

# Suárez on the Lower External Senses

Daniel Heider —

Institute of Philosophy, Czech Academy of Sciences

Daniel.Heider@seznam.cz

## 1. Introduction

What are the criteria of the individuation of sensory modalities? Can we regard the sensible aspects of external objects as the only shibboleth for the differentiation of the external senses? Do we have only five external senses, or should we revise our intuitive scheme of the five senses? How is it with the (private) bodily sensation known as interoception? Is the object of interoception, namely a range of physical properties of the body (itch, heart-throb, hunger, pain, etc.), part of the sensible object of touch? Do we perceive the external tangibles without a prior percept of our own body? And what does the affinity of the so-called chemical senses of smell and taste actually amount to? Can we reliably “localise” the source of odorous evaporation? In general, are the sensibles of the senses part of the external world, or are they ultimately produced by the subject? Why are the senses of olfaction, gustation and touch, when compared to the senses of vision and hearing, regarded as the “lower” senses? All these (and several other) questions, discussed by contemporary analytical philosophers as well,<sup>1</sup> are addressed by Francisco Suárez, S.J. (1548–1617). His treatment of these issues can be found in the second half of the seventh disputation *De sensibus exterioribus in particulari* of his *Commentaria una cum quaestionibus in libros Aristotelis De anima*, published by Balthasar Álvares, S.J., in 1621 after Suárez’s death.<sup>2</sup> The last seven *quaestiones* (qq. 10–16) of the longest disputation in the whole *Commentary* are devoted to the physical, physiological, psycho-

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1 For detailed treatment of these queries in contemporary philosophy of perception see De Vignemont, F. – Massin, O., Touch, in: Matthen, M. (ed.), *The Oxford Handbook of Philosophy of Perception*. Oxford, Oxford University Press 2015, p. 294–313; Smith, B. C., The Chemical Senses, *ibid.*, p. 314–352; Ritchie, J. B., Carruthers, P., The Bodily Senses, *ibid.*, p. 353–370; Ross, P., Primary and Secondary Qualities, *ibid.*, p. 405–421; Hardcastle, V. G., Perception of Pain, *ibid.*, p. 530–541.

2 The text was written previously in the first half of the 1570s while Suárez was teaching philosophy in Segovia.

logical and epistemological questions related to the issue of the lower senses. Since Suárez's view of these senses is largely unexplored, I aim to provide, above all, a systematic survey of the author's positions on the issues raised by Aristotle in *On the Soul*, *On Sense and Sensible Objects* and some of his biological treatises. Following Suárez's systematic procedure, in the context of each sense, I will discuss the following items: a) The nature and kinds of proper sensible object;<sup>3</sup> b) the way the proper sensibles affect the medium and the sense organ; c) the organ of the perceptual faculty. Apart from these issues applicable to all the lower senses, I will consider two special difficulties concerned with touch and taste suggested by Aristotle in *On the Soul*. These are the specific unity of *tactus*, and the question of the irreducibility of the sense of taste to touch. However, before approaching the topic of the nature and varieties of the proper sensibles of smell I will briefly explain in what sense Suárez evaluates the three senses as "lower".

## 2. The "Absolute" Ordering of the External Senses

The senses of smell, taste and touch can be called "lower" according to an *absolute* ordering which does not consider the subjects (e.g., a man, or a brute) in which the power inheres. On this absolute ordering Suárez advocates the following ranking of the external senses: The most perfect sense is sight, the second is hearing,<sup>4</sup> the third is the sense of smell, which is followed by taste and touch.<sup>5</sup> What are the criteria for this arrangement? In general, the pertinent shibboleth is the degree of "immateriality"; more precisely, the level of corporeal subtlety of an external sense and the principles of its cognition.<sup>6</sup> The more "immaterial" an external sense is, the nobler it is, and the higher position it occupies. On the other hand, the earthier a sense is, the lower the position on the scale of perfection it fills. Obviously, the criterion is applied not only to the character of a sense organ but also to the nature

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3 By a proper sensible (*sensibile proprium*) I mean a sensible quality, which can be perceived only by one external sense. Sound can be sensed only by hearing; colours can be perceived only by sight, etc. For Suárez's definition of this kind of sensible see Suárez, F., *Commentaria una cum quaestionibus in libros Aristotelis De anima*. Ed. S. Castellote. Tomo 2. Madrid, Editorial Labor 1981, disp. VI, q. 1, n. 1, p. 454 (hereinafter referred to as DA VI, 1, 1, p. 454).

4 Symptomatically, several books on the sense of hearing have the phrase "The second sense" in the titles. Cf., e.g., Burnett, Ch. – Fend, M. – Gouk, P. (eds.), *The Second Sense. Studies in Hearing and Musical Judgment from Antiquity to the Seventeenth Century*. London, The Warburg Institute, University of London 1991.

5 DA VII, 16, 2, p. 764.

6 Clearly, if the possibility of gradation is taken into account, the designation "immaterial" is far from having the literal meaning of immateriality as, e.g., in angels.

of the proper sensible object and, importantly, to the manner in which a sensible affects or stimulates the medium and organ.<sup>7</sup>

Sight is the noblest sense since its object is the most “immaterial” one. It is not only colour but also light, which with colour forms the total object of corporeal vision<sup>8</sup>, and which – as the medieval imagery of light clearly attests – stands closest to the realm of immateriality. Sight is affected by colour and light in the most “spiritual” way. Both in case of colour and light the organ and the medium can be affected purely intentionally. As compared to the other senses, the radius of corporeal vision is the largest. Moreover, sight, as the “distal sense”, can in an instant reach the planets and stars of the lunar sphere. As opticians claim, the visual organ, the eye, has the most admirable fabric. Finally, sight best cognizes the other sorts of sensibles, i.e., the common sensibles (figure, size, number, rest and movement) – the sensibles perceptible by more than one sense, and the incidental sensibles, which, like substances, are sensed only *per accidens*.<sup>9</sup>

Although the proper sensible of the sense of hearing, *sonus*, is – ontologically speaking – a rather imperfect entity (it is only a transient entity, and seems to be less perfect, given the permanent qualities of the other senses), Suárez asserts that in its *esse sensibile* sound is a quality superior to odour, and to the sapid and tangible properties. The dispersal of sound *in medio* is more “immaterial” than the smoky evaporation of fragrances. While a sound commonly affects hearing through the local movement of air, an odour affects olfaction by means of alteration (an odour heats up the organ) – a qualitative accidental change.<sup>10</sup> Further, the *sensorium* of hearing – the inner ear located behind the eardrum – is even more “immaterial” than the pupil, the proper organ of vision. While the organ of hearing is composed of air,<sup>11</sup> the pupil consists of water, precisely of the crystalline humour or, in other terms, in the transparent liquid.<sup>12</sup>

On the absolute comparison, the power of smell stands higher than the “contact” senses of touch and taste.<sup>13</sup> As we shall see below, according to

7 Suárez refers to the five modes of the mediums’s and organs’s affection (*rationes immutandi*) conceived by Aquinas in his *Summa theologiae* I<sup>a</sup>, q. 78, art. 3. For Suárez cf. DA VII, 15, 1, p. 750; for Aquinas cf. Sanctus Thomas Aquinas, *Opera omnia*, t. 5, *Pars prima Summa theologiae*. Ed. Leonina. Roma 1889, p. 253–255.

