

Jens Ole Schmitt\*

## **Barhebraeus on the Internal Senses and Animal Self-Awareness. Some Notes on Furlani and Bakoš**

**Barhebraeus sobre os sentidos internos e a aperceção animal. Algumas notas sobre Furlani e Bakoš**

### **Resumo**

Os sentidos internos de Avicena também são trabalhados por Barhebraeus (1226-1286), o famoso polímata síriaco ortodoxo do Renascimento Síriaco. O seu tratamento dos sentidos internos ao longo das suas ocorrências em diferentes obras vai ser tomado em atenção, bem como uma mudança de terminologia. Também se tomará em atenção a posição de Barhebraeus sobre se os animais têm algum tipo de racionalidade como os humanos, ou se têm pelo menos uma certa aperceção, seguido de uma breve consideração sobre a conexão desta questão com os sentidos internos. Far-se-ão notar possíveis influências árabes para além de Avicena. Através disto, o artigo procura acrescentar algo aos trabalhos iniciais de Furlani e Bakoš sobre a psicologia de Barhebraeus.

**Palavras-chave:** sentidos internos; racionalidade animal; Síriaco; aperceção animal; *al-Mulakhkhas*.

### **Abstract**

The Avicennan internal senses are also dealt with by Barhebraeus (1226-1286 CE), the famous Syrian Orthodox polymath of the Syriac Renaissance. Their treatment in the course of their occurrences in different works will be looked into as well as a shift in terminology. Also, Barhebraeus's stance

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\* Philosophy VI, LMU Munich, Geschwister-Scholl-Platz 1, 80539 Munich, Germany. Jens. Schmitt@lmu.de.

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on whether animals have a share in rationality like humans or have at least a certain self-awareness and its connection with these internal senses shall be briefly considered. Possible Arabic influences besides Avicenna will also be taken note of. Through this, the paper aims at adding to Furlani's and Bakoš's initial works on Barhebraeus's psychology.

**Keywords:** internal senses; animal rationality; Syriac; animal self-awareness; *al-Mulakhkhas*.

## I. Introduction

Nearly eighty years ago, Giuseppe Furlani gave detailed descriptions and analyses of several psychological writings by Barhebraeus<sup>1</sup>, some of which still remain inedited today. Fifteen years later, Ján Bakoš edited the psychological part of the *Sanctuary Lamp* with a French translation and detailed notes, with a focus on Barhebraeus's textual sources<sup>2</sup>. Given the recent interest in the topic of animal rationality and (animal) self-awareness in Arabic philosophy<sup>3</sup>, it is justified to

<sup>1</sup> G. Furlani, «La psicologia di Barhebreo secondo il libro *La Crema della Sapienza*», *Rivista degli Studi Orientali* 13 (1931) 24-52; id., «Barhebreo sull'anima razionale (Dal *Libro del Candellabro del Santuario*)», 2 pts., *Orientalia* (N.S.) 1 (1932) 1-23; 97-115; id., «Avicenna, Barhebreo, Cartesio», *Rivista degli Studi Orientali* 14 (1933) 21-30; id., «Di tre scritti in lingua siriana di Barhebreo sull'anima», *Rivista degli Studi Orientali* 14 (1933) 284-308.

<sup>2</sup> Barhebraeus, *Psychologie de Grégoire Aboulfaradj dit Barhebraeus, d'après la huitième base de l'ouvrage La Candélabre des Sanctuaires*, ed. J. Bakoš, Brill, Leiden 1948.

<sup>3</sup> For example, P. Adamson's reassessment of Druart's interpretation of Abū Bakr al-Rāzī in his «Abū Bakr al-Rāzī on Animals», *Archiv für Geschichte der Philosophie* 94 (2012) 249-273 regarding rationality as well as, regarding the internal senses and self-awareness and usually with special focus on Avicenna's *Glosses* and *Investigations*, D. Black, «Estimation (*Wahm*) in Avicenna. The Logical and Psychological Dimensions», *Dialogue* 32 (1993) 219-58, ead., «Avicenna on Self-Awareness and Knowing that One Knows», in Sh. Rahman - T. Street - H. Tahiri (eds.), *The Unity of Science in the Arabic Tradition. Science, Logic, Epistemology and Their Interactions*, Springer, Dordrecht 2008, 63-87, J. Kaukua - T. Kukkonen, «Sense-Perception and Self-Awareness: Before and After Avicenna», in S. Heinämaa - V. Lähteenmäki - P. Remes (eds.), *Consciousness. From Perception to Reflection in the History of Philosophy*, Springer, Dordrecht 2007, 112-119, T. Kukkonen, «Sources of the Self in the Arabic Tradition: Remarks on the Avicennan Turn», in J. Kaukua - T. Ekenberg (eds.), *Subjectivity and Selfhood in Medieval and Early Modern Philosophy*, Springer, Cham (CH) 2016, 37-60, J. Kaukua, «Self, Agent, Soul: Abū al-Barakāt al-Baghādāfī's Critical Reception of Avicennian Psychology», in Kaukua - Ekenberg (eds.), *Subjectivity and Selfhood*, 75-89, L.X. López-Farjeat, «Self-awareness (*al-shu'ūr bi-al-dhāt*) in Human and Non-Human Animals in Avicenna's Psychological Writings», in A.G. Vigo (ed.), *Oikeiosis and the Natural Basis of Morality. From Classical Stoicism to Modern Philosophy*, Olms, Hildesheim 2012, 121-140, id., «Avicenna on Non-conceptual Content and Self-Awareness in Non-human Animals», in Kaukua - Ekenberg (eds.), *Subjectivity and Selfhood*, 61-73, and A. Alwishah, «Avicenna on Animal Self-Awareness, Cognition and Identity», *Arabic Sciences and Philosophy* 26 (2016) 73-96.

