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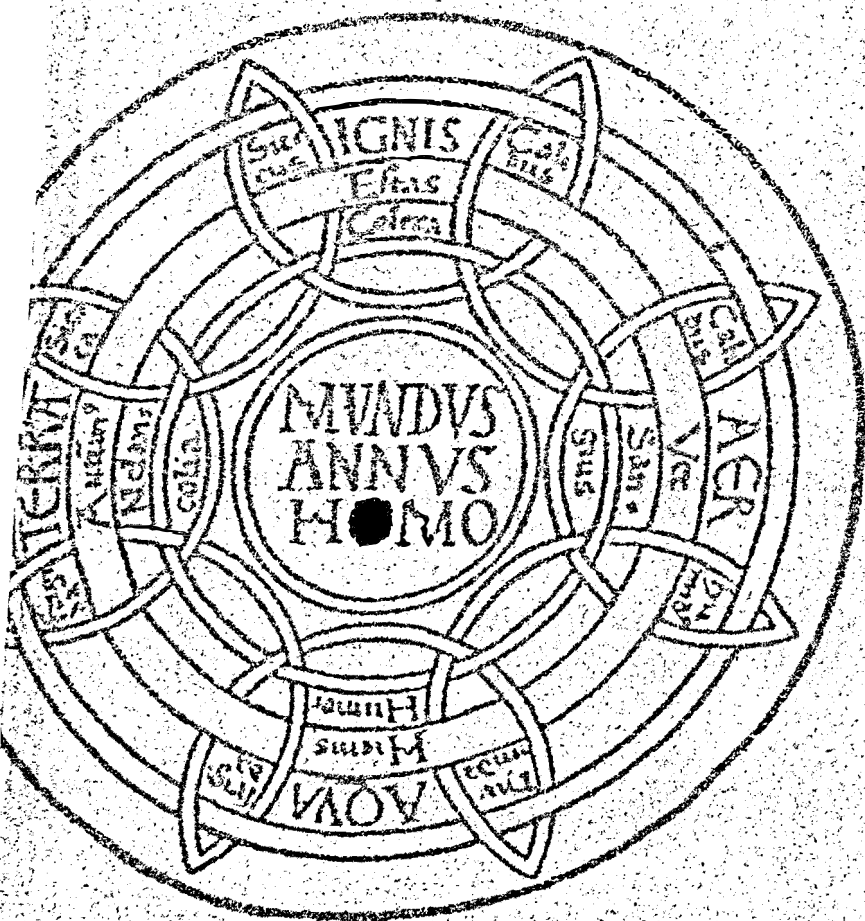
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## Avicenna's *De anima* in the Latin West



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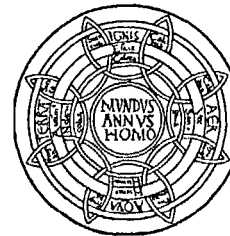
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## Avicenna's *De Anima* in the Latin West

The Formation of a Peripatetic Philosophy of the Soul  
1160–1300

Dag Nikolaus Hasse



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## PREFACE

The 'errors' of Avicenna have vexed Western thinkers since the thirteenth century. When it appeared to some Catholic scholars in the 1920s that Avicenna's impact on medieval thought might have been on the scale of that of Averroes, they had to integrate him into the then prevailing view of the thirteenth century: a period of condemnations, of movements dangerous to Christian belief, and of errors. Much of this turmoil seemed due to false interpretations of Aristotle's true philosophy, and the culprits at hand were the Arabs, who had hidden the pure Aristotle beneath a Neoplatonic veil. It was the wrong time for Avicenna to re-enter the history of Western thought; and as so often happens when one starts on the wrong foot, the next step is unbalanced as well. Hence, in recent scholarship hostile to the older interpretation, Avicenna is portrayed as the foreign rebel, the Muslim challenger to the authority of Christian thought, who introduced the West to the use of reason in science and religion. But whether he was seen as a culprit or rebel, in substance the perception of Avicenna remained the same.

We therefore need to look again at Avicenna's place in the thirteenth century: not as a footnote to Aristotle, nor as a danger to confessionalists, nor yet as a role-model for their post-modern counterparts, but as a philosopher in his own right. Few have taken him seriously, because in the end he lost against Aristotle and Averroes in the competition to be the leading philosopher in the West. But to be impressed by the contingent verdict of history is to underestimate a philosopher powerful enough to eclipse Aristotle and to dominate philosophy in the Arabic East for centuries. If we are to be fair and pay our tribute to Avicenna, we should make him the protagonist of his own story, that is, we should look at the reception of his thought in the West as an autonomous phenomenon with its own chronology and not merely as a function of other developments. If we adopt this perspective, the emphasis falls on his most frequently copied and quoted philosophical work, the *Kitāb an-nafs* or *De anima*, his book on the soul. The present study is concerned with the history of its influence on the Latin West.

It was Etienne Gilson who first examined closely the Western fate of Avicenna's *De anima*; and one can truly say that after his seminal studies of the late 1920s Avicennism became a key topic among medievalists. Gilson's starting point was Thomas Aquinas and the latter's criticism of the Augustinian theory of intellection. In an attempt to explain why Thomas turned against one of the highest authorities of Christian learning, Gilson came to the conclusion that Thomas had reacted against a doctrinal current which connected Augustinian theories about illumination with those of Avicenna. This current he labelled 'Avicennized Augustinianism'.

Gilson's thesis aroused controversy. In 1934, Roland de Vaux made it even more radical by claiming that there existed a heterodox Avicennian movement in the West, which he called 'Latin Avicennism', which, he claimed, came to be a danger to Christian belief. This in turn provoked numerous refutations, of which the most important were those by Fernand Van Steenberghen and Ermenegildo Bertola. Gilson's brilliantly written, but highly speculative studies influenced subsequent scholarship not only on the Latin Avicenna but also on the intellectual position of many medieval writers. Scholars before Gilson had been aware of Avicenna's influence on the psychology of Albertus Magnus; but Gilson succeeded in diverting attention towards Thomas Aquinas and William of Auvergne – a misleading shift in focus.

After Gilson (who, it must be admitted in fairness to him, has often been misunderstood) there have been several brief surveys of Avicenna's Western influence, which merely reiterate previous scholarship (Goichon, Afan, Ulken, Van Riet, Verbeke, Davidson). Several significant case studies concerning his impact on particular scholastic writers have, however, appeared. The credit for raising our knowledge of Avicenna's impact on Western thought to a higher level by giving it a firm philological grounding, goes to Marie-Thérèse d'Alverny, who produced a catalogue of manuscripts, and Simone Van Riet, who published a multi-volume critical edition of Avicenna's philosophical works in the Latin translation. The recent revival of philosophical interest in Avicenna (e.g. Flasch, de Libera) has benefited from working within these new parameters.

A common weakness of almost all the studies mentioned above is that their 'Avicenna' is the Avicenna of the Latin translation. The most notable exception to this general neglect of the Arabic original is Simone Van Riet, whose editions contain a very useful Arabic-Latin *apparatus criticus*. As a rule, the Latin of arabists is much better than the Arabic of latinists, but it is seldom used. Given the enormous work still to be done in the field of Arabic studies, it is understandable, though regrettable, that Arabists do not make greater use of their Latin skills.

Twentieth-century scholarship on the psychology of the Arabic Avicenna – or Ibn Sīnā, to use his Arabic name – though modest in its beginnings, has seen remarkable progress. First, Fazlur Rahman provided both a critical edition of the *Kitāb an-naḥs* from *aṣ-Ṣifā'* (i.e. *De anima*) and a number of studies which benefit from his excellent knowledge of the text and his acquaintance with the Greek commentators on Aristotle. Unfortunately, Avicenna's other psychological writings have not received editions of such a high standard, if any at all (e.g. the *Maṣrīqiyūn*).