8 DA VII, 3, 6, p. 596.

9 DA VII, 16, 2, p. 764–766.

10 I write “commonly” because both sensibles can affect the relevant powers purely intentionally (see below).

11 DA VII, 9, 1, 680–2.

12 DA VII, 5, 6, 628.

13 I write “contact” with inverted commas since, as we shall see in 4.3, both senses can be taken to perceive, in a way, through a medium as well.

Suárez, the quality of odour, unlike those of taste and the tangible, can affect its power purely intentionally. Moreover, its object is obviously less “earthy” than the tasteable and the tangible. Without any explicit argument for the priority of taste to touch, Suárez notes: “Et eisdem rationibus gustus superat tactum.”<sup>14</sup> Why is it so? Generally speaking, the higher position of taste is due to its greater “rareness”. Some imperfect animals are nourished only “tactually”, i.e., only through the primary qualities of the Hot and the Moist.<sup>15</sup> They do not feel any flavour.<sup>16</sup> Accordingly, taste is rarer since there are animals that do not have this faculty. In analogy, its organ is “less universal”. While the organ of touch is spread all over the body, that of taste is located in the tongue. *Tactus* has to be evaluated as the lowest sense because as the universal sense (*sensus universalis*) abounds also in the organs of the other senses.<sup>17</sup>

### 3. Smell

#### 3.1 Nature and Kinds of Odour

Due to the affinity in the objects of smell and taste Suárez deals with the issue of the nature of odour in conjunction with that of taste. The kinship of both sensibles derives from the fact that both are secondary qualities. Both arise from the blending of the first qualities, namely the Dry, the Moist, the Hot and the Cold, and both are constituted by mixtures of the Moist and the Dry with significant assistance of the Hot. At the same time the particular kinds of both qualities are interrelated. The names of odours are taken over from the nomenclature of tastes. Considering the imperfect character of our (human) smell, the names of “nutritive odours”, i.e., affect from nutritive substances, are taken over from the names of the sapid properties available to taste, with which we are much more familiar.<sup>18</sup>

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14 DA VII, 16, 2, p. 766.

15 I mention the first (elemental) qualities of the Dry, the Moist, the Hot and the Cold in capitals since, much like the elements of Air, Water, Fire and Earth, these qualities never appear in *rerum naturae* separately. As such they are theoretical postulates rather than objects of experience. For a general analysis of scholastic first and secondary qualities see the introduction in Pasnau, R., *Scholastic Qualities, Primary and Secondary*. In: Nolan, L. (ed.), *The Primary and Secondary Qualities: The Historical and Ongoing Debate*. Oxford, Oxford University Press 2011, p. 41–61.

16 DA VII, 15, 8, p. 760–762.

17 On its universality see DA VII, 16, 7, p. 774.

18 Unlike the common contemporary view Suárez does not seem to take into account so-called retronasal olfaction, which arises during eating. This second kind of smell, distinct from orthonasal olfaction which perceives odours coming from the outside, is today generally regarded as part of the multisensory flavour experience. For this cf. Smith, B. C., *The Chemical Senses*, op. cit., p. 324 ff.

In his procedure, Suárez first comes to reject the reductionist account of odour. On this interpretation, odour is nothing else than a vapour, a smoky exhalation (today we would say the dispersal of volatile molecules), which is partly constituted by Air, partly by Earth. Accordingly, odour is not an accident of quality, but a substance.<sup>19</sup> In his anti-reductionist drive, Suárez dismisses this view by arguing that no substance can be the proper sensible of an external sense since all substances are only incidental sensibles. Fragrance is not a substance, however airy and subtle. Ontologically speaking, it is an accident of patible quality, namely of the quality that can be “suffered” by a percipient, or a quality pertaining to the third kind of accident of quality. The Jesuit is well aware of Aristotle’s wavering in this issue. In *De sensu et sensato*, chapter 2, on the one hand, Aristotle explicitly says that “[...] odour is a kind of smoky vapour [...]” (438b24–5). However, in the same treatise, chapter 5, while reprehending Heraclitus, he states that “[...] smell is neither of these [vapour and smoky exhalation; D.H.]” (443a30–1). In his typically conciliatory exegesis, Suárez comes with the following distinction: The equivalence of odour and smoky exhalation can be interpreted either formally (*formaliter*), or merely subjectively (*subiective*). Formally speaking, the essence of odour is not smoky evaporation. However, if the identity is taken in the subjective sense, the equivalence is true. The sensible quality of odour is an accident, which exists in evaporation as in its subject. Since it holds that no accident can “travel” without its substance, the quality of odour needs its own substantial subject *in medio*. This subject is a smoky exhalation.<sup>20</sup> An odour’s immediate subject thus is not air but a smoky evaporation. A smoky evaporation with the quality of odour is only carried along by air.<sup>21</sup>

The first qualities are odourless, as they are flavourless. To constitute the quality of odour a blending of the first qualities is necessary. Much more briefly than Aristotle in *De sensu et sensato*, Suárez specifies an “odorous mixture” as follows. The sensible of odour arises by the blending of first qualities, in which the Dry and especially the Hot are dominant.<sup>22</sup> The

19 In *On the Sense and Sensible Objects* Aristotle says that, in fact, all his predecessors defended this theory. Nevertheless, he explicitly names only Heraclitus. Cf. Aristotle, *On Sense and Sensible Objects*. Ed. W. S. Hett. Cambridge, Mass., London 2000, p. 249, 443a 24–5.

20 For this issue of what the subject of an odorous quality *in medio* is, as exposed by late ancient Neoplatonic commentators, see Ellis, J., The Trouble with Fragrance. *Phronesis* 35, 1990, no. 3, p. 290–302. Basically, these expositors presented two theories. On the “tense solution”, an accident of odour inheres in a new subject, in air. On the “effluence solution”, the fragrance rides on a part of, say, an apple, which comes away from it, and it reaches the sense power without having been separated from it. In this case, Suárez seems to embrace the second solution.

21 DA VII, 11, 2, p. 700.

22 DA VII, 10, 3, p. 688.

predominance of both elemental qualities is clear from experience. Like Fire, comprising the Dry and the Hot, the quality of odour moves upward. Our experience substantiates the absolute prevalence of the Hot as well. In summer we can smell better than in winter. Proportionally, if the Moist outweighs the Dry, the things turn to be less fragrant. Sweet meals are less fragrant since they are damper. The same “logic” holds for the organ of olfaction as well. If it gets moistened, it loses its ability to discriminate smells.<sup>23</sup>

In the part on kinds of odour, Suárez distinguishes two *genera* of odour. One *genus* is connected with taste – these are the fragrances of food; the second relates to the non-nutritive odours such as those of flowers. Suárez stresses that, unlike humans, the smell of brutes is related only to “nutritive fragrances”,<sup>24</sup> or if non-nutritive odours are part of the brutes’ sensory system, their perception of these odours is rather imperfect since brutes do not find pleasure in them. On the ground that sight is not always sufficient for the right probing of food (not everything that looks nice is also edible) smell (and Suárez seems to speak about the orthonasal olfaction) is of vital importance for animals. The brute’s sense of smell is also more developed than in humans. However, since men, absolutely speaking, are superior to brutes, Suárez qualifies the higher perfection of the beastly smell (e.g., of dogs or vultures) only as a superiority in a certain respect (*secundum quid*). Strictly speaking, the human sense of smell is the more perfect.<sup>25</sup> The superiority of the human smell can be seen in the human ability to appreciate “aesthetic fragrances”. Besides the “nutritious odours”, humans appreciate also the pleasure in odours not directly related to tastes. The range of the human smell is broader than that of brutes since it also includes the odours of flowers, etc. Not only do these fragrances not stimulate our appetite, they often have a contrary effect. If they are mixed into a meal, they often discourage us from eating.<sup>26</sup>

### 3.2 How Odour Affects the Medium and the Power

It has been said that fragrances inhere in an exhalation, which is carried along in, or by, the air. Although air is the best medium for their spreading,

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<sup>23</sup> DA VII, 10, 3, p. 690.