reconsider both these topics as well as the related internal senses in Barhebraeus, as some minor additions to Furlani's and Bako's pioneering investigations can be made while doing so.

Barhebraeus (or Bar Hebraeus, 1226-1286 CE), Syrian Orthodox theologian and polymath and one of the eminent representatives of the Syriac Renaissance, left a diverse literary output, chiefly in Syriac, but also in Arabic. Many of his philosophical and theological works are to a varying degree influenced by post-Avicennan Arabic writers rather than by Avicenna exclusively. By their structure, most of the works to be considered here are Avicennan *summae*. These are the more theological *Sanctuary Lamp* (ܟܘܢܝܘܢ ܕܗܘܪܐ) and its abbreviated parallel work, the *Book of Rays* (ܟܘܢܝܘܢ ܕܩܝܡܐ), as well as the philosophical *Cream of Wisdom* (ܟܘܢܝܘܢ ܕܗܘܪܐ ܕܗܘܪܐ) and the shorter, though independent, *Discussions of Wisdom* (ܟܘܢܝܘܢ ܕܗܘܪܐ) and *Treatise of Treatises* (ܟܘܢܝܘܢ ܕܗܘܪܐ ܕܗܘܪܐ)⁴.

## II. Internal Senses

Barhebraeus accepts and lists the five Avicennan internal senses in several of his works⁵. However, the terminology changes slightly over the course of his works, which is especially seen in coining a Syriac rendition of the Avicennan faculty of estimation. For in the earlier works, this internal sense is just rendered into Syriac in transliteration.

Looking, firstly, at one of his later and exhaustive works on the topic, the *On the Soul* of the *Cream*, which is roughly modeled on Avicenna's *Healing*, there's a division of the animal soul into two faculties (ܟܘܢܝܘܢ), namely, a moving (ܟܘܢܝܘܢ) and a perceiving (ܟܘܢܝܘܢ) one⁶. The latter is, again, divided, namely, into five external and five internal senses. The latter five are individually listed, located in the respective ventricle of the brain, and stated with their activity⁷. The first,

4 An overview of his life and works is given by H. Takahashi, *Barhebraeus. A Bio-Bibliography*, Gorgias Press, Piscataway, NJ 2005, who also discusses ambiguities in the English rendition of some of the titles.

5 For a brief overview regarding Avicenna, see, for example, J. McGinnis, *Avicenna*, Oxford University Press, Oxford 2010, 113-116, whose English renditions of the faculties will be employed in the following, E. R. Harvey, *The Inward Wits. Psychological Theory in the Middle Ages and the Renaissance*, The Warburg Institute, London 1975, 43-46, and C. Di Martino, *Ratio Particularis. Doctrines des sens internes d'Avicenna à Thomas d'Aquin*, Vrin, Paris 2008, 23-40.