It is not surprising that only a few scholars (Gätje, Marmura) have been able to improve our knowledge substantially at this stage. One of the main hindrances to research has been the lack of a philological assessment of Avicenna's own statements about the aim and standpoint of his philosophy, and even about his life

and works. Dimitri Gutas's *Avicenna and the Aristotelian Tradition* (1988) has now filled this gap and given Avicennian scholarship a new and more solid foundation. In the last few years the level of philosophical analysis of Avicenna's theory of the soul has risen considerably: Herbert Davidson has studied the theory of the intellect; Jean Michot has published studies and translations on religious aspects of Avicenna's psychology; and Deborah Black has investigated his theory of estimation.

There thus exists a more solid philological and historical basis for a new attempt to comprehend the role of Avicenna and his theory of the soul in the history of Western thought. Nevertheless, the situation is far from ideal. On the Arabic side, not only is there a dearth of reliable editions, but there is also a total absence of *apparatus fontium* or detailed accounts of the sources of Avicenna's psychology. To study these sources, in particular the Greek commentators on Aristotle, is beyond the scope of this survey. Throughout the book, I have therefore adopted the method of *scriptura sui ipsius interpres* and have aimed at elucidating Avicenna's standpoint by collecting evidence from his own works. Avicenna's œuvre is, in fact, a paradise for practitioners of the *sola scriptura* method. His many different philosophical treatises represent different stages in a continuous process of reworking his position within the Peripatetic tradition and eventually emancipating himself from it. Consequently, for most of his psychological doctrines, one can find counterparts in works earlier and later than *De anima*. I only depart from the *sola scriptura* method to compare Avicenna's standpoint with the major source and role-model of his philosophy, Aristotle. This seems an especially appropriate approach since most of the scholastic writers examined here did not yet know the Greek commentaries on Aristotle's *De anima*.

On the Latin side, we are far from having a complete set of editions for all psychological treatises written between 1160 and 1300. This is immediately apparent from René Antoine Gauthier's survey of commentaries on Aristotle's *De anima* between 1240 and Thomas Aquinas (in the preface to his edition of Thomas's commentary). Half of these commentaries have not been published. The manuscripts considered in the present survey are mostly of writers of the first half of the thirteenth century, when Avicenna's influence was particularly strong. In general, the core material of the book consists of Latin sources that treat psychology as a primary subject. This includes sections on the soul in longer works, such as Michael Scot's chapter on the soul in his *Liber introductorius*, but excludes, for example, Robert Grosseteste's sermon *Ecclesia sancta celebrat*, which touches upon psychological matters, but does not devote a separate section to it. Hebrew and medical sources, as well as highly conservative sources that do not take account of either Aristotle or Avicenna, are mentioned only in passing (e.g. Pseudo-Robert Grosseteste, *De anima*).

My approach to Avicenna's influence is to move from the general to the specific. The first part of the book analyses the impact of Avicenna's *De anima* as a whole on the structure and method of Western psychological writings in the twelfth and thirteenth centuries. As will become clear, the story of the rise and decline of Avicenna's *De anima* as a methodological model for philosophers and theologians is largely identical with the history of psychology in this period. It opens with Dominicus Gundissalinus's *Liber de anima* and ends in the second half of the thirteenth century, when the scholastics came to prefer other formats, notably the commentary, for their psychological writings.

The second part of the book turns from questions of genre and approach to specific doctrines. Each chapter is an entity in itself and leads from an analysis of a particular Avicennian theory to its understanding and reception in the Latin West. Instead of covering all the theories laid out in *De anima*, six representative doctrines have been chosen and are presented in the order of their appearance in *De anima*: the Flying Man as part of Avicenna's discussion of the notion of the soul in general (*De anima*, book one); shellfish and nerves as an example of the theory of sense perception (book two); optics as the topic treated most extensively in *De anima* (book three); estimation and 'intentions' as an example of the theory of the internal senses (book four); prophecy as a theory which connects several core notions of Avicenna's philosophy (books four and five); and intellection as an aspect of Avicenna's theory of the rational soul (book five).

The last two topics present the particular difficulty that they seem to be linked with metaphysical ideas and to demand an investigation of Avicenna's *Metaphysics* and its reception. It turns out, however, that this is a problem only for the modern reader: Avicenna makes a straightforward division between what belongs to natural philosophy and what to metaphysics (see, for example, *De anima*, ed. Van Riet, IV,2, p. 28 and V,5, p. 132). In addition, the pattern of dissemination of the *Metaphysics* and the period of its main influence, the late thirteenth century, were also different from that of *De anima*. Avicenna's metaphysical doctrines will therefore be discussed only when scholastic writers connected them with his psychology.

Consideration of the social background, of universities, countries, courts, libraries, religious orders, schools, church organization and especially condemnations has been deliberately left aside, partly because it seemed preferable to let the sources themselves determine the topics. The story of the influence of Avicenna on thirteenth-century psychology can – and perhaps should – be told with no more than incidental reference to the condemnations or the social background. But now that the story has been told, I hope it will be fruitfully linked with a larger context by other scholars.

The last part of the book consists of an Index locorum containing all quotations

and adaptations of Avicenna's *De anima* in the Latin West found in the body of sources described above and in several other texts dating from between 1160 and 1300. The Index comprises c. 1600 quotations ordered according to the passages in Avicenna from which they are drawn. Instead of giving complete references in the course of the book, I often refer to the Index locorum. It hardly needs to be pointed out that the Index is far from complete, given the many treatises not yet edited and the fact that important works, such as half of the *Opera omnia* of Albertus Magnus, still lack indexes. I have turned many pages with the constant fear of overlooking a reference, and obviously there is room for improvement: *Quae me fugerunt, alii facile reperient*.

It remains for me to thank all those who have helped and advised in writing this book. It was in the medieval Latin and Arabic seminars of the University of Göttingen that my attention was first drawn to the encounter of Arabic and Latin cultures in the Middle Ages. I am grateful for the advice and encouragement of Fidel Rädle, Otta Wenskus, Ulrich Rudolph and Peter Bachmann. When, as a postgraduate at Yale University, I was exploring several Arabic-Latin subjects with an eye to future study, Dimitri Gutas aroused my interest in Avicenna. I wish to thank him for this, for the very enjoyable and intense year at the Near Eastern Languages and Civilizations Department, and for the many hints and pointers which he continued to provide after I had left. Above all, my gratitude goes to Charles Burnett, who was the supervisor of my doctoral dissertation written at the Warburg Institute, which was the precursor of the present book. This gratitude pertains not only to all I have learned from him in these years, but also to the constant exchange and dialogue with him on matters scholarly and personal, which made my stay at the Warburg Institute so pleasant. I should also like to thank Jill Kraye – everyone knows how much that is produced at the Institute is indebted to her knowledge and care, and my work benefited from both. The Warburg Institute proved to be an ideal place for working on cross-cultural topics and I am grateful to the Director Nicholas Mann, the staff and the students for the scholarly atmosphere which was so conducive to my work. At the Institute there are many people to whom this book is indebted, and my heartfelt thanks go to all of them and especially to Christopher Ligota. The Arabic part of my study benefited from the informal reading class on Arabic philosophy held at the Institute and from the philological competence of Fritz Zimmermann and Rob Wisnowsky. The librarians of the Warburg Institute were of the greatest help, responding without complaint to my requests to buy books. The final version of the book was written at my present academic home, the University of Tübingen: I am grateful for the warm welcome I was given here. My thanks extend to a number of scholars I have enjoyed discussions with, and from whom I have learnt while working on Avicenna, especially Silke Ackermann, Henryk Anzulewicz, Frank Bezner, David d'Avray, Luc

Deitz, Rebecca Flemming, Ann Giletti, Danielle Jacquart, David Knipp, Christina Knorr, Judith Reker, Jonathan Rolls, Andreas Speer, Martin Stone, Koenraad Van Cleempoel and Irene Zwiep. Finally, I wish to thank the Studienstiftung des deutschen Volkes, the British Academy, and the Rotary Club Kiel (in particular Harald Wohlthat) for their generous financial help, and my parents, my brother and my wife for all their support and encouragement.