<sup>24</sup> It must be noted that the view that brutes in general are not capable of perceiving non-nutritious odours was not common in second scholasticism. The Coimbran authors, the Portuguese Jesuits whose Commentaries on Aristotle became the standard scholastic philosophical manual at the end of the 16th century, dissented from that view: “... bruta animantia non odores tantum alimentitios ... sed alios etiam percipiunt ... quia videmus canes venaticos florum odores sentire ...”, Collegium Conimbricensis, *In tres libros de anima*. Ed. L. Zetzner. Coloniae 1609 (reprint: Hildesheim 2006), In II lib. De anima, cap. 9, q. 5, art. 2, p. 300–301.

<sup>25</sup> DA VII, 16, 4, p. 768–770.

<sup>26</sup> DA VII, 10, 7, p. 696–698.

Suárez explains that it is not the only one. In fact, water can be a medium as well since fish, led by smell, swim from afar for food. Having noted the two media, Suárez approaches the crucial issue of his theory of perception, which is the question of sensible species (*species sensibilis*). First of all, the Jesuit shows that there are two possible kinds of affection of both the medium and the power. One kind is natural affection<sup>27</sup> – a smoky exhalation naturally affects the air and then the power of smell. The second is spiritual (intentional) stimulation.<sup>28</sup> Accordingly, the Jesuit discerns two positions in the issue of the propagation of smell. According to the first, odour is spread only naturally up to the power. On this view, the material affection fully suffices to explain the origin of a perceptual act. On the second theory, *res odorifera* emits *ab initio* only sensible (odoriferous) species. Before entering into the three questions related to the issue of the nature of affection Suárez mentions two premises. 1) Smell cannot be *realiter* diffused in water since water is not able to receive the quality of odour. 2) Obviously, odour is *realiter* diffused from *res odorifera*. One of the five arguments for real spreading noted by Suárez states that we experience that the fragrance of, say, an apple remains in a room for a long time after the apple has been eaten. Due to the fact that the *species odoriferae* (like all the species of the external senses) are ontologically dependent on the sensible quality of odour, there must be another subject, i.e., a smoky exhalation, in which they inhere. Precisely this subject is carried away from an apple, and it is this subject that carries the accident of odour that continuously emits and multiplies the olfactory species of an apple.<sup>29</sup>

Having formulated two assumptions, three difficulties regarding the conditions of olfaction elicitation come to occupy Suárez's mind. 1) Does the real evaporation of an odour have to reach the organ of smell? 2) Is the

27 By the term “natural” I primarily mean “non-intentional” stimulation, which once received in the subject destroys the previous (contrary) existent property. Unlike intentional stimulation this non-intentional affection does not contribute to the production of object-directed intentional perceptual acts that grasp the sensible aspects of external objects.

28 The theory of intentional immutation and the sensible species is typical for Suárez's theory of perception. What does Suárez mean by the intentional species? Since I have dealt with this issue elsewhere, I mention here only four statements fundamental for the understanding of Suárez's theory. 1) All the species are accidents, qualities (DA V, 2, 2, p. 296); 2) the species are not of the same order and the same kind as the sensibles of which they are species (DA V, 2, 8, p. 306); 3) the sensible species are material and divisible (DA V, 2, 17, p. 316); 4) the species are formal likenesses of the sensibles (DA V, 2, 21, p. 322). Importantly, these species are caused by the sensible qualities of substances (DA VI, 2, 6, p. 474–476). For the details of Suárez's theory see Heider, D., Suárezova teorie vzniku species sensibilis a kognitivního aktu v kontextu středověké a renesanční filosofie. *Organon* F 22, 2015, no. 2, p. 229–249; and South, J. B., Suárez and the Problem of External Sensation. *Medieval Philosophy and Theology*, 10, 2001, No. 2, p. 217–240.

29 Cf. DA VII, 11, p. 700.

*species odorifera* multipliable from an odorous thing (*ab initio*), or only from the point where real multiplication has ceased? 3) Is the real multiplication of an exhalation, at least for a certain distance, necessary?

As regards the first query Suárez replies that the more probable view is the negative one. An act of olfaction is possible even if a real evaporation does not reach the organ of smell. Setting aside the obvious counter-example to the opposite claim, namely the fact of the underwater diffusion of smell where only intentional multiplication occurs, Suárez employs the argument “from the perception over long distances” which he also employs in the case of hearing.<sup>30</sup> Vultures perceive the smell of a carcass over fifty miles. However, it is improbable that their odorous evaporation travels over such a distance. Albeit the fume of a carcass can be carried along by wind over that distance, it would still be difficult to understand how vultures can find the place where the carcass is. It is not credible to assume that the whole way from the carcass to the vulture is blazed by its smoky evaporation. The positing of the species and their multiplication seems to be the device necessary for “saving the phenomena”. Moreover, if the real evaporation were a necessary condition, smell would be a sort of touch. Accordingly, the quality of fragrance would be reducible to the tactile qualities. However, this “Democritean view” is rejected not only by Suárez but also by Aristotle.<sup>31</sup>

Concerning the second enquiry, Suárez underlines the premise that fragrance is the proper sensible of smell. As the proper sensible it must emit its intentional qualities *ab initio*. Contrary to “spiritual” emission, natural evaporation is accidental. It can occur but it need not. Suárez raises two objections to this “intentional” conception. 1) If the olfactory species is multiplied from the very beginning, olfaction must proceed on the instant, which is not the case. According to Suárez only vision proceeds in no time since – as the scholastics falsely assumed – the speed of light is unlimited. The perception of all the other senses runs successively. In his recurrent analogy to hearing and sound,<sup>32</sup> Suárez replies by distinguishing a (circular) field of perception, within which a fragrance can be immediately perceived. Beyond this notional ambit it can be sensed only after some time. This is because, beyond this notional ambit the multiplication necessarily takes time, as the process of exhalation and heating, which accompany the propagation of odour, also takes time. 2) The perception of odour cannot take its course by multiplication of the species since the diffusion of odour can easily be affected by external influences such as wind or a stronger fragrance. Wind

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30 For the intentional multiplication of sound see DA VII, 8, 7, p. 670.