6 Furlani, «La psicologia di Barhebreo», 37; Florence, Biblioteca Medicea Laurenziana, Or. 83, f. 116v.

7 Furlani, «La psicologia di Barhebreo», 38; Laurenziana, Or. 83, f. 118r-v.

فيلسفة or, as alternative name, فلسفة حس مشتركة the common sense, is located in the front of the first ventricle of the brain. Its task is explained as receiving forms (شدة الحس) from all outer senses. (The Arabic equivalent in terminology of Avicenna's *Healing* is حس مشترك)<sup>8</sup> The second, فلسفة شكلية, the form-bearing faculty or representative imagination, is located in the back of the first ventricle. It keeps the forms that it receives from the common sense. (The Arabic equivalent is متصورة.) The third one is distinguished by being called فلسفة حس مركبة, compositive imagination, when related to the animal soul, but فلسفة حس معقولة, cogitative faculty, when related to the rational soul. In both cases, it is located in the brain's middle ventricle. Barhebraeus doesn't state this sense's task. (The Arabic equivalents are قوة متخيلة, or مفكرة respectively.) The fourth, فلسفة حس تقديرية, the estimative faculty or estimation, is situated in the back of the middle ventricle. It perceives imperceptible concepts or contents (مفاهيم) from perceptible ones. (The Arabic equivalent is وهمية or وهم.) The fifth, فلسفة حس تذكارية, memory, is found in the back ventricle. It keeps concepts (مفاهيم) of the estimative faculty. (The Arabic equivalent is قوة ذاكرة.)

In the following section «On the Confirmation of the Internal Senses», Barhebraeus uses the combination of perceptions from different senses, such as color, sound, etc., and application of them to the particular perception of a single person to exemplify the task of the common sense<sup>9</sup>. He further distinguishes between memory (حس تذكاري), which every animal is said to have, and recollection (حس تذكاري متفكر), which is concerned with concepts and found in human animals only:

Every animal has memory (حس تذكاري), though recollection (حس تذكاري متفكر), which is the skill of returning a concept (مفاهيم), man alone has. Thus the other animals, if they remember (تذكروا), remember, and when they don't remember, they don't desire to remember (لا يحسنون التذكير)<sup>10</sup>.

This passage is based on Avicenna's *On the Soul*<sup>11</sup>. However, Barhebraeus

<sup>8</sup> An overview of diverging terminology is found in H.A. Wolfson, «The Internal Senses in Latin, Arabic, and Hebrew Philosophic Texts», *Harvard Theological Review* 28 (1935) 69-133, esp. 130-133.

<sup>9</sup> Laurenziana, Or. 83, f. 122r, cf. Furlani, «La psicologia di Barhebreo», 42.

<sup>10</sup> Laurenziana, Or. 83, f. 123r-123v.

<sup>11</sup> *Avicenna's De Anima (Arabic Text) Being the Psychological Part of Kitāb al-Shifā'*, F. Rahman (ed.), Oxford University Press, London 1959, 185, 9-14 (see also Alwishah, «Avicenna on Animal Self-Awareness», 80) and 169, l. 3. However, there's also a certain further similarity with Aristotle, *On Memory and Recollection*, 453a, where W.S. Hett (tr.), *On the Soul, Parva natu-*

doesn't distinguish these two terms in his above-mentioned listing of the internal senses. As they all belong to the animal soul in general, where he uses *נפש חיה*, this term has to be considered either as not identical with the human-related *נפש אנושית* or as being used in a wider sense<sup>12</sup>.

In exemplifying the derivation of non-perceptual content from sensory impressions, however, which is the usual task of the estimative faculty, he illustrates compassion and enmity not with sheep and wolf, as Avicenna had done, but, rather, with persons<sup>13</sup>.

The treatment in the *Book of Rays* is roughly similar to the *Cream's* version in content, even though it is usually an abbreviated version of the *Sanctuary Lamp*, which, though, doesn't include a full discussion of the internal animal senses. In the *Rays*, the common sense is just called *כח השכל* without further terminological alternatives, while estimation is *חכמה* as a nominalized form<sup>14</sup>. He illustrates the task of the common sense with the perception of raindrops as a straight line and of a rotating point on a circumference as a circle, and that of imagination with the conception of a human with two heads<sup>15</sup>, which are both Avicennan examples<sup>16</sup>.

A difference of the *Rays's* version, however, lies in the explicit addition of pneuma to the respective ventricle and seat of each sense, for example, «situated in the pneuma (*רוח חיה*) of the front [part] of the brain's first ventricle»<sup>17</sup>. The introduction of pneuma into the description of mental processes is a Stoic and Ga-

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*ralia, On Breath*, Harvard University Press, Cambridge, MA 1936, 311, distinguishes between remembering and recollecting. Whether this is due to a direct influence by the Arabic *Parva naturalia* (ed. R. Hansberger, forthcoming) or, rather, an indirect one such as via Nicolaus of Damascus, should be looked into further. The Aristotelian recollection is discussed by R. Sorabji, *Aristotle on Memory*, Bristol Classical Press, London 2012, 35-46.