Dag Nikolaus Hasse  
Tübingen  
January 1999

Note on terminology:

- *Peri psychēs* refers to Aristotle's *De anima* (Περὶ ψυχῆς);
- 'psychology' means theory of the soul and excludes modern connotations;
- 'Aristotelian' is used to refer to Aristotle's own theories, books, etc. only, and not to those of his followers;
- 'Peripatetics' refers to Aristotle's Greek and Arabic followers, but not to Aristotle himself; the same applies to the adjective 'Peripatetic';
- 'Avicennian' does not imply a doctrinal current;
- 'Avicennist' applies only to a doctrinal current;
- 'Arabic' puts the emphasis on the language;
- 'Arab' puts the emphasis on the ethnic group;
- 'Islamic' puts the emphasis on the religion and culture.

The transliteration of Arabic follows the rules laid down by the Deutsche Morgenländische Gesellschaft, with the exception that I have used the diphthongs *aw* and *ay* instead of *au* and *ai*. The Latin is quoted in a standardized version, even if the edition or manuscript employs medieval spelling: *ae* for *e* where appropriate, *ti* for *ci*, *i* for *y*, *v* for *u* where appropriate. Punctuation is modernized and adapted to the expectations of English readers.

- |           |  |
|-----------|--|
| [...]     | deletion   |
| <...>     | phrases in my English translation that do not have a direct equivalent in the original |
| (italics) | explanatory remarks  |

## INTRODUCTION

*De anima* is Avicenna's most comprehensive work on the soul. It was written as part of *aš-Šifā'* ('The Cure'), an enormous compendium covering logic, natural philosophy, mathematics and metaphysics. Avicenna started to work on *aš-Šifā'* not long before AD 1021 (412 AH), when he was in Hamaḍān serving as vizier to the ruler Šams ad-Daula. The city was captured in 1023–24, and Avicenna moved to Iṣfahān, where he completed the book by 1027 at the latest. *De anima* was very probably written in Hamaḍān between 1021 and 1024, as part of the section on natural philosophy.<sup>1</sup>

It is a common mistake among Western medievalists to call Avicenna's *De anima* a commentary on, or paraphrase of Aristotle's *Peri psychēs*. The true character and purpose of the book is obvious both from Avicenna's prologue to *aš-Šifā'*, and from testimonies by his secretary Ġūzġānī. To quote the latter's introduction to *aš-Šifā'*, written shortly after Avicenna had completed the work:

The hope of ever obtaining his lost works having dimmed, we asked him <i.e. Avicenna> to rewrite them and he said: 'I have neither the time nor the inclination to occupy myself with close textual analysis and commentary. But if you (*pl.*) would be content with whatever I have readily in mind <which I have thought> on my own, then I could write for you (*pl.*) a comprehensive work arranged in the order which will occur to me'. We readily offered our consent to this and urged that he start with Physics.<sup>2</sup>

What is meant by 'close textual analysis and commentary' is more obvious from Ġūzġānī's other testimony: 'Then I asked him myself to comment upon the books of Aristotle, but he answered that he had no leisure at that time.'<sup>3</sup> It can be inferred from these passages that Avicenna in fact had written commentaries on Aristotle in his youth, but that they were already lost by about AD 1020 when he started to write *aš-Šifā'*. This book then is 'a comprehensive work arranged in the order which will occur to me'. In the prologue to the part on natural philosophy (which includes *De anima*) Avicenna says that he will write about natural philosophy 'in the manner established by our opinion and arrived at by our theoretical investigation. The arrangement on this occasion will correspond to that followed in Peripatetic

1. Only the first 20 folios of the section on natural philosophy were completed before 1021; *De anima* is part six out of eight (cf. the Latin title *Liber sextus de naturalibus*). We owe most of the information on the genesis of *aš-Šifā'* to Ġūzġānī, Avicenna's secretary. See Gutas, *Avicenna*, pp. 41 and 101–12.

2. Translation by Gutas, *Avicenna*, pp. 40–41 and 101.

3. Ibid., p. 101, slightly changed.

philosophy.<sup>4</sup> *De anima*, therefore, is a comprehensive compendium of the theory of the soul; it is arranged for the most part according to the Peripatetic tradition but presents Avicenna's own philosophy.

The work is divided into five sections which cover the following topics: the general notion of the soul (book one); the faculties of the vegetative soul and the external senses except vision (book two); vision (book three); the internal senses and the motive faculties (book four); and the rational soul (book five). A closely argued philosophical work of 468 pages (in Van Riet's edition) is not easily summarized; nevertheless, if the history of its influence is to be intelligible, its contents have to be sketched out and its terminology explained.

The soul is defined as the perfection of the body. Although it cannot be proved it is obvious to intelligent people that the soul exists independently of the body (I,1). The soul, defined in itself, is a substance. The soul is one; from it the faculties flow into the organs (I,3). There are three vegetative faculties (nutrition, growth, reproduction). There are two kinds of motive faculty: one which orders, the other which performs. There are five external and five internal senses. There is a practical and a theoretical intellect. The latter has four different relations to intelligible objects: the first three levels (material intellect, intellect *in habitu*, intellect *in effect*) are increasingly higher dispositions to reach the fourth level (acquired intellect), which is a temporary actualization of the third (I,5).

There are different degrees of abstraction, extending from sense perception to intellection (II,2). Flesh and nerves are the natural instrument of touch; there is no medium (II,3). The process of smelling happens when the medium is either mixed with particles from the object or permuted by it (II,4). Sound is the product of the undulation of air or water when pressed between two objects (II,5).

The elements involved in the process of sight are natural light, acquired light and the translucent (III,1–4). The correct theory of vision is that of the intromission of visible forms, which are conveyed without any change in the medium or any lapse of time. Their transmission proceeds in the internal senses (III,5–8).

As for the internal senses, imagination stores the sensible forms perceived by the senses and collected together by common sense (IV,1). The imaginative/cognitive faculty combines and separates these forms. If it acts freely (as in sleep or madness), unreal forms are perceived. In some people the imaginative faculty and the soul are so powerful that they have visions in waking life (IV,2). Estimation instinctively perceives connotational attributes (the so-called 'intentions'), which are relational attributes (such as hostility) that exist in the object perceived. Estimation then forms a judgement. Memory stores these connotational attributes (IV,3). The soul has an influence on matter, i.e. its body. Some people's souls are even able to

influence external matter; this is one of the properties of prophets (IV,4).

The rational soul is not a body, nor does it subsist in a body (V,2). The senses assist in the process of intellection, but only up to a certain point. The human soul comes into existence together with its particular body. It is individuated by certain dispositions, which ensure its continued individuation after the death of the body (V,3). It is immortal (V,4). The universal forms, which are abstracted from the particular imaginable forms in the soul, flow into the human intellect from the active intellect, which is separate (V,5). There is no storehouse for intelligibles in the soul. The acquisition or re-acquisition of an intelligible form depends upon the skill or predisposition of the soul to hit upon the middle term of the syllogism by intuition. A very highly developed ability of intuition is a prophetic property (V,6). There is only one soul in each living being (V,7). The soul reigns over the body by means of the heart (V,8).