31 DA VII, 4, 4, p. 704–706.

32 DA VII, 8, 9, p. 678.



or some other smell can affect the perception of an original odour. What can be influenced in this way can be only a real quality. Although Suárez agrees that wind can affect our perception of fragrance, he explains that this effect applies specifically to the sensible species itself. Even though the sensible species is called “spiritual”, it is still material and divisible.<sup>33</sup> Its “spirituality” does not mean literal immateriality but material subtlety and a different character from sensible qualities. As a consequence, in his answer Suárez comes to endorse a certain (ontological) gradation in sensible species with respect to their constitution. The reason why wind can affect the dispersion of odour and not that of colour is that the *species visualis* is more “spiritual” than the *species odorifera*.<sup>34</sup>

Accordingly, the reply to the third issue results from the answer to the second argument. If a smoky exhalation of odour is only an accidental feature of intentional multiplication, a real evaporation, even for a minimal distance, is not necessary. The intentional multiplication is fairly sufficient for the elicitation of olfaction. Some cypresses and pebbles are redolent for many years without diminution. It means that they are redolent without evaporation.<sup>35</sup>

### 3.3 Organ and Act of Olfaction

In analogy to the physiological *quaestiones* on the organs of other senses, also in *DA VII*, 12, devoted to the organ of olfaction, Aristotle is not a decisive authority for Suárez: “Aristotelis sententia non est clara ...”.<sup>36</sup> On one hand, Aristotle considers the nose to be the proper organ of smell,<sup>37</sup> on the other hand, he seems to advocate the view that it is only a way (*meatus*) of olfaction.<sup>38</sup> This opinion comes close to Galen’s position. For Galen the sense of olfaction is to be placed in the front ventricle or, more precisely,

33 Cf. the third conclusion in note 23.

34 *DA VII*, 11, 5, p. 708. Obviously, what we have here is a certain gradation in the “spirituality” of sensible species. This gradation is far from new and was advocated, e.g., by Albert the Great, cf. Knuuttila, S., Aristotle’s Theory of Perception and Medieval Aristotelianism. In: Knuuttila, S. – Kärkkäinen, P. (eds.), *Theories of Perception in Medieval and Early Modern Philosophy*. Dordrecht, Springer 2008, p. 1–22, esp. p. 13–14.

35 *DA VII*, 11, 6, p. 708–710.

36 *DA VII*, 12, 2, p. 712.

37 When speaking about animals’s sense organ of smell in the fourth book of his *Historia animalium*, Aristotle distinguishes between animals with nostrils and animals with olfactory passages such as birds. Obviously, he must assume that the nose is the organ of smell here. Cf. Aristotle, *Historia animalium*. Transl. A. L. Peck. Cambridge, Mass., London 1970, Book IV, Chapter 8, 533a22–4.

38 In the first book of the same treatise the Stagirite claims: “Smelling, too, takes place through the nose [...]”, Aristotle, *Historia animalium*, op. cit., Book I, Chapter 11, 492b13. This seems, at least, to admit the possibility that the nose is only a channel of olfaction but not the very sensorium.

in the two front ventricles of brain.<sup>39</sup> In his brief anatomical entry, Suárez notes that there are also two olfactory nerves, the so-called mammillary nerves (*mamillares*), leading from these ventricles to the nasal cavities. It was Andreas Vesalius (1514–1564) who located the olfactory organ just in these “olfactory nerves”.<sup>40</sup>

Despite the considerable authority of both physicians, Suárez is quick to say that neither Galen’s nor Vesalius’s opinion is probable. His critical stance is based on the arguments formulated a couple of years earlier by the Spanish physician Francisco Valles (1524–1592).<sup>41</sup> As Suárez shows in *DA VI*, 6, the brain is not the proper organ of *any* external sense since it is the universal source (*fons*), principle (*origo*) or root of sensation (*radix sentiendi*). Unlike Aristotle, who locates the *radix sentiendi* in the heart, Suárez places it in the brain.<sup>42</sup> The brain is not the *sensorium* of any external sense but only the source “irrigating” (*foveat*) the sense organs with animal spirits (*spiritus animales*). The influx of the *spiritus* is what (physiologically) disposes a power in its attention for perception.<sup>43</sup> In any case, there is no better reason to locate the organ of smell in the brain than any other organ. If we place the sense of smell in the brain, why not fix sight there as well? Besides, Galen himself admits that there is no touch in the brain. But if no touch is there, Suárez asks rhetorically, can we really say that the power of smell is? Besides denying Galen’s view, Suárez dismisses also Vesalius’s opinion by saying that *mamillares* are in the brain. If the brain as the *sensorium* of smell was rejected by Suárez, the same is to hold also for the olfactory nerves.<sup>44</sup>

In the positive part of the *quaestio* Suárez asserts that the sense organ and also the power of olfaction must be placed in the nasal cavities.<sup>45</sup> He mentions two arguments for this claim taken over from Valles. First, the organ of sense perception must be located where the pleasure and pain associated with it are sensed. However, they are felt in the nose, not in the brain. Second, the olfactory organ must be situated outside the cranial wall (*calvaria*) – the borderline between the nasal cavities and the front ventricle – since if it

39 For this Galen’s opinion see Galenus, C., *De usu partium corporis humani*. Ed. S. Colina. Paris 1528, lib. 8, p. 244.

40 *DA VII*, 12, 2, p. 712. For Vesalius’s view cf. Vesalius, A., *De humani corporis fabrica*. Ed. I. Oporini. Basel 1543, lib. 4, cap. 3, p. 322–323.

41 It is Francisco Valles who, besides Galen, is for Suárez the key authority in anatomical matters. For Valles’s treatment of the organ of smell see Valles, F. *Controversiarum medicarum et philosophicarum libri decem*. Ed. A. Wechel. Francofurti ad Moenum 1582, lib. 2, cap. XXIV, p. 97–99. *Controversiae* were first published in Alcalá in 1556.

42 *DA VI*, 6, 6, p. 534.

43 Cf. *DA VI*, 6, 10, p. 540.

44 *DA VII*, 12, 3, p. 712–714.

45 *Ibid.*, p. 714.

were not the brain would be “flooded” with the chaos of various exhalations. As a consequence the power would have difficulties discriminating them. In analogy to the mouth in the case of taste, there must be an “explorer” situated in front of the brain, which discerns and hinders its potential damage.<sup>46</sup>

One of Galen’s reasons for the claim that the organ of olfaction is the brain is the assertion that breathing creatures can smell fragrances only by inhaling. Accordingly, aspiration is necessary so that the fragrances could get through up to the brain. Without sniffing smoky exhalations odours could not reach the inner *sensorium* situated in the front ventricles. Suárez is not impressed by this argument for the view he rejects. He provides a different explanation. Basically, he follows Aristotle of *De anima* II, 9. There the Stagirite asserts that animals smelling by aspiration have a sort of a lid (*operculum*) in the nose, which needs to be opened so that fragrances and species could enter. This lid opens when they breathe in; it closes when they breathe out. The lid has the same function as an eyelid protecting an eye as a sheath against potential damage. On the other hand, animals that can smell without aspiration (e.g., aquatics) do not have this operculum. Likewise, the hard-eyed animals – animals whose eyes are not protected by an eyelid – do not have to open their eyes to be able to see. Consequently, Suárez in principle agrees with Aristotle’s opinion. The only proviso he makes concerns the existence of the operculum. Instead of employing a lid of which anatomists know nothing, Suárez explains smelling by inhalation through a process of expansion of the narrow internal cavities in the nose. Without this aspiration the nasal tracts would be too narrow even for the species to go through.<sup>47</sup>

## 4. Taste and Touch

### 4.1 Nature of Sapor and Tangible

The kinship of odour and sapor is manifest in Suárez’s definition of *gustabile*. Like odour, sapor is defined as a second (patible) quality resulting from the blending (*temperamentum*) of the elemental qualities, which are the explanatory basics with respect to secondary qualities. As with odour, the dominant quality in sapor is heat; unlike odour, however, the Moist gains head over the Dry.<sup>48</sup> The Moist must be the prevalent quality in the organ too. The tongue must be moistened with saliva to be capable of perceiving sapor. If not, as with the sick, sapor cannot be perceived or they are sensed falsely. If heat attains an inordinate degree, Moisture evaporates and Dryness outweighs

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46 Ibid.