<sup>12</sup> As already noted by H.A. Wolfson, «Maimonides on the Internal Senses», *Jewish Quarterly Review* 25 (1935) 447-467, here 459-460, regarding two Hebrew authors. On the Avicennan passage, see also T. Alpina, «Retaining, Remembering, Recollecting. Avicenna's Account of Memory and Its Sources», in V. DeCaix - C. Thomsen Thörnqvist (eds.), *Memory and Recollection in the Aristotelian Tradition. Essays on the Reception of Aristotle's De memoria et reminiscencia*, Brepols, Turnhout 2021, 67-92, here 77-81.

<sup>13</sup> Laurenziana, Or. 83, f. 123r, using «Socrates» as a placeholder name. He does, however, also use the Avicennan animal examples elsewhere.

<sup>14</sup> Furlani, «Di tre scritti», 286.

<sup>15</sup> Furlani, «Di tre scritti», 287.

<sup>16</sup> For example, in his Persian *Book of Science*, M. Achena - H. Massé (trs.), *Le livre de science*, Société d'Édition «Les Belles Lettres», Paris 1955, 63.

<sup>17</sup> Furlani, «Di tre scritti», 287-288.

lenic turn that is already found in Avicenna<sup>18</sup>, whose *Pointers* might be the particular source that Barhebraeus has used here<sup>19</sup>. It should be noted that the (faculties of the) senses are said to be situated in pneuma, which they do not directly employ for their operations<sup>20</sup>.

The discussion in the *Treatise of Treatises*, however, is distinguished by an additional and peculiar threefold grouping of the internal senses, which also leads to a different sequence of the internal senses<sup>21</sup>. The first group comprises those internal senses dealing with particular formations (ܠܚܘܫܐ ܠܚܘܫܐ ܥܘܠܘܫܐ)<sup>22</sup> and consists of both the common sense (ܠܚܘܫܐ ܠܘܟܘܠܐ) as well as imagination (ܠܚܘܫܐ ܠܘܟܘܠܐ)<sup>23</sup>. The second group comprises those dealing with particular concepts (ܠܚܘܫܐ ܠܚܘܫܐ ܠܚܘܫܐ ܠܚܘܫܐ), consisting of both estimation, which is just rendered in transliteration as ܘܠܘܟܘܠܐ, and memory (ܠܚܘܫܐ ܠܚܘܫܐ)<sup>24</sup>. In consistency with the temporal order of Barhebraeus's works, there might (not yet) have been an established Syriac term for estimation<sup>25</sup>. The final group, dealing with relating forms with one another (ܠܚܘܫܐ ܠܚܘܫܐ ܠܚܘܫܐ), consists of just the faculty of compositive imagination, which, again is either called ܠܚܘܫܐ ܠܚܘܫܐ with reference

<sup>18</sup> J. Rocca, *Galen on the Brain. Anatomical Knowledge and Physiological Speculation in the Second Century A.D.*, Brill, Leiden 2003, 61-63, see also my forthcoming «Touchy Animals».

<sup>19</sup> *Pointers: al-Ishārāt wa-l-tanbīhāt ma'a shurūḥ Naṣīr al-Dīn al-Ṭūsī wa Quṭb al-Dīn al-Rāzī*, K. Faydā (ed.), 3 vols., Maṭbū'āt dīnī, Qum 1384 Sh., ii. 317-323, see also ii.317, nt. 5.

<sup>20</sup> Abū l-Barakāt al-Baghādāī locates in his *Well-Reflected Book on Science (al-K. al-Mu'tabar fī l-ḥikma*, al-Musawī (ed.), 3 pts. in 2 vols., Byblos 2012 [identical reprint of ed. Yaltkaya, Haydarabad 1939], ii.350-351) also kinds of pneuma in different ventricles of the brain, such as, for example, pneuma in the brain's front ventricle for imaginations and composing of forms, pneuma in the middle ventricle for thinking, and that in the rear ventricle for memorizing.

<sup>21</sup> See Wolfson, «Maimonides on the Internal Senses», 443-444, and id., «The Internal Senses», 98-99, for medical as opposed to philosophical divisions. Avicenna also has a general twofold division in the *Salvation (al-Najāh fī l-manṭiq wa-l-ilāhiyyāt)*, 'A. 'Umayra (ed.), 2 pts. in 1 vol., Dār al-Jīl, Beirut 1992, ii.8, according to which forms of sensibles or their meanings are concerned.

<sup>22</sup> Note that not ܠܚܘܫܐ is used here.

<sup>23</sup> Furlani, «Di tre scritti», 300.

<sup>24</sup> Furlani, «Di tre scritti», 300-301.