Apart from *De anima*, Avicenna wrote a number of other psychological works. None of them (except the *Canon medicinae*) was available in Latin in the twelfth and thirteenth centuries; nevertheless, they will be used in the present study to clarify Avicenna's position in his *De anima*. The major works are, in chronological order:

1. *Compendium on the Soul* (ed. Landauer): written at the age of about eighteen; it follows the order of Aristotle's *Peri psychēs*, but is independent of it.
2. *De anima*.
3. *an-Nağāt* ('The Salvation'), section on the soul: written after the completion of *aš-Šifā*; it does not contain new material, but is a compilation from earlier works, in particular (but not exclusively) from *De anima*.
4. *Dānešnāme*, section on the soul: written in Persian for the ruler 'Alā ad-Dawla; al-Ġazālī (latinized as Algazel) produced an 'intelligent reworking' of it in Arabic, the 'Intentions of the Philosophers' (*Maqāsid al-falāsifa*), which was translated into Latin; the *Tabāfut al-falāsifa*, Ġazālī's 'Refutation of the Philosophers', was not translated, and in the Latin West he was therefore generally thought to be a straightforward follower of Avicenna.
5. *al-Mašriqīyūn* ('The Easterners'), section on the soul: the work was erroneously believed to contain Avicenna's mystical 'oriental philosophy';<sup>5</sup> the section on the soul is largely identical with that of *De anima*, but much shorter; it concentrates on Avicenna's own conclusions in the earlier work.
6. *Canon*: Avicenna's main medical work; book one contains a discussion of the philosophers' and physicians' psychology.
7. *al-Isārāt wa-t-tanbihāt* ('Pointers and Reminders'), psychological section: a late

5. To borrow Charles Lohr's phrase ('Logica Algazelis', p. 226).

6. See Gutas, *Avicenna*, pp. 115–30, and *id.*, 'Ibn Ṭufayl on Ibn Sīnā's Eastern Philosophy', pp. 222–41.

4. *Ibid.*, p. 295.

*magnum opus* on the same topics as the previous compendia; written in the peculiar method of hints and pointers.

There is some controversy among scholars about the chronology of Avicenna's writings, but the overall development of his approach to philosophy seems clear.<sup>7</sup> It leads from his first tentative and brief treatises on topics belonging to the Peripatetic tradition to proper commentaries on Aristotle's works, of which none survive, and then to the great *summa* of Peripatetic philosophy, *as-Šifā'*, in which Avicenna abandons textual analysis and critical engagement with his predecessors. In subsequent works, he further emancipates himself from the Peripatetic tradition by making extracts and writing expositions not of Aristotle's works but of his own. The *Īsārāt wa-t-tanbihāt* mark the culmination of this development in that Avicenna merely states the conclusions of his philosophy, addressing himself only to those able to understand.

In the middle of the twelfth century, Avendauth 'Israelita' writes a Latin letter to an unnamed important person, whom he addresses as 'dominatio vestra':

Wishing to excite the appetite of your studious soul for the translation of a book by Avicenna, which he called 'Asschiphe', meaning 'Sufficientia', I have undertaken to translate for your sovereignty from Arabic into Latin several chapters on general aims which he put at the beginning of his treatment of logic at the opening of this book. But since in most manuscripts one can find at the beginning of the entire book the prologue of one of <Avicenna's> disciples, from which one can derive much information about the life and works of this writer, I decided to translate this prologue together with the aforementioned chapters.<sup>8</sup>

The 'chapters on general aims' that Avendauth refers to must be Avicenna's own preface and table of contents to *as-Šifā'*, which accompany Avendauth's letter in the manuscripts.<sup>9</sup> We do not know the reaction of the addressee to this advertisement

7. The chronology adopted here is that established by Gutas, *Avicenna*, pp. 79–145. For a divergent opinion, which argues for an earlier dating of the *Īsārāt*, see Michot, 'La Réponse d'Avicenne à Bahmanyār et al-Kirmānī', pp. 153–63. Marmura follows Gutas's chronology, with the exception of the late dating of Avicenna's autobiography; see Marmura, 'Plotting the Course of Avicenna's Thought', pp. 334–6.

8. D'Alverny, 'Avendauth?', p. 32: 'Verba Avendeuth israelitae. Studiosam animam vestram (Birkenmajer: *nostram*) ad appetitum translationis libri Avicennae, quem Asschiphe, id est Suffic<i>enti<i>am nuncupavit, invitare cupiens, quaedam capitula intentionum universalium, quae negotio logico praeposuit in principio istius libri, Dominationi vestrae curavi in latinum eloquium ex arabico transmutare. Tamen quia in plerisque codicibus in principio libri totius prologus cuiusdam discipuli ipsius invenitur appositus, ex quo plura colligi possunt tam de vita quam de scriptis praefati viri, ipsum quoque transferendum duxi cum capitulis memoratis'. Birkenmajer, 'Avicennas Vorrede zum "Liber Sufficientiae" und Roger Bacon', p. 95, has edited the same letter together with the prefaces which Avendauth translated. These seem to have been known to no medieval writer other than Roger Bacon and are extant in only two manuscripts.

9. It is unlikely that the phrase 'quaedam capitula intentionum universalium' refers to a separate specimen of Avendauth's projected translation, a candidate for which would be chapter 1.12 of the

of a translation, but it must have been encouraging. For we have from Avendauth the Latin translation of *De anima*, which he produced in Toledo in collaboration with the archdeacon Dominicus Gundissalinus. The preface to this translation tells us that the work was ordered and paid for by John, Archbishop of Toledo, to whom it is dedicated and who is therefore likely to be the 'dominatio vestra' of Avendauth's letter. This fixes the date of the translation between 1152, the death of Archbishop Raimundus, and 1166, the death of his successor Archbishop John of Toledo.<sup>10</sup> The text of Avendauth's preface – the earliest Latin comment on Avicenna's book – is as follows:

The philosopher Avendauth the Jew <announces> the grateful obedience of service he owes to John, the most revered archbishop of the seat of Toledo and the primate of the Spains.

Although everyone is composed of soul and body, not everyone is as certain about the soul as about the body. Whereas the latter is accessible to the senses, the former can be reached by the intellect alone. Hence, those devoted to the senses either believe that the soul is nothing, or, if they happen to suspect its existence on the grounds of the body's movement, most of them take on faith, and few show by reason, what it is and what kind of thing it is. For it is unworthy of a human being not to know the part of himself by which he knows, and not to be able to understand with <his> reasoning that <part> by which he is rational. How could he love himself or God, if he is shown to be ignorant about that which is best in himself? For a human being is inferior to almost every creature with regard to his body; he surpasses the rest only with regard to his soul, in which he carries the likeness of his creator more evidently than the rest.

Therefore, I took pains to carry into effect your command, Sir, of translating the book of the philosopher Avicenna on the soul, so that by your provision and by my labour the Latins will have firm knowledge of something hitherto unknown, namely of whether the soul exists, and what it is and what kind of thing it is with respect to essence and effect – corroborated by very true reasons.

Here then you have this book, translated from the Arabic: I took the first steps

*Isagoge* part of *as-Šifā'* which is headed 'capitulum de universalibus translatus ab Avendeuth de Libro Avicennae de loyco' (d'Alverny, *Avicenna latinus. Codices*, pp. 40, 78, 93, 99, 125, 142, 157, 174, 190, 220). This is for three reasons. First, the chapter on universals is transmitted in many more manuscripts than the letter with the prefaces. Second, the specimen of Avendauth's translation is 'put (by Avicenna) at the beginning of his treatment of logic at the opening of this book'; this is true for Avicenna's preface and the table of contents – which together form the first *fasl* of the *Isagoge* in the Cairo edition, pp. 9–11 – but is not true for chapter twelve of the *Isagoge*. Third, Avendauth in the translation of Avicenna's preface uses *intentio* only for *ḡarad* ('purpose'), but not for *ma'nā* ('concept, meaning') (ed. Birkenmajer, p. 98, line 10, and p. 101, line 92). Thus, his phrase 'capitula intentionum universalium' may well mean 'chapters on general aims'.