47 DA VII, 12, 7, p. 718.

48 DA VII, 10, 5, p. 692.

it. This leads to the production of odour. By contrast, if *res odorifera* is moistened, its odour is diminished.<sup>49</sup> The “metamorphosis” of the two sensibles evinces Suárez’s collateral treatment of the nature of the sensibles and their kinds. Like the kinds of odour, the different types of sapor result from the different *temperamenta* of the elemental qualities. The analogy holds also between the kinds of sapor and colours. In analogy to the two extreme colours, white and black, there are two extreme sapor, sweet and bitter. These two qualities differ in the degree of Dryness and Moisture. The more Moisture a sapor has, the sweeter it is. The more Dryness it possesses, the bitterer it is. In analogy to the “medial” colours, all the other “medial” sapor are characterized by proportional approximation and recession to the pertinent extremes.<sup>50</sup>

Although Suárez is painfully brief in his exposition on the proper sensible object of touch, as if he was suggesting that the reply is entirely clear, the issue is anything but such. In *DA* 7, 13, 1, Suárez asserts that the object of touch is a set of the primary qualities and other qualities resultant from them.<sup>51</sup> What resultant qualities does Suárez mean? Obviously, these cannot be sapor or odour. Even though they are second qualities, *as such* they are not tangible. In the second book of *De generatione et corruptione* (*GC*), disputation 4, question 1, Suárez mentions five pairs of non-basic tactile qualities. All constitute binary contraries. They are the heavy and the lightweight, the hard and the soft, the viscous and the brittle, the rough and the smooth, the coarse and the fine. Although he does not explicitly say whether they are secondary qualities or first qualities, in line with the mainstream scholastic tradition he is inclined to take them for secondary qualities. Except for the opposition of the heavy and the lightweight, all the other pairs are grounded in the primary qualities. Since the primary qualities are foundational – they are the material causes of both the second qualities and the elemental substances (Earth, Water, Fire and Air) – the touch, which perceives them, is also a fundamental sense power.<sup>52</sup> As Suárez affirms, the sense of *tactus* is “quasi sensus universalis”.<sup>53</sup> This universality is due to the fact, as we shall see in 4.3, that its organ is spread all over the body and it can perceive, in a way, all the proper sensible objects of the other external senses, even though it cannot perceive them *as such*.

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49 *Ibid.*, p. 694–696.

50 *DA* VII, 10, 6, p. 694–696.

51 *DA* VII, 13, 1, p. 720.

52 For this see Suárez, F., *De generatione et corruptione*, disputatio 4, quaestio 1, p. 25–26 [retrieved on February 5th, 2016]. Available on-line: <http://www.catedraldevalencia.es/castellote/degetc2.pdf>.

53 *DA* VII, 15, 4, p. 754.

So far Suárez's position seems to be clear. However, what about other qualities, which we today call "interoceptive", namely the introspectable qualities perceived by bodily self-awareness such as fevers, swells, itches or the non-visual (proprioceptual) perceptions of the position of our own limbs, which are all characterized by the special phenomenal quality of "ownness"? Are these also part of the proper sensible object of touch? Truly, Aristotelian psychology paid much more attention to the *external* tangibles than to the *internal* ones. The main reason was that the tactual potency, like the other senses, could not be actuated by itself. As material powers, none of the external senses are capable of reflection. They are directed outside, namely toward the proper extramental sensibles. In defiance of this mainstream scholastic position there were not infrequent exceptions in the Middle Ages. Peter John Olivi (1248–1298),<sup>54</sup> who is occasionally mentioned as a significant source of Suárez's psychology,<sup>55</sup> was one of the authors who extended the field of tangibles to include these interoceptive and proprioceptive qualities. Pietro d'Abano (1250–1316), to name another exception, broadened the field of tangibles to comprise even pain (*dolor*) as a proper sensible of touch.<sup>56</sup>

I have to say that throughout *DA VII I* I have not found a statement going in the direction of this tactual interoception and proprioception. Although the Jesuit rejects the typically Aristotelian opinion that all the external senses necessarily proceed through a medium (see 4.3), which seems to approximate him to the affirmation of bodily self-awareness, Suárez explicitly asserts that the touch does not perceive the qualities *inherent* in the organs.<sup>57</sup> It senses only the qualities of external (tangent) things.

Can we thus say that Suárez completely rules out all interoceptive qualities including *dolor* from the objective field of touch? If we look outside Suárez's *DA VII*, we should be, at least, cautious in saying that. In the second question "*Quotnam sint et quales actus appetitus sensitivi*" of *DA 11 "De appetitu sensitivo"* Suárez comes close to Abano's view, according to which we tactually perceive corporeal pain. There Suárez says that there are two factors in pain. First, it is the cognition of something inconvenient; second, it is a (bitter) act of disliking (*amaritudo de illo obiecto*). Since proportional cognition precedes an appetitive act, the first is to be considered the cause of

54 Peter John Olivi is mentioned in this context also in De Vignemont, F. – Massin, O., Touch, op. cit., p. 296.

55 Cf. Spruit, L., *Species Intelligibilis: From Perception to Knowledge*. Vol. 2. Leiden, Brill 1995, p. 306.

56 On Olivi see Yrjönsuuri, M., Types of Self-Awareness in Medieval Thought. In: Hirvonen, V. – Holopainen, T. J. – Tuominen, M. (eds.), *Mind and Modality: Studies in the History of Philosophy in Honour of Simo Knuuttila*. Leiden, Brill 2006, p. 153–169, especially p. 158–161. For Olivi and D'Abano see also Yrjönsuuri, M., Perceiving One's Body. In: Knuuttila, S. – Kärkkäinen, P. (eds.), *Theories of Perception in Medieval and Early Modern Philosophy*, op. cit, p. 101–116.

57 *DA 7, 13, 3*, p. 722.

the second. Suárez avers that while the second is an act of the concupiscible appetite – in the chart of emotions it is to be located next to *tristitia* –, the first “resides” not in the appetitive power, which is for Suárez really distinct both from the external and internal senses, but in the bodily part where pain is perceived. Suárez is not hesitant to say that it is the sense of touch, extended all over the body, which perceives this corporeal pain. By way of elimination – the proximate cause of *dolor* cannot be the chopping of the bodily continuum since the result of scission is a common sensible, which can be both seen and touched, and not the proper sensible of touch –, Suárez concludes that apart from the above mentioned secondary qualities we also have to include another kind of tangible secondary quality in the proper object of touch, which he calls *dolorifera qualitas*. Like the non-basic tangible qualities, the dolorogenic quality results from the blending of the first qualities and affects the touch.<sup>58</sup> Basically, there is no obstacle for Suárez not to subsume this quality under the tangibles. In *GC* Suárez says that second qualities are *innumerae*.<sup>59</sup>