<sup>25</sup> According to Takahashi, *Barhebraeus*, the temporal sequence would be *Treatise, Sanctuary Lamp, Rays, Discussions*, and *Cream*. The forms employed by Barhebraeus, based on the Aph. of ܠܚܘܫܐ without any negative implication, shouldn't refer to the imaginative faculty, as registered in the *Thesaurus syriacus* and its *Supplement*, as already noted by H. F. Janssens (ed./tr.), *L'Entretien de la sagesse. Introduction aux oeuvres philosophiques de Bar Hebraeus*, Liège 1937, 249-250, on Furlani. Rather, these should denote the estimative faculty.

to estimation (ظن) or كبرياء in the human case, respectively<sup>26</sup>. However, the reference here is to estimation or intellect, respectively, not the animal soul or the rational soul as such (as was the case in both Avicenna's and Barhebraeus's respective *On the Soul*). That is, besides intending the faculty that uses the imaginative faculty, the animal soul as such is represented here just by estimation, while the rational is so by intellect. The peculiar threefold division, which is not found in the structural source of the *Treatise*, namely, al-Ghazālī's *Intentions of the Philosophers*<sup>27</sup>, occurs, for example, in Fakhr al-Dīn al-Rāzī's *Abridgment of Logic and Science*, together with the matching sequence<sup>28</sup>. However, Barhebraeus omits the role of the second and fourth in the list, imagination and memory, as repositories (*khizāna*) for the first and third on the list<sup>29</sup>.

The list of the internal senses as found in the *Discussions of Wisdom* is, as expected, roughly similar with the version of the *Cream* (the main structural source for Barhebraeus has sometimes been seen in Avicenna's *Salvation*). However, Barhebraeus literally speaks of the internal senses of the animal here<sup>30</sup>, not the animal soul (which, literally, would allow for them to be found with humans as well only when understood in a wider sense as living being). For the common sense, even three different terms are offered here, كمال الحواس كبرياء كمال as well as كمال. The others are, in sequence كمال, now as an abstract noun, not an adjective related to a faculty<sup>31</sup>, كمال or كبرياء, when, again, related to estimation (now كمال, that is, not the abstract form) or intellect (كبرياء), respectively, not the whole animal or rational soul, and, finally<sup>32</sup>,

<sup>26</sup> Furlani, «Di tre scritti», 300-301.

<sup>27</sup> *Maqāṣid al-falāsifa*, A. F. al-Murīdī (ed.), Dār al-Kutub al-'ilmiyya, Beirut 2003, 200-201.

<sup>28</sup> Fakhr al-Dīn al-Rāzī, *al-Mulakkhāṣ fī l-manṭiq wa-l-ḥikma*, Ī. Hanoğlu (ed.), 2 vols., Dār al-Aṣḥayn, Ammān 2021, ii.943-944 [I am indebted to Abdurrahman Mihirig for providing me with a copy of this edition].

<sup>29</sup> This is based on Avicenna's *On the Soul*, for example, 167, l. 5, for the case of the imaginative power (rendered as *thesaurus* in the Latin translation, ed. van Riet, ii.8, 4), see also Wolfson, «Maimonides on the Internal Senses», 459. Even though this passage is also similarly found in al-Abharī's *Unveiling of the True Natures (Kashf al-ḥaqā'iq)*, H. Sarioğlu (ed.), Istanbul 1998, 473-474, Fakhr al-Dīn's text seems to have been used as a source here due to the omission of the repeated clear sequence of the senses in al-Abharī. In both Fakhr al-Dīn and al-Abharī, the estimative faculty or rational soul determine the fifth's faculty's denomination, respectively.

<sup>30</sup> Furlani, «Di tre scritti», 306.

<sup>31</sup> However, there are at least four manuscripts of a different line of transmission listed in Janssen's apparatus that just have the transliterated form ظن.

<sup>32</sup> Furlani, «Di tre scritti», 306.

روحان. Here, estimation is illustrated by the Avicennan example of the sheep grasping the enmity of the wolf<sup>33</sup>. The common sense is said to perceive all sensibles simultaneously<sup>34</sup>. Pneuma is introduced for all faculties of «the composed animal»<sup>35</sup>, though the faculties aren't expressly said to be situated in pneuma.

### II.1 Complete Presence of the Internal Senses?

In the *Animals*, Barhebraeus also includes the Aristotelian doctrine that some animals don't have all, but, rather, only some external senses<sup>36</sup>. However, while Avicenna requires all animals to have at least touch and taste in the *Salvation*<sup>37</sup>, Barhebraeus requires only the sense of touch<sup>38</sup>. Therefore, one might wonder whether all animals always have all the internal senses nonetheless, a topic seemingly not discussed by Barhebraeus, and what the task of the common sense will be with regard to its combinatory function, if the sensory input is limited to that of a single sense only. Perhaps it would be the procuring of the sense-data to the other internal senses rather than the addition of a temporal component<sup>39</sup>.