10. See Van Riet, 'La Traduction latine du "De anima"', p. 95; Rivera Recio, *La Iglesia de Toledo*, v. 1, p. 125; Rivera Recio, *Los Arzobispos de Toledo*, pp. 21–6. Archbishop John of Toledo, formerly bishop of Segovia (1149–52), was a Frenchman: Jean de Castelmoron-sur-Lot (Burnett, 'Magister Iohannes Hispalensis et Limiensis', p. 236, n. 38).

and read out every word as it is spoken by the people; and the archdeacon Dominicus turned each <word> into Latin. In the book, the author, as you will notice, has collected together what Aristotle said in his book<s> *On the Soul*, *On Sense and What is Sensed*, and *On Intellect and What is Intellected*;<sup>11</sup> hence, after you have this <book>, God willing, you should not doubt that you have these three <works> fully <contained> in it.<sup>12</sup>

Avendauth has been convincingly identified with Abraham ibn Daud, the Jewish historiographer and philosopher, for whose own writings Avicenna's *De anima* was an important source. Ibn Daud was born in Toledo, studied in Cordoba and returned to Toledo, probably around 1148, to escape the persecutions of the Almohads, the intolerant new Muslim rulers. He died in Toledo around 1180.<sup>13</sup> It is possible that it was because he had written to the archbishop that Avendauth established contact with Dominicus Gundissalinus, his fellow translator, who was the archdeacon of the district of Cuéllar in the diocese of Segovia between 1162 and

11. The first two titles clearly refer to Aristotle's works *Peri psychēs* and *De sensu et sensato*, but the third recalls the title of works by Alexander of Aphrodisias (*Maqāla fi l-'aql*, ed. J. Finnegan = *De intellectu et intellecto*, ed. Théry), Alkindi (*Risāla fi l-'aql*, ed. Jolivet = *De intellectu*, ed. Nagy), and Alfarabi (*Risāla fi l-'aql*, ed. Bouyges = *De intellectu et intellecto*, ed. Gilson). Given the very limited knowledge of *De sensu et sensato* in the Arabic world (see Gätje, *Studien*, pp. 81–92; in the 1980s a manuscript with an Arabic translation of the *Parva naturalia* was found), it is likely that Avendauth's knowledge of 'On Sense and What is Sensed' and 'On Intellect and what is Intellected' rests on hearsay. This agrees with the fact that Ibn Daud, the first Aristotelian in Jewish philosophy, holds Aristotle, 'the chief of the philosophers', in great esteem, but does not seem to use either Aristotle's *Parva naturalia* or the treatises on the intellect by Alexander, Alkindi and Alfarabi; instead, he relies mainly on Avicenna's *De anima* and Aristotle's *Peri psychēs* (see Fontaine, *In Defence of Judaism: Abraham ibn Daud*, pp. 40, 82, 253–4, 256–7).

12. I follow the version of the Latin text as edited by Van Riet, giving significant divergent readings in brackets (for a comparison with the prologue of Gundissalinus's *Liber de anima* see pp. 13–15 below). See Avicenna, *De anima*, I–III, ed. Van Riet, pp. 103\*–104\* and 3–4 (and Van Riet's careful analysis on pp. 91\*–103\*): 'Iohanni Reverentissimo Toletanae sedis archiepiscopo et Yspaniarum primati, Avendeuth israelita, philosophus, gratum debitae servitutis obsequium. Cum omnes constant ex anima et corpore, non omnes sic certi sunt de anima sicut de corpore. Quippe cum illud sensui subiaceat, ad hanc vero non nisi solus (om.) intellectus attingat. Unde homines sensibus dediti, aut animam nihil esse (om.) credunt, aut si forte ex motu corporis eam esse coniiciunt, quid vel qualis sit plerique fide tenent, sed pauci ratione convincunt. Indignum siquidem ut illam partem sui qua est sciens, homo nesciat, et id per quod rationalis est, ratione ipse non comprehendat. Quomodo enim iam se vel Deum poterit diligere, cum id quod in se melius est convincitur ignorare? Omni etenim paene creatura homo corpore inferior est, sed sola anima ceteris antecellit, in qua sui creatoris simulacrum expressius quam cetera gerit. Quapropter iussu vestrum, Domine, de transferendo libro (om.) Avicennae (A.) philosophi de anima, effectui mancipare curavi, ut (quatinus) vestro munere et meo (nostro) labore Latinis fieret certum, quod hactenus exstitit incognitum, scilicet an sit anima, et quid et qualis sit secundum essentiam et effectum, rationibus verissimis comprobatur. Habetis (babes) ergo librum, nobis (vobis) praecipiente et (add.: me) singula verba vulgariter proferente, et Dominico archidiacono singula in latinum convertente, ex arabico translaturum: in quo, quicquid Aristoteles dixit in libro suo de anima, et de sensu et sensato, et de intellectu et intellecto, ab auctore libri sciatis (scias) esse collectum; unde postquam, volente Deo, hunc habetis (babes), in hoc illos tres plenissime vos habere non dubitetis'.

13. See d'Alverny, 'Avendauth?', pp. 35–8; Cohen, *Ibn Daud Sefer Ha-Qabbalah*, p. xxiv; Fontaine, *In Defence of Judaism: Abraham ibn Daud*, pp. 262–3. See also n. 11 above.

1181, and who was resident in Toledo.<sup>14</sup> Their method of translation is explained in the preface to *De anima*: Avendauth first read out every word of the Arabic original 'as it was spoken by the people' ('singula verba vulgariter proferente'), and Gundissalinus then turned it into Latin ('Dominico archidiacono singula in latinum convertente').<sup>15</sup> The meaning of the word *vulgariter* ('as spoken by the people') is ambiguous: it may refer either to a vernacular Romance language or to vulgar Latin or to spoken Arabic. Given that Avendauth uses the word *proferente* ('reading out', 'pronouncing') to describe his activity rather than *convertente* ('translating'), and given that there are no traces of an intermediate language in the Latin translation,<sup>16</sup> it is most likely that Avendauth read out the Arabic text word for word and that Gundissalinus, who presumably understood Arabic but did not read the language, wrote down the Latin equivalent.<sup>17</sup> The outcome is a literal translation of some quality, as will repeatedly emerge in the present study; it certainly surpasses the modern French rendering by Jan Bakoš. *De anima* seems to be the only translation these two scholars produced together; in other translations Gundissalinus collaborated with 'Magister Iohannes Hispanus'.<sup>18</sup>

The translation of *De anima* by Avendauth and Gundissalinus is extant in fifty

14. See Rivera, 'Nuevos datos sobre los traductores Gundisalvo y Juan Hispano', pp. 268–75. Rivera's findings are discussed by d'Alverny in 'Translations and Translators', p. 446, n. 103, and in her 'Les Traductions à deux interprètes', p. 196, and, in more detail, by Burnett, 'Magister Iohannes Hispanus', pp. 425–6.