#### 4.2 Real or Intentional Affection?

In 3.2 we have seen that Suárez believes that an odorous quality can affect the power both naturally (*realiter*) and intentionally. Moreover, he said that while an intentional affection can occur without a physical (natural) alteration, the opposite is not possible. The situation with the “contact senses” of taste and touch appears to be different from that of the “distal senses”. It seems that for eliciting a tactual perception material contact with a tangible is both necessary and sufficient. Consequently, intentional affection seems to be entirely dispensable for an explanation of the elicitation of the corresponding perceptual acts. The title question of *DA* 7, 13 – whether *gustabilia* and *tangibilia* affect the corresponding senses only *realiter* or also *intentionaliter* – shows that Suárez is well aware of this “naturalist” position. He affirms that one of the arguments for the sufficiency of real affection is our experience. The organs of both powers, when actualized by the sensibles, *always* undergo material alteration. When we touch fire, our hand is warmed; touching snow it gets cold; while tasting ice cream our tongue is penetrated with sweet flavour through its pores. Why should we then introduce qualities such as the tangible or the saporific species? Why not conceive

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58 For Suárez’s treatment of *dolor* see Suárez, F., *Commentaria una cum quaestionibus in libros Aristotelis De anima*. Tomo 3. Madrid, Editorial Labor 1991, *DA* 11, 2, 6–7, p. 342–346.

59 Suárez, F., *GC*, disp. 4, q. 1, p. 25.

the elicitation of perceptual acts in a naturalized manner, namely by means of “literal” affection?<sup>60</sup>

Suárez formulates a simple query, crucial for the reply to the title question, as follows: What is it like to feel? Suppose that we approach fire with our hand. What do we feel? Do we feel the heat inherent in our hands, or the heat of the fire itself?<sup>61</sup> As mentioned in 4.1, only the second option is tenable for Suárez. He has four arguments for his “externalist” claim. First, Suárez argues by employing an analogy with the other senses. If sight, hearing and smell do not perceive the qualities inherent in their organs and thus their organs must be deprived of proper sensible qualities if these are to be perceptible, the same must be said about taste and touch. Second, if we felt the qualities in the tactile organ(s), we would have to be tactually sensing all the time since there always are some primary qualities in the tactile organ(s). The espousal of the “interoceptual” statement, which is absent in *DA VII*, does not cohere with the dynamic character of our tactual experience. Our tactile sensation varies depending on the distance from the external tangible. Consequently, it is the extramental object what triggers our tactual perception. This dynamic character of tactile experience, dependent on external tangibles, is addressed again in the third reasoning. If we come close to fire, we quickly feel its heat. If we draw our hands away from it, we immediately feel its recession. Fourth, the sense of touch is specifically one (for more see 4.4). However, *tactus* does not perceive only the primary qualities but also second qualities, e.g., the hard and the soft. Although in the tactile experience of primary qualities such as heat we can assume that the organ literally takes on the primary qualities, it is not the case with second qualities such as the hard or the soft. When touching hard and soft objects these qualities do not literally come to inhere in the organ.<sup>62</sup> They do not “imprint” real affections in the organ. By way of conclusion, Suárez says it is only possible for these sensibles to be perceived through “non-literal”, to wit, intentional affection.<sup>63</sup>

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60 Cynthia Freeland (while discussing Aristotle’s theory) calls the theory, according to which for eliciting a perceptual operation it suffices to be actually and literally affected by the relevant qualities, a “literalist position”. Cf. Freeland, C., Aristotle on the Sense of Touch. In: Nussbaum, M. C. – Rorty, A. O., *Essay on Aristotle’s “De Anima”*. Oxford, Oxford University Press 1995, p. 227–248, p. 231.

61 This question is frequently raised also by contemporary phenomenologists. For an overview of the divergent positions on the issue “what it is like to feel”, see Mattens, F., *Perception, Body, and the Sense of Touch: Phenomenology and Philosophy of Mind*. *Husserl Studien* 25, 2009, p. 97–120.

62 For these arguments see *DA VII*, 13, 4, 722–8.

63 *DA VII*, 13, 5, p. 728.

But why cannot the qualities of Heat or Cold existent in the sense organs produce the species in these organs? In the reply Suárez assumes the premise that in the case of touch there is a natural order between the intentional and the natural (in the sense of the non-intentional) activity of a sensible. The intentional action of a sensible is *always* accompanied by its natural action. Our hand simply cannot feel heat without being warmed. The reason for this necessary connection is the imperfect character of *tangibilia* and *gustabilia*. Unlike the “distal” senses, the tangible can intentionally affect the power only if it undergoes (material) alteration. This alteration then can proceed only by deflection from the midpoint (*secundum excessum*), i.e., only by means of the (necessary) application of an external quality registrable by the tactile organ, which must be rightly “tuned” by the elemental “medial disposition” (*temperamentum*) of the first qualities. This is also the reason why this organ cannot be affected by the quality of an equal degree but only *secundum excessum*.<sup>64</sup>

#### 4.3 Organ of Taste and Touch

One of the most controversial issues in the Aristotelian tradition related to touch is the question of its organ. Unlike the organ of touch, the organ of taste does not pose a problem. In line with Galen, Suárez says that it is an intrinsic part of the tongue, namely the lingual nerve, while the extrinsic part is its medium.<sup>65</sup> Since these external parts are porous, food – if sufficiently chewed and humidified by saliva – penetrates through the pores to the internal part of the tongue. Consequently, the power of taste, though possessing an intrinsic medium, can sense *gustabile* by being in immediate contact with it.<sup>66</sup>

The issue of the organ of touch is more problematic. There are several divergent views. On the first sentiment, attributed to the Aristotle of *De sensu et sensato*, the organ is the heart and all the other parts such as the skin and the flesh are its medium.<sup>67</sup> On the second tenet, the organ(s) are the nerves abounding under the flesh and the skin; they are spread all over the body. On this view, advocated by the Aristotle of *De anima*, the flesh is again only the medium of the tactual perception.<sup>68</sup> According to yet another opinion,

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64 DA VII, 13, 6, p. 730–732.

65 DA VII, 14, 1, p. 734. For Galen’s tenet see Galenus, *De usu partium corporis humani*, lib. 16, p. 450–451.

66 DA VII, 14, 4, p. 742.

67 Aristotle mentions the heart not only as an organ of touch but also as an organ of taste. Cf. Aristotle, *On Sense and Sensible Objects*, ch. II, 439a1-2: “... the sense organ of both taste and touch is near the heart”.