## III. Animal Rationality

### III.1 Indirect Denial

As the rational soul is also called the «human soul»<sup>40</sup>, animals are formally

<sup>33</sup> *Discussions of Wisdom*, ed. Janssens, 86.

<sup>34</sup> *Discussions of Wisdom*, ed. Janssens, 85.

<sup>35</sup> Furlani, «Di tre scritti», 306, *Discussions of Wisdom*, ed. Janssens, 88. This could be understood as complex animal or, rather, animal soul. One might wonder whether at least every blooded animal is supposed to have pneuma, as the latter might derive from blood.

<sup>36</sup> Aristotle discusses this in the *History of Animals*, iv.8.

<sup>37</sup> *Salvation*, ii.10.

<sup>38</sup> Ms. Laurenziana, Or. 83, f. 108v (said about animals having uniform parts). See also B. O'Shaughnessy, *Consciousness and the World*, Oxford University Press, Oxford 2002 (reprint 2008), 558-661, for connecting this sense with a required body-awareness in animals.

<sup>39</sup> See also P. Gregoric, *Aristotle on the Common Sense*, Oxford University Press, Oxford 2007 (re-issue 2011), 99-110, for discussing time and the common sense in Aristotle, and Th. K. Johansen, *The Powers of Aristotle's Soul*, Oxford University Press, Oxford 2012, 196-198, for a discussion of the common sense, and *ibid.*, 208, for Aristotle on some animals having perception, though not *phantasia*, but not vice versa in his *On the Soul*, iii.3 (428a6-11). The Aristotelian case is, however, not directly applicable to the Avicennan model.

<sup>40</sup> For example, in Barhebraeus's *On the Soul*, ms. Laurenziana, Or. 83, f. 126r, at the beginning of the chapter on the rational soul, and in the *Epistle on the Human Soul (Traité sur l'âme*, P. Sbath (ed.), H. Friedrich, Cairo 1926), 24.

not assumed to be equipped with one. This is also seen in the twofold distinction of the faculty's name as composite imaginative or cogitative in respect of a non-human or human animal bearer as represented by the respective faculty or soul. However, while Barhebraeus uses animal and rational soul as point of relation in the *Cream*, but estimation and intellect in the *Treatise* and *Discussions of Wisdom*, estimation might be understood as animals' highest, though not fully rational, faculty, which is explicitly stated in Avicenna<sup>41</sup>.

### III.2 Express Denial

In both the *Sanctuary Lamp* and a shorter version of the *Rays*, Barhebraeus discusses and explicitly rejects animal rationality<sup>42</sup>.

After refuting three objections of affirmers of animal rationality in the longer version in the *Sanctuary Lamp*, Barhebraeus presents fourteen examples of animal behavior that, according to these hypothetical opponents, display rational behavior<sup>43</sup>. These examples, which present behavior considered to portray thought and foresight, exceptional sensory perception, and skillful remembering, feature mice<sup>44</sup>, bees, ants, spiders, asses and camels, foxes, snakes, hedgehogs, swallows, hens, beavers, wild asses, eagles, and crows. Besides having given a full translation, Bakoš also traced most of these examples to potential sources, among them Moshe Bar Kepha, the *Physiologus* in several versions, and Aristotle's *History of Animals*<sup>45</sup>. However, it should be added that there is a very close likeness in at least the first animal examples with a similar discussion in the *Higher Investigations* of Fakhr al-Dīn al-Rāzī, who also presents fourteen examples<sup>46</sup>. This Arabic text seems to have been Barhebraeus's main textual and structural source

<sup>41</sup> López-Farjeat, «Self-awareness», 127.

<sup>42</sup> That is, whether non-rational animals have a rational soul, according to the former place, or are rational, according to the latter, respectively; Furlani, «Di tre scritti», 296, «Barhebreo sull'anima razionale II», 103.

<sup>43</sup> Furlani, «Barhebreo sull'anima razionale II», 103; ed. Bakoš, ۳۹-۴۰.

<sup>44</sup> See S. Virgì, «The Mouse's Tale: al-Jāhīz, Abū Bakr al-Rāzī, and Fakhr al-Dīn al-Rāzī on Animal Thinking», *British Journal for the History of Philosophy* (forthcoming). A version with two rats helping each other is also found in J.S. Watson, *The Reasoning Power in Animals*, Reeve & Co., London 1867 (reprint Charleston, SC 2021), 293, and several reports of animals returning home *ibid.*, 322-339.

<sup>45</sup> Bakoš (ed.), 121-124.

