attention is required for the perfection of a sensation. Therefore, if we pay intensive attention to voices or melodies, we do not perceive clearly things that present themselves in front of our eyes, regardless of how well-proportioned they are to sight. But it is not possible to pay attention equally perfectly to each [thing] in some plurality as it is to one [thing], be they [objects] of the same sense or of different senses, as we commonly experience. Therefore etc.[75]

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74 "Quinta conclusio est quod non est possibile sentire plura simul et quodlibet eorum ita perfecte sicut posset sentiri unum eorum. Probatur sic: quia possibile est aliquod unum esse optime proportionatum sensui, et secundum intensionem vel remissionem et secundum magnitudinem vel parvitatem et secundum situm sive secundum distantiam vel propinquitatem. Et tunc si sentiens bene advertat ad illud, illud perfectissime sentietur, scilicet quantumcunque perfecte ille sensus potest ipsum sentire. Sic autem non est possibile quod aliquorum plurium simul sensatorum quodlibet se habeat in optima proportione ad sensum; ideo non est possibile quod illorum quodlibet ita perfecte sentiatur." (John Buridan, *Quaest. Sens.*, qu. 21, 222.6–15.)

75 "Et item, ad perfectionem sensationis requiritur diligens attentio; ideo si valde attendimus ad voces vel melodias, non bene sentimus quae ante visum occurrunt, quantumcunque sunt visui bene proportionalia. Sed non est possibile ita perfecte attendere simul ad utrumque aliquorum plurium sicut ad unum, sive eodem sensu sive diversis, sicut communiter experimur; igitur etc." (John Buridan, *Quaest. Sens.*, qu. 21, 222.15–223.3.)

It is possible to perceive many things simultaneously, but the degree of clarity with which they are perceived depends on the conditions that prevail in each situation *and* on the psychological attention of the perceiving subject. If one focuses on listening to a conversation, one sees less clearly; but one sees nevertheless. And it is a psychological limitation that we cannot pay an equal amount of attention to everything around us. In Buridan's view, the argument about the strength of movement (i.e., the idea that two qualities are perceived less well if they are mixed, a stronger impression prevents the perception of a weaker movement, and, if the two movements are equally strong, neither or only one is perceived) is a purely psychological matter that is based on the attention of the soul.[76]

The distinction between confused and distinct perception/judgement fits well with the idea that perception requires attention. Not all perceptual qualities that act upon our senses are perceived, at least not in a distinct way that makes them appear as distinct things. We may perceive in a confused way everything that happens to be in our visual field (and *mutatis mutandis* with respect to other senses), but our ability to form a distinct judgement concerning many things is limited. The limitation is a psychological one. We are able to pay full attention to one or perhaps a couple of things at the same time. Other objects remain at the periphery. They are present to us and we are aware of them to some degree but not fully.[77] Perception of many things simultaneously is possible, but there are limits to this ability.

## 4 Conclusion

Aristotle's theory of perception is based on the realist assumption that the world divides unproblematically into individual substances and their perceptual qualities. Coupled with certain metaphysical suppositions concerning the mechanism of perception, his theory faces a problem: How it is possible to perceive many things at the same time? Aristotle's solution is challenging in

76 Buridan defends the view that the soul is active in perception (Sobol, "John Buridan," 95–106).

77 Buridan does not say it explicitly, but we may suppose that sometimes we are completely oblivious to things around us: stars cannot be seen in full daylight. Probably this is not caused by a failure in paying attention to them but because movements they cause in the sense organs are too weak.

many ways, and when medieval authors elaborate and extend his suggestions, they use several different strategies.

One of the most important ideas is the distinction between two modes of being, material/natural and spiritual/intentional. In the context of the problem of simultaneous perception, medieval philosophers side with the spiritualist interpretation of Aristotle's theory of perception and claim that perceptual acts are spiritual, even though some sense modalities involve also a material change. This allows them to tackle the metaphysical aspect of the problem of simultaneous perception. Given that perceptual acts and the sensible species that cause them have an intentional mode of being, it is possible for two perceptual qualities to act upon one and the same sense organ simultaneously. Some authors went so far as to claim that it is possible to have two separate *acts* of perception, both belonging to the very same power, at the same time. This shows that they were unwilling to accept a strictly hylomorphist explanation of perception, which is based on the idea that formal changes of a sense power are necessarily related to (or even identical with) material changes of the sense organ. Among other things, they thought that this explanation undermines the possibility of perceiving many things simultaneously.

In addition to this metaphysical strategy, medieval authors appealed to various psychological ideas to explain how simultaneous perception is possible. They distinguished reception of sensible species from perceptual judgement. The latter is needed in order to become explicitly aware of external objects as distinct and individual objects, but it is possible to see many things at the same time without making this kind of judgement. Perceived objects may remain indistinct in our experience – for instance, when we see the whole visual field in front of us without being fully aware of all individual items in it. This idea was developed further when certain authors argued that perceptual awareness comes in degrees. Objects and qualities are perceived more clearly and distinctly when one pays attention to them, but they can be perceived in a confused way also when one's attention is directed elsewhere.

Discussions concerning the ability to perceive many things simultaneously are not the most important context in which these interpretations were offered. Many of them were commonly used in commentaries on *De anima* and other works on philosophical psychology. However, commentaries on *Parva naturalia* gave medieval authors an occasion to analyse certain fundamental challenges that Aristotle's theory of perception entails. As the focus in commentaries on *De sensu* is precisely the interaction between the body and the soul, they provide an important platform to develop and test new ideas and elaborate on the details of Aristotelian theory of perception.

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