68 Aristotle, *De anima* II, 9, 423b23-7: “... that which is perceptive of what is touched is within ... the medium of the tangible is flesh”.



espoused by Galen, the organ of touch is the skin. The skin, unlike the flesh, which is too hot since it is too sanguine, contrary to the nerves, which are too cold because bloodless, is best tempered for perception of the first qualities. Thus it is most suitable for their perception. On the last opinion, advocated by Suárez, the organ of touch is the whole body or all the parts except for the hard and the earthy parts such as bones, hairs, etc.<sup>69</sup> When writing about the flesh as the tactile organ Suárez also mentions the skin.<sup>70</sup>

The first two opinions, regarding the flesh as the medium of perception, are quickly dismissed by Suárez. We feel heat in our hands, not in the heart. Moreover, the heart is neither the organ of tactile perception nor the *radix sentiendi*. The most spurious is the second opinion. It cannot be denied that Aristotle embraced it in *De anima* II, 9: "... as air and water are related to vision, hearing and smell, so is the relation of the flesh and the tongue to the sense organ in the case of touch".<sup>71</sup> In this quote, Aristotle states that the only difference between the higher senses and the lower senses is that the former have an *external* medium (e.g., air), while the latter are operative through the *internal* medium (the uppermost part of the flesh). The difference is not that the higher senses have a medium, while the lower do not. On the contrary, all the senses operate through a medium since "That which is placed on the sense organ should be imperceptible is common to *all* senses" [italics; D.H.].<sup>72</sup>

We have seen that Suárez in a way accepts medium in the case of taste. Yet, he is of a different mind in the case of touch. In his reasoning he starts with an argument from experience. If we are pricked, our flesh and skin feels the prick. Even when the skin is separated from the flesh due to injury, still this "naked" flesh feels it. Moreover, there is tactile perception in parts where no such nerves exist, such as the stomach. Suárez also adds that the required "medial" *temperamentum* of the first qualities can best be found in the skin and only in a lesser degree in the flesh. Finally, the organ of touch must be placed in the peripheral parts of skin and flesh since *tactus* was given to animals to protect themselves from external harm. Teleologically speaking, the main function of the external "soft parts" is to protect the "hard parts", such as the skeleton. Although Suárez mentions the flesh and the skin as the proper organs of touch, he is at the same time well aware of Aristotle's claim that this organ can be not only the flesh but also what is proportional to flesh.<sup>73</sup>

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69 DA VII, 14, 2, p. 736.

70 *Ibid.*, p. 740.

71 Aristotle, *De anima* II, 11, 423b17–20.

72 *Ibid.*, II, 9, 421b16–18.

73 DA VII, 14, 2, p. 736–738. Thus this "proportional flesh" can be, e.g., the teeth. Cf. DA VII, 14, 3, p. 740. This claim also raises the issue of "the limits of body". For this issue in the theories of early

However, how can Suárez be reconciled with the fact that he advocates a view which is at odds with the dictum of *On the Soul*, i.e., with the text he is commenting on? In his reply Suárez is quick to say that although the claim is not in line with the Aristotle of *De anima*, it can be authorized by the Aristotle of treatises such as *De generatione animalium*, *De historia animalium*, etc.<sup>74</sup> Since these texts are later than *De anima* it is justifiable to follow the Aristotle of those texts. Second, more importantly, Suárez neither agrees with the universal validity of the assertion “sensible supra sensum non facit sensationem”, nor with the claim that the difference between the visible, the audible and the smellable on one side, and the tangible and the tasteable on the other is due to the fact that while the former senses operate through an external medium, the latter ones are active through an internal medium. In his elaborate reasoning, Suárez underscores that in the case of the affections of sound and odours no external medium is necessary. The senses of hearing and smell can both sense sensible objects such as a smoky evaporation or a local movement of air by which they are touched. At the same time it is not true that the tangible and the tasteable can be perceived only through an internal medium. In 4.2 it has been said that both sensibles can be perceived while contiguous to the sense powers. Strikingly, Suárez notes that touch can be affected by fire through a medium such as air. By that, surprisingly, the sense of touch is assimilated to the “distal senses”. It may be concluded that Suárez regards the aforesaid distinction between two groups of “connect” and “distal” senses, based on operability through an external and internal medium, as implausible since it is too “cut-and-dry”.<sup>75</sup>

How does Suárez assess the validity of the proposition “that what is placed on the sense organ is imperceptible to all the senses” – an important axiom of Aristotelian theory of perception? Is the proposition acceptable for Suárez in any sense? As usual, the Jesuit distinguishes between two meanings. First, the phrase “of what is placed on the sense organ” can be interpreted in the sense of “inherence”. If the proposition asserts that the object *inherent* in the organ does not cause sensation, it is true. Considering Suárez’s overall approach to interoceptive perceptions in *DA VII*, for all the sense powers he holds that if a sensible inheres in the organ, the power cannot be intentionally affected by it. Second, the aforesaid phrase can be taken in the sense of “tangentiality”. If understood in the way that a tangent (*contiguum*) object cannot be perceived, the sentence is true only for sight. In order for an object

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Jesuits see Des Chene, D., *Life's Form: Late Aristotelian Conceptions of Soul*. Ithaca and London, Cornell University Press 2000, p. 196–199.

74 *DA VII*, 14, 3, p. 738.

75 *DA VII*, 14, 4, p. 742–744.

to be visible it must be illuminated by the illumination of air. Yet in the other senses the proposition is not true. A sensible adjoining the tactile organ can “spiritually” affect the power. It may be objected that a medium is necessary since it is what makes a sensible “spiritual” and what makes it a sensible species. In his reply Suárez leaves no doubt that this move is futile since it is not due to the medium that the object is capable of producing a “spiritual” species but only due to the virtue of the sensible itself.<sup>76</sup>

#### 4.4 Appendix: Non-Reducibility of Taste and Unicity of Touch

In *DA* 7, 15, in which he treats the issue of the number of external senses, Suárez considers two puzzles taken from *De anima*.<sup>77</sup> Not surprisingly, he states that there are five external senses. There are two objections to this view. First, it seems that there are four senses since Aristotle himself advocated that taste and the tasteable are reducible to touch and the tangible: “The tasteable is a kind of tangible”;<sup>78</sup> “Taste, in fact, is itself, as it were, a sort of touch”.<sup>79</sup> Although Suárez presents this view as a part of the scholastic tradition, exemplified by Paul of Venice (ca 1369–1429), he is clear that the majority of Aristotelians endorsed the opposite view. Taste cannot be reduced to touch since its proper sensible is different; the two powers have a diverse organs: while the faculty of touch is spread over the whole body, taste resides in the tongue; the way of their affection is different: While taste can be affected only while in physical contact with the tasteable, the tangible – as said above – can be felt through a medium. Correct reading of Aristotle’s “Gustus est quidam tactus” requires (how else) a pertinent distinction. The sentence can be taken either *formaliter*, or *praesuppositive*, i.e., in the sense according to which touch is necessary but not sufficient for the operation of taste. If we consider it in the first sense, it is false. Though Suárez accords with the view that the tongue can also perceive tangibles, its “essence” is not pinpointed by tactual perception. However, if the sentence is considered in the second way – assuming that touching constitutes the necessary condition – it is true. Taste can perceive only by touching.<sup>80</sup>

The second caveat comes with the claim that there are more than five senses. At the outset of *De anima* II, 11, Aristotle avers: “For if touch is not

76 *DA* VII, 14, 6, p. 744–746. For the dispensability of the intentional radiation from the tangible and the tasteable through the medium in Suárez’s theory and its evaluation as non-traditional see also Knuuttila, S., Suárez’s Psychology. In: Salas, V. – Fastiggi, R. L. (eds.), *A Companion to Francisco Suárez*. Leiden, Brill 2015, p. 192–220, esp. p. 207.

77 *DA* VII, 15, 3, p. 752.

78 Aristotle, *De anima* II, 10, 422a8, p. 125.

79 Aristotle, *Parts of animals*. Ed. E. S. Forster. Cambridge, Mass., London 2000, Book II, chapter 10, 656b37–657a1, p. 179–181.