<sup>46</sup> Fakhr al-Dīn al-Rāzī, *al-Maṭālib al-'āliyya min al-'ilm al-Ilāhī*, M. Shāhīn (ed.), 9 pts. in 6 vols., Dār al-Kutub al-'Ilmiyya, Beirut 1999, vii.180-182; English translation in P. Adamson, «Fakhr al-Dīn al-Rāzī on Animal Intelligence» (forthcoming).

here, though he changed some animal examples. Some examples are also found in Aelian's *Animals*<sup>47</sup>, which might be considered an indirect source for both Fakhr al-Dīn and Barhebraeus. Notable among them is the beaver's self-mutilating behavior aimed at being left alone by enemies, which, while not found in Fakhr al-Dīn, is, as Bakoš notes, in the *Physiologus*, as well as an example of a bear, which is in Fakhr al-Dīn, though not in Barhebraeus.

In the shorter version in the *Rays*, some examples are only alluded to (especially that of the fox or the ants' prevention of sprouting of wheat)<sup>48</sup>, as if supposing a common knowledge among his readers.

Barhebraeus's own solution in the *Sanctuary Lamp* consists in declaring these animal actions to be natural and performed by God-given powers for performing distinct singular actions<sup>49</sup> and the term knowledge being used only in a metaphorical way for animals<sup>50</sup>. By contrast, the rational human being is able to perform various and especially opposite actions<sup>51</sup>. In the *Rays*, the rational being has, in contrast to all animals, secure knowledge of their capacities<sup>52</sup>. With this, his denial reads stricter than the response in Fakhr al-Dīn, who could be understood as allowing for various degrees of rationality<sup>53</sup>.

### III.2.1 Metaphorical Usage

Similarly to his abovementioned metaphorical usage of knowledge for animals, some other passages in Barhebraeus featuring seemingly rational animals have to be understood in a metaphorical sense as well. Among these are speaking animals in his *Amusing Stories*<sup>54</sup>, but also the interpretation of birds as repre-

<sup>47</sup> Vi.34 and vi.9 [I owe the latter reference to Peter Adamson]. There's also a similarity with the snakes eating fennel and vi.12.

<sup>48</sup> Barhebraeus, for example, uses the adjectives فكحش and فكحش («of the fox», «of the hen») for this allusion, Mosul, Syrian Orthodox Archdiocese, ms. 26, f. 53r.

<sup>49</sup> Ed. Bakoš, ⲉⲓ. D.R. Griffin, *Animal Minds*, University of Chicago Press, Chicago 1992, 254-258, argues that instinct in animal actions doesn't exclude consciousness. See also K. Andrews, *The Animal Mind. An Introduction to the Philosophy of Animal Cognition*, Routledge, Abingdon 2015, 51-79, for an introduction, especially 70-73 for reassessing the mirror test.

<sup>50</sup> Ed. Bakoš, ⲉⲓ.

<sup>51</sup> Furlani, «Di tre scritti», 296. Being able to perform opposite acts is employed as a hallmark of rationality here and in the *Rays*.

<sup>52</sup> Syrian Orthodox Archdiocese, ms. 26, f 53r.

<sup>53</sup> As recently suggested by Adamson, «Fakhr al-Dīn al-Rāzī on Animal Intelligence».

<sup>54</sup> *The Laughable Stories*, E.W. Budge (ed./tr.), Luzac & Co., London 1897 (reprint Piscataway, NJ 2003), ch. 10 (ed. 70-74, tr. 90-94). The heading calls them «irrational», though.

senting some capacities that might be related to the internal senses (he mentions  $\text{كذلك}$ ,  $\text{من}$ , and  $\text{فصل}$  here) in Creation as found in his *Sanctuary Lamp* (xii.4.4)<sup>55</sup>.

#### IV. Animal Self-Awareness

Avicenna discusses animal self-awareness in some of his works, granting it to animals in a limited manner only<sup>56</sup>. According to a much commented upon passage in the *On the Soul* of his *Healing*, animals are aware of themselves as a single soul that governs the body<sup>57</sup>. In his later *Investigations* and *Glosses*, Avicenna is usually understood as stressing the limitedness of this self-awareness, as it is achieved only via estimation, whereas full self-awareness (and the grasping of universals) requires an immaterial soul, which is possible for human intellect only<sup>58</sup>. For, due to the estimative faculty's situation in the brain, it is material<sup>59</sup>.

However, as there are no works by Barhebraeus that are similar to the *Glosses* and *Investigations*, and, further, as Barhebraeus doesn't include Avicenna's few, though important lines on animal self-perception in his own *Book on the Soul*, be it for lack of personal interest in that topic or due to abbreviating, Avicenna's stances on this topic cannot simply be employed when referring to Barhebraeus.