15. Avicenna, *De anima*, ed. Van Riet, prologue, p. 4.

16. See Van Riet, 'La Traduction latine du "De anima"', pp. 95\*–98\*. I am not convinced by d'Alverny's argument that the confusion between the terms *res* and *causa* in the Latin translation of *De anima* goes back to the use of the vernacular term *cosa* in the translation process (d'Alverny, 'L'Introduction d'Avicenne en Occident' (1951), p. 13, and 'Les Traductions à deux interprètes' (1989), p. 197, n. 1). Firstly, the translation *causa* for *šay'* or *amr* ('thing') appears in four cases (vol. I: 192.20, 232.55, 273.11; vol. II: 120.42); they have in common that Avicenna mentions two different things which have the same or different effects. The rendering *causa* therefore is intelligently chosen. Secondly, the translation *res* for *sabab* or *illa* ('cause') appears only in one passage (chapter IV.2, 21.82–3): 'Sed proprietas motus eius <scil. virtutis imaginativae> ... fit ex rebus singularibus quae non numerantur. Omnino autem oportet ut origo rei in hoc sit hoc scilicet quia ...'. Avicenna says here that he is not going to enumerate the causes for a certain characteristic function of the imaginative faculty, but only to mention the basic cause in a general way. The term *causa* would be a more precise translation, but *res* certainly does not mar the meaning. In fact, the phrase *origo rei* is the more elegant translation (for *aṣl as-sabab*) since it does not double the sense as *origo causae* would; this may have convinced the translators to use *res* in both sentences. In sum, the translations are carefully chosen – which makes it hard to imagine that Avendauth read out *cosa* and that Gundissalinus then decided whether he would chose *res* or *causa*.

17. For a different view holding that a Romance language was used as an intermediate, see d'Alverny, 'Les Traductions à deux interprètes', pp. 194–7. But cf. preceding note.

18. The entry 'Iohannes Hispanus' in Schulthess/Imbach, *Die Philosophie im lateinischen Mittelalter*, pp. 486–7, treats as one person what are three different translators working in Spain: (1) Avendauth, (2) Magister Iohannes Hispanus, the second collaborator of Gundissalinus on the translation of Algazel and Avicebron, working in the second half of the 12th century (see the articles by Rivera Recio and Burnett referred to in n. 14 above), (3) John of Seville, the translator of many astrological texts in the first half of the 12th century.



manuscripts, of which thirty-five were copied in the thirteenth century, fourteen in the fourteenth, and one in the fifteenth.<sup>19</sup> Judged by the sheer number of manuscripts, *De anima* was Avicenna's most influential philosophical work, followed by the *Metaphysics* with twenty-five.<sup>20</sup> The textual tradition of *De anima* is complicated by the fact that it is extant in two recensions, called A and B by modern scholars. Simone Van Riet, the editor, has convincingly shown that someone who had recourse to the Arabic reworked the translation – especially the popular chapter I,5 – in the late twelfth or early thirteenth century. It is not impossible that this person was one of the translators. Van Riet decided to publish the version B, which is extant in the majority of manuscripts (thirty-one of the fifty), and to give the readings of version A in the *apparatus criticus*, represented by manuscripts P, N and V. She invested much labour in attempting to determine which of the versions preceded the other, but without success. Either version could be a reworking of the other. Van Riet in the end tentatively suggested that B was the older.<sup>21</sup> The present study sheds new light on the question only with regard to the reception of the two versions. Dominicus Gundissalinus in his *Liber de anima* (c. 1170) and John Blund (c. 1200) quote version A.<sup>22</sup> The quotations in Jean de la Rochelle's *Tractatus* (c. 1233–5) are predominantly in the wording of version A, whereas the newly added passages in his *Summa* (ca. 1235–6) usually follow version B.<sup>23</sup> Albertus Magnus's *De homine* (1242–3) quotes version B. It may still be that version B was the original translation, which Gundissalinus reworked into version A before he wrote his *Liber de anima*, and that B was not used until it began to circulate in the first half of the thirteenth century. But it is more natural to assume that the reason why version B circulated several decades after A is that it was produced at a later date. In short, it seems likely that B is a reworking of the original translation A.

Avicenna's *De anima* was to become a bestseller among thirteenth-century writers on the soul, but it was not the only one. It was translated at about the same time as other texts of the Greek and Arabic Aristotelian tradition, most notably Aristotle's book on the soul itself. In Islamic culture, two and possibly three Arabic translations of *Peri psychēs* were made. The only complete one is anonymous and dates from the ninth century AD. Only fragments survive of the second translation, which was produced by Ishāq ibn Hunayn (d. AD 910).<sup>24</sup> Averroes in his long

commentary, which is not extant in Arabic,<sup>25</sup> seems to have used a third version; of this we have only the Latin translation and the Hebrew version by Zerahyah Hen from 1284.<sup>26</sup> From these translations developed a rich tradition of Arabic Peripatetic psychology; and Alkindi, Alfarabi, Avicenna and Averroes influenced both Latin and Hebrew philosophy. The present study is confined to the Latin tradition, which means that the interesting question of the influence of Avicenna's *De anima* on Jewish thought is left aside.<sup>27</sup>

Towards the middle of the twelfth century James of Venice translated Aristotle's *Peri psychēs* from the Greek, in Italy or Constantinople.<sup>28</sup> This version, which is extant in 120 manuscripts, is called the *translatio vetus* to distinguish it from the revision produced by William of Moerbeke between 1260 and 1269.<sup>29</sup> Around 1220, an unknown scholar (who in only one manuscript out of fifty-seven is said to be Michael Scot) translated Averroes's long commentary together with Aristotle's *Peri psychēs* from the Arabic.<sup>30</sup> Thus, there existed two translations of Aristotle's *Peri psychēs* in the Latin West: an early version from the Greek, a late one from the Arabic.

The introduction of the works of Aristotle and Avicenna (and later Averroes) into the Latin Middle Ages proved an enormous challenge to Western scholars. The translations of these books provided the West with hundreds of folios of systematic, terminologically refined and strictly philosophical teachings on the soul, which are unparalleled in early medieval psychology. This is not to say that the early Middle Ages lacked a long and rich, albeit largely unexplored tradition of psychological

anonymous translation (wrongly attributed to Ishāq in the manuscript) was published by Badawī (1954). For the transmission of Aristotle's psychology in Islamic culture see in general (and most pertinently) Gätje, *Studien zur Überlieferung der aristotelischen Psychologie im Islam* (1971), and recently Ramon Guerrero, *La Recepción árabe del De anima* (1992), and Arnzen, *Aristoteles' De anima: eine verlorene spätantike Paraphrase in arabischer und persischer Überlieferung* (1998), esp. pp. 690–707.

25. Averroes's synopsis of and middle commentary on Aristotle's *Peri psychēs* are, however, extant. See the editions by Gómez Nogales (1985) and Ivry (1994). Averroes's middle commentary influenced medieval Hebrew psychology; see Davidson, *Alfarabi, Avicenna, and Averroes*, pp. 262–3 and 298–300.

26. See the preface to Bos's edition of Zerahyah's translation (1994), pp. 1–4 and 10–12.

27. For an example of the influence of Avicenna's *De anima* on Jewish thought see Fontaine, *In Defence of Judaism: Abraham ibn Daud*, chapter 5. See in general Pines, 'Avicenna', pp. 957–9. For an overview of the translations of Arabic works into Hebrew see Halkin, 'Translations and Translators', pp. 1321–9. Avicenna influenced Hebrew philosophy also via Gundissalinus's *Liber de anima*; see p. 18. below.

28. See Minio-Paluello, 'Iacobus Veneticus Grecus, Canonist and Translator of Aristotle', pp. 284–91.

29. See Minio-Paluello, 'Le Texte du "De anima" d'Aristote: la tradition latine avant 1500', pp. 221 and 226. William of Moerbeke seems to have revised the translation twice, once 1260 and again around 1266–9; see Wielockx, 'Guillaume de Moerbeke, réviseur de sa révision du "De anima"', pp. 113–85, and Verbeke, 'Les Progrès de l'Aristote latin', pp. 195–201. We still do not have a critical edition of James's translation; I have used the text printed in Stroick's edition of Albertus's *De anima*. See Gauthier's critical review of this edition in his 'Les Commentaires de la *Vetus*', pp. 257\*–9\*.