80 *DA* VII, 15, 4, p. 752–754.

one sense but several, there must be several kinds of tangibles. It is difficult to say whether touch is one sense or more than one [...] For every sensation appears to be concerned with one pair of contraries, e.g., vision is of white and black [...] but in the tangible there are many pairs of contraries, hot and cold, dry and wet, hard and soft [...] (422b18–28). There are two pairs of basic tactile qualities, namely hot/cold and dry/wet. All the other qualities are derivable from them. If we start from Aristotle’s assumption that it is a sensible which specifies a power, there must be, at least, two kinds of touch.<sup>81</sup> In his reply, Suárez says that there is only one kind of touch. Employing the biological criterion of sensory individuation, there is only one *sensorium* for all the tactile qualities; there is only one way of affection, which requires the unique “medial” *temperamentum* of the first qualities. Moreover, for getting one sense it is far from necessary to assume one pair of contrary qualities. If it were necessary, there would have to be more powers of sight since its proper sensible is not only colour but also light.<sup>82</sup> Even smell would have to be at least a twofold power. As we have seen, there are two *genera* of fragrances.<sup>83</sup> It may be concluded that according to Suárez the premise that if there is to be a specifically unique power, there must be a specifically unique pair of contraries, cannot be considered as true.

## 5. Conclusion

One of the most distinctive features of Suárez’s theory of the lower senses and perception in general is his universal endorsement of the sensible species. If we start from the fact that critique of intentional species in late medieval tradition was associated with nominalism represented by William of Ockham,<sup>84</sup> Suárez’s stance in *DA VII* is to be regarded as clearly anti-nominalist. The sensible species is presented as an inevitable metaphysical vehicle in the exposition of all the external senses including the “lower” ones. Unlike the natural or physical actions of sensibles, the “spiritual” activities of the sensible qualities represent a necessary phase in the “mechanism” of sense perception in the lower senses. The explanatory force of these “spiritual” likenesses is underlined by Suárez’s affirmation of the species’s gradation

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81 This is also Aquinas’s claim from *Sentencia libri De anima, Opera omnia*, t. XLV, 1. Ed. Leonina. Roma, 1984, lib. 2, c. 22, p. 160–161: “...unus sensus est unius contrarietatis ... In genere autem tangibilium sunt plures primae contrarietates per se ... Unde formaliter loquendo et secundum rationem, sensus tactus non est unus sensus, sed plures; subiecto autem est unus.”

82 For this see *DA VII*, 3, 7, p. 596.

83 *DA VII*, 15, 5, p. 756–758.

84 Cf. Tachau, K. H., *Vision and Certitude in the Age of Ockham. Optics, Epistemology and the Foundations of Semantics 1250–1345*. Leiden, Brill 1988, p. 130–135.

in the degree of material “subtlety”. Historically speaking, if we realize that two years before the publication of Suárez’s *Commentary on De anima* (1621) another member of the Society of Jesus, Pedro Hurtado de Mendoza (1578–1641), explicitly denied the existence of the olfactory, gustatory and tangible species,<sup>85</sup> we can better assess how tightly Suárez’s position was linked with *via antiqua*.

The crucial aspect of the sensible species as the vehicles of the intentionality of perceptual acts has its counterpart in Suárez’s insistence on the irreducibility of the proper sensible objects, which are the objects represented by the species. Suárez makes clear, throughout, that all the proper sensibles of all the lower senses are accidents pertaining to the kind of patible qualities. The quality of odour cannot be reduced to a substantial smoky evaporation. Although the sensible qualities of odor and taste are derived from the blending of the first qualities, they constitute “emergent” qualities *sui generis*, which as the proper sensibles are perceptible only by the senses of smell and taste. Similarly, the primary qualities, which together with the other derived qualities constitute the proper sensible object of touch, are irreducible to the common sensibles such as shape or size.

From a methodological viewpoint, our analysis of Suárez’s doctrine of the lower external senses has shown how systematic and lucid, contrary to Aristotle’s model,<sup>86</sup> the Jesuit’s exposition is. Moreover, his theory also gave evidence that although, no doubt, the Stagirite was the key authority for Suárez in most issues, in anatomical or physiological matters it was not so. Rather than Aristotle,<sup>87</sup> Suárez followed Galen, Andreas Vesalius and Francisco Valles. Furthermore, while in *DA VII* Suárez advocates the classical Aristotelian concept of tactual perception oriented outside to external tangibles, in *DA XI* he mentions the internal *qualitas dolorifera* as a (new) proper sensible quality of touch. This shows that doctrinally not only Aristotle and the tradition of Aristotelian commentaries that constituted important points of reference for Suárez in his treatment of the particular external senses, but also the respectable medical tradition.

Last but not least, in regards to early modern (textbook) philosophy and its notorious elimination of intentional species in general, one of the most “progressive” (depending on the philosophical motivations of the interpreter) doctrinal features of Suárez’s doctrine of the external senses, ushering in “the new times”, is his claim about the dispensability of a medium in all the

85 Hurtado, P., *Disputationes a Summulis ad metaphysicam*. Ed. L. Prost. Valladolid 1615. *De anima*, disp. 12, sect. 1, § 8, p. 798.

86 No doubt, the text mirrors the fact that it was written for pedagogical purposes while Suárez was teaching philosophy in Segovia in the first half of 1570s.

87 Cf. *DA VII*, 5, 2, p. 624.

external senses – with the important exception of sight. In general he holds that a sensible object adjoining the relevant organ and the power can in fact be perceived. As such the object can intentionally affect the sense power. In my opinion, this not only gives evidence of the materiality of the Suarezian sensible species but, from a certain point of view, this “elimination of medium”, related to Suárez’s claim that the medium does not have any “spiritualizing force”, can be regarded as an important stone in the mosaic that helped to prepare the way for the elimination of sensible species in early modern philosophy. If a sensible object physically adjoining to a sense organ can be cognized, why could we not get sense perception without a species, i.e., only by means of material affection? Once we admit the possibility of medium-less contact of the power and the object, the question is ‘why not suppose this more generally?’. If we did that, taking into account Suárez’s “conditional” definition of the intentional species from *Metaphysical disputationes* (1597), according to which intentional species are to be posited only if the objects are distant or disproportionate to the cognitive power,<sup>88</sup> we would not have to employ the intentional species in explanation of the (co) principles of the perceptual act at all.

## SUMMARY

In the paper the author presents a survey of Francisco Suárez’s theory of the lower external senses. The author proceeds in three main stages. In the first, he explains in what sense the external senses of smell, taste and touch can be called “lower” as compared to the senses of sight and hearing. Second, he deals with the issue of the nature and kinds of the proper sensible objects of smell, how they affect the medium, the sense organ, and the question of the organ of olfaction. Third, the same subissues are analyzed in the senses of taste and touch. In this last part, the issues of the (ir)reducibility of the sense of taste to the sense of touch and the number of the senses of touch are also tackled. In the conclusion the author states that one of the most typical features of Suárez’s theory is the Jesuit’s endorsement of sensible species.

**Keywords:** Suárez, Aristotle, the lower external senses, sensible species

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<sup>88</sup> Suárez, F., *Opera omnia*, t. 26. Ed. C. Berton. L. Vivès, Paris 1861, *Metaphysical disputation*, disp. 35, sect. 4, n. 18, p. 464: “... species intelligibilis poni solet, vel ut objectum intelligibile in potentia fiat intelligibile in actu, vel ut objectum quod erat separatum aut distans et improporcionatum, conjungatur vel proporcionatur potentiae.”