Barhebraeus does, however, treat self-awareness regarding the human soul in several works in the context of its bodiliness, though without any mention of animals<sup>60</sup>. As seen above, he also changed the classic animal examples for the estimative faculty's role to humans («Socrates»)<sup>61</sup>, at least in one instance.

In his *Physics*, Barhebraeus exemplifies an agent aware of his acting with a human only, while plants represent a natural agent without awareness<sup>62</sup>. Even

<sup>55</sup> Ed. Çiçek, col. 956. This interpretation will be looked into in a forthcoming paper.

<sup>56</sup> See the analyses in Alwishah, «Avicenna on Animal Self-Awareness», 74-80, and López-Farjeat, «Self-awareness», 131-139.

<sup>57</sup> *On the Soul*, ed. Rahman, 234; López-Farjeat, «Self-awareness», 126-127.

<sup>58</sup> Though López-Farjeat, «Self-awareness», 133-136, raises some skeptical concerns.

<sup>59</sup> López-Farjeat, «Self-awareness», 131, and Alwishah, «Avicenna on Animal Self-Awareness», 80-81.

<sup>60</sup> Furlani, «Avicenna, Barhebreo, Cartesio».

<sup>61</sup> *Cream, On the Soul*, Laurenziana, ms. Or. 83, f. 123r (Socrates's friendliness).

<sup>62</sup> 1.2.3 (ed. Schmitt, forthcoming). However, Barhebraeus uses even «knowledge» (معرفة), not just «awareness», here, which renders the Arabic doublet معرفة ودراية.

though this passage is verbatim taken from Abū l-Barakāt<sup>63</sup>, Barhebraeus doesn't include animal self-awareness, which is discussed several pages further in the chapter on psychological powers in the same source in a similar manner<sup>64</sup>. Therefore, perhaps only a limited (first-order) self-awareness of animals by estimation can be tentatively assumed of animals<sup>65</sup>. Also for Barhebraeus, estimation can be considered the highest animal faculty.

There is, however, as it seems, no discussion of a criticism of the faculty of estimation's role, which is found in some later authors (even though Barhebraeus is relying on them as well)<sup>66</sup>.

## V. Conclusion

Summing up, Barhebraeus offers a theory of the internal senses that is basically Avicennan. Despite his usage of several post-Avicennan authors elsewhere as well as on this topic, Barhebraeus doesn't follow their criticism of the Avicennan system. An establishment of Syriac terminology for the internal senses, especially estimation, is discernible throughout the course of his writings, which are a rare instance of their rendition into Syriac (and of a Syriac reception of post-Avicennan texts on this matter, which manifests, for example, in the *Treatise*).

There is expressly no share of rationality in animals. Rather, their estima-

63 *Well-Reflected Book*, ii.5.

64 *Well-Reflected Book*, ii.298. This passage is translated and discussed in Kaukua, «Self, Agent, Soul», 84-88. Barhebraeus usually does, however, grant the animal soul voluntary movement, see Furlani, «La psicologia di Barhebreo», 37.

65 On second-order awareness, see Black, «Avicenna on Self-Awareness», 76-78. An argument for assuming first-order self-awareness here only might be seen in the immediacy of animal memory, on which see also Alwishah, «Avicenna on Animal Self-Awareness», 92-93. For an introduction, see also R.J. Gennaro, «Animal Consciousness and Higher-Order Thoughts», in K. Andrews - J. Beck (eds.), *The Routledge Handbook of Philosophy of Animal Minds*, Routledge, Abingdon 2018, 196-202. Some distinctions of self-awareness and experimental evidence for it in apes are given by A. Sinha, «Experimentally Acquired Knowledge of the Self in a Nonhuman Primate», in S. Menon - A. Sinha - B.V. Sreekantan (eds.), *Interdisciplinary Perspectives on Consciousness and the Self*, Springer, New Delhi 2014, 81-99, here 91-92. Sh. Gupta and A. Sinha, «Executive Functions as a Path to Understanding Consciousness: Looking Under the Light», in *ibid.*, 101-116, here 104, argue for a continuous increase of consciousness across species according to evolutionary development. See also St. Finger, *Minds behind the Brain. A History of the Pioneers and Their Discoveries*, Oxford University Press, New York 2000, 299, for a similar historical assumption of continuity by Sperry.

66 The objections by al-Ghazālī and Fakhr al-Dīn are discussed by, for example, Alwishah, «Avicenna on Animal Self-Awareness», 85, and Black, «Estimation (*Wahm*) in Avicenna», 221-224.

tive faculty might come closest to this. As in Avicenna, a limited form of animal self-awareness might be argued for, but on less available statements and, therefore, with many more question marks.