30. See the prolegomena to Crawford's edition of Averroes's commentary, p. xi.

19. See Van Riet, 'La Traduction latine du "De anima"', p. 109\*, n. 68, and pp. 110\*–111\*.

20. The manuscripts containing translations of Avicenna's philosophical works are described by d'Alverny, *Avicenna latinus. Codices*.

21. Van Riet, 'La Traduction latine du "De anima"' (1972), p. 132\*. See also her earlier 'La Traduction latine du De Anima d'Avicenne: Préliminaires à une édition critique' (1963), pp. 583–626, esp. 606–7 and 615–16.

22. That Gundissalinus uses version A is acknowledged by Van Riet, 'La Traduction latine du "De anima"', p. 131\*, n. 148.

23. See p. 50 below.

24. See Frank, 'Some Fragments of Ishāq's Translation of *De anima*', pp. 231–4. The early

writings. The list of authors of texts on the soul is considerable: Alcuin, Hrabanus Maurus, John Scot Eriugena, Pseudo-Bede *De mundi ... constitutione*, Hugh of St-Victor, Adelard of Bath, William of St-Thierry, William of Conches, Peter Lombard, Ailred of Rievaulx, Achard of St-Victor, Isaac of Stella, Pseudo-Augustine *Liber de spiritu et anima*, Alan of Lille, Thomas of Cantimpré, to name only the most prominent. Early medieval psychology goes back ultimately to Plato and Aristotle, but its main direct sources are Calcidius, Augustine, Cassiodorus, and Pseudo-Dionysius.

For all the differences between them, there are standard patterns in these writings, which may be seen in the following quotation from Hrabanus Maurus's *Tractatus de anima* (first half of the ninth century):

I have therefore written for you <King Lothar> something about the definition of the soul, why it is called the soul and what the soul is; as well as on its origin and whether it is thought to have a form; also about its magnitude, whether it is smaller in children and bigger in adults, and where it is thought to have its seat principally; then, what its moral virtues are; also, a few words about its dwelling place, that is, its possession of the body.<sup>31</sup>

These questions reappear in many of the authors named above. In answering them they take up a great deal of Augustinian and Cassiodorian material, such as the distinction between *intellectus*, *memoria* and *voluntas* or between the desiring part, the irascible part and the rational part of the soul (which is Platonic in origin); but they use also Aristotelian teachings such as the definition of the soul as a perfection or the list of the five external senses. The question of the origin of the soul is concerned with whether new souls derive from previous souls (of the parents) or whether they are newly created by God, and if the latter, when. One frequently finds the inaugural *topos* that it is most unworthy for the soul not to know itself, as it is the part of the human being most akin to God (Cassiodorus, Alcuin, William of St-Thierry, Isaac of Stella, Pseudo-Augustine). In a way then, these are theological treatises: they are written by theologians, they are theologically motivated and the authors specifically call attention to their use of material derived from the *philosophi* or the ancient sources in general.

The most important event in the course of the early medieval history of psychology is apparent in the twelfth-century theologian William of St-Thierry, who says in the prologue to *De natura corporis et animae*:

31. Hrabanus Maurus, *Tractatus de anima*, p. 1109: 'Scripsi itaque vobis quaedam de diffinitione animae, quare anima dicatur vel quid sit anima; nec non et de origine ipsius, utrumne formam habere credatur; de quantitate etiam ipsius, utrum in parvulis minor, in fortioribus maior, vel ubi maxime sedem habere credatur; deinde quae sint virtutes eius morales; pauca etiam de habitaculo eius, hoc est corporis possessione.'

You should know that what you read is not mine, but <is drawn> partly from philosophers and natural scientists (*physici*), partly from ecclesiastical writers – not merely the contents of their works, but their very words and writings, as they have published them.<sup>32</sup>

The keyword here is *physici*; it refers to the medical sources translated in the later eleventh century from Arabic (and partly Greek) into Latin. In some cases these were rewritten rather than translated. Thus, William's most important source is Constantine the African's *Theorica Pantegni*, a reworking of the first part of 'Alī ibn al-'Abbās al-Mağūsī's *Kitāb Kāmil aṣ-ṣinā'a aṭ-ṭibbīya*. How does its influence manifest itself in William's treatise? He divides the work into two parts: the first presents the theories of the philosophers and natural scientists; the second lays out what the 'Church Fathers have learned from God and taught to the people'.<sup>33</sup> Consequently, the latter part resembles Hrabanus's *Tractatus de anima* in the topics treated and in the contents, whereas in the first we meet the new medical theories of the four elements and humours, the three spirits (*naturalis*, *spiritualis*, *animalis*) and their respective organs (liver, heart, brain) and a long treatment of the five external senses.

William of St-Thierry is particularly clear in his distinction between the medical and the theological tradition; he is very interested in the first. Other writers of this period such as Isaac of Stella, Pseudo-Augustine (*De spiritu et anima*) and Thomas of Cantimpré adopt the new learning only in fragments and integrate it into a predominantly theological framework. Still others, like William of Conches, use the format of a commentary on Macrobius, Martianus Capella, Boethius or Plato's *Timaeus* to discuss psychological issues connected with both the theological and the medical traditions.<sup>34</sup>

This was the situation when the Latin West became acquainted with the philosophy of the soul of Aristotle and Avicenna. Their work challenged not only doctrines – which will be treated in the second part of this book – but the entire

32. William of St-Thierry, *De natura corporis et animae*, prologue, p. 69: 'Scias autem quae legis non mea esse, sed ex parte philosophorum vel physicorum, ex parte vero ecclesiasticorum doctorum, nec tantum eorum sensa sed ipsa eorum sicut ab eis edita sunt dicta vel scripta.'

33. William of St-Thierry, *De natura corporis et animae*, p. 127: '... quid catholici patres a Deo didicerint et homines docuerint'. See the recent discussion of these passages in Ricklin, 'Vue et vision', pp. 24–7 and 37–8.

34. Unfortunately, questions of genre and attitudes towards the authorities in psychology have not yet received a proper study – nor has the history of early medieval psychology as a whole – and the reader can be referred to only a few works for further information and literature. A good introduction to early medieval psychology is given by Talbot, 'Ailred of Rievaulx: De anima' (1952), pp. 32–47. See also Werner, *Der Entwicklungsgang der mittelalterlichen Psychologie* (1876); Baumgartner, 'Die Philosophie des Alanus de Insulis' (1896), pp. 88–106; Michaud-Quantin, 'La Classification des puissances de l'âme' (1949), pp. 15–34; d'Alverny, *Alain de Lille: Textes inédits* (1965), pp. 163–80; Bertola, 'Di una inedita trattazione psicologica' (1966), pp. 572–6; Mojsisch *et al.*, 'Seele' (1995), pp. 12–13.

approach to psychology. It was not altogether clear what role the powerful new learning would play. There was no genre of philosophical treatises on the soul into which it could be integrated, nor was there a gap in the system of sciences waiting to be filled. Instead, the new psychology met with a strong current of theological treatises on the soul whose questions and answers were specific to Christianity. And the medical tradition, while it left its mark in many places, had only served to enrich the discussion; it had not established a new genre of physiological treatises on the soul. It is all the more remarkable that many scholastic writers tried to integrate into their account of psychology Avicenna's systematically structured *De anima*, which presented a far greater methodological challenge than Aristotle's *Peri psychês*. Still, Latin readers found a way – in fact many ways – to accomplish the integration. It is to this story of the formation of a Peripatetic philosophy of the soul that we now turn.

## I. APPROACHES TO PSYCHOLOGY

### 1. DOMINICUS GUNDISSALINUS

The first treatise on the soul to incorporate material from the newly translated *De anima* of Avicenna was written by one of the translators themselves, Dominicus Gundissalinus, the Archdeacon of Cuéllar, who lived in Toledo.<sup>1</sup> The treatise is called *Liber de anima*, and is attributed to Gundissalinus in two of the six extant manuscripts.<sup>2</sup> Further indications that Gundissalinus is indeed the author of this treatise are, firstly, quotations by Albertus Magnus, who refers to its author as 'Toletanus',<sup>3</sup> and, secondly, the fact that the two main sources of the treatise are works which Gundissalinus knew very well, since he collaborated in their translation from the Arabic: Avicenna's *De anima* and Avicebrol's *Fons vitae*.

There is disagreement among scholars about how to characterize Gundissalinus's *Liber de anima*: some stress the Christian background of the author, whereas others emphasize his secular approach, arguing that Gundissalinus integrates the Christian doctrine 'into a secular edifice'.<sup>4</sup> There is a consensus that the treatise is a rather mediocre compilation.<sup>5</sup>

These judgements should be reconsidered. Let us take the prologue to the *Liber*

1. See Introduction, pp. 6–7.

2. See the preface to Muckle's edition, pp. 28–9, and Abeloos, 'Un cinquième manuscrit' (1972), p. 72. The sixth manuscript is MS Vat. lat. 175, ff. 208r–218r, and was found by Bertola; see his 'I "De anima" del Vat. Lat. 175' (1953), pp. 258–60. The manuscripts give different titles to the treatise: *Liber de anima*, *Tractatus de anima*, *Opus de anima* or *Comentum de anima*.

3. Albertus Magnus, *De homine*, pp. 12a, 15a, 24a, 28b, 64a, 71b, 76b, 78a, 82b, 83a, 83b, 102b, 463b, 467b. Callus traced two references in Albertus, *Summa theologiae*, II, tr. 12, q. 73 (ed. Borgnet, v. 33), pp. 52a, 53a (Callus, 'Gundissalinus's De anima and the Problem of Substantial Form', p. 339). The reading 'Collectanus' for 'Toletanus', which appears in the editions of Albertus's works, seems to be 'a misreading of the first editors. No trace of "Collectanus" is to be found in the manuscript tradition' (Callus, *ibid.*, p. 339).

4. Jolivet, 'The Arabic Inheritance', p. 145. For the contrary opinion see for instance Alonso's 'El traductor y prologuista', p. 8: 'Se trataba, pues, de ennoblecer la fe cristiana'. Alonso's suggestions concerning the identity of the translators of Avicenna's work and the author of *De anima* have to be read with caution.

5. On Gundissalinus's *Liber de anima*: Loewenthal, *Pseudo-Aristoteles über die Seele* (1891); Baeumker, 'Dominicus Gundissalinus als philosophischer Schriftsteller' (1898), pp. 12–16; Furlani, 'Contributi alla storia della filosofia Greca in Oriente. I. Pseudo-Aristotele' (1915); Gilson, 'Les Sources gréco-arabes' (1929), pp. 79–92; Teicher, 'Gundissalino e l'Agostinismo avicennizante' (1934), pp. 252–8; De Vaux, *Notes et textes* (1934), pp. 141–78. Callus, 'Gundissalinus's De anima' (1939), pp. 338–55; Gilson, 'The Treatise De Anima' (1940), pp. 23–27; Alonso, 'Gundisalvo y el "Tractatus de anima"' (1948); Alonso, 'El traductor y prologuista' (1961), pp. 1–7 and 26–35; Abeloos, 'Un cinquième manuscrit' (1972); Jolivet, 'The Arabic Inheritance' (1988), pp. 141–5; Dales, *The Problem of the Rational Soul* (1995), pp. 13–15. On Gundissalinus and Avicenna: Hugonnard-Roche, 'La Classification des sciences' (1984), pp. 41–75.

*de anima*. It is closely modelled on the preface to the translation of Avicenna's *De anima*, which means that Gundissalinus re-used what Avendauth had probably written jointly with him.<sup>6</sup> Gundissalinus's opening sentences are almost identical with their counterparts in the preface to the translation. One should be careful, however, not to associate Gundissalinus's prologue too closely with the Arabic Peripatetic tradition; the fourth sentence recalls a rather traditional opening of Christian treatises on the soul of the early Middle Ages:

For it is not proper that a human being should not know that part of himself with which he knows, and that he himself cannot understand with <his> reason that <part> by virtue of which which he is rational; someone who is shown to be ignorant about that in which he is similar to God, will not be able to know fully either God or himself.<sup>7</sup>

This is close in wording and content to passages in Cassiodorus's *De anima*, Alcuin's *De animae ratione* and the Pseudo-Augustinian *Liber de spiritu et anima*.<sup>8</sup> Also, Gundissalinus's objective of drawing on the arguments of the philosophers can be found in early medieval writings on the soul: Cassiodorus uses not only Christian works but also *libri saeculares*, and Isaac of Stella states that he was asked to write not about the doctrines to be found in the Bible, but about the soul's essence and faculties, thus referring to philosophical theories.<sup>9</sup> And again it is in Cassiodorus, on whose treatise Gundissalinus seems to have modelled the opening of the *Liber de anima*, that one can find the idea of bringing to light knowledge about the soul until now hidden away in books.<sup>10</sup> With this in mind, a reader will find Gundissalinus's following sentences less secular than might have been thought:

Therefore I took care in collecting all rational theories about the soul which I found among the philosophers. Thus a work hitherto unknown to the Latins, because it was hidden in the secret places<sup>11</sup> of the Greek and Arabic languages, has now by the grace of God, but nevertheless with great labour, come to the notice of Latin readers so that the faithful who work so hard for <their> soul know no

6. The preface to the translation of Avicenna's *De anima* is quoted and discussed above, pp. 5–7. Cf. Alonso, 'El traductor y prologuista', pp. 3–5.

7. Gundissalinus, *De anima*, p. 31, line 6: 'Indignum siquidem est ut illam sui partem qua homo sciens est ipse nesciat, et id per quod rationalis est ipse ratione non comprehendat; unde nec Deum nec se plene potest cognoscere qui id in quo Deo similis est convincitur ignorare'.

8. Cassiodorus, *De anima*, I, p. 534: '... addens nimis ineptum esse si eam per quam plura cognoscimus quasi a nobis alienam ignorare patiamur, dum ad omnia sit utile nosse qua sapimus'; Alcuin, *De ratione animae*, p. 639; Pseudo-Augustine, *Liber de spiritu et anima*, p. 779.

9. Ibid., p. 534, line 5. Isaac de Stella, *Epistola de anima*, p. 1875.

10. Ibid., p. 534: '... <amicorum collegium> postulans ut aliqua quae tam in libris sacris quam in saecularibus abstrusa compereram de animae substantia vel de eius virtutibus aperirem, cui datum est tam ingentium rerum secreta reserare'.

11. Reading 'arcanis' (with manuscripts C, P) instead of 'archivis' (against M, V).

longer by faith alone but also by reason what they should think about the soul.<sup>12</sup>

How then does Gundissalinus arrange his newly acquired material? He does it in a rather clever way in that he divides the whole treatise into four parts by asking four traditional questions, which can also be found in earlier treatises on the soul. The answers consist entirely (with a few exceptions such as the end of the treatise) of passages pillaged from Avencebrol, Avicenna and Costa ben Luca, whose names are never mentioned. That the treatise is quadripartite can be seen immediately in the prologue: every question is introduced with the words *postea* or *deinde*. The first question is whether the soul is existent, the second asks what the soul is, the third concerns the soul's origin, and the fourth the soul's immortality and afterlife.<sup>13</sup> That the author uses this scheme throughout the text becomes clearer if one follows the chapter headings of the earlier manuscripts and not those of the edition.<sup>14</sup>

Now and then Gundissalinus inserts introductory and concluding sentences which deserve a longer investigation of their own. Here we can say only that for all questions he gives his own answer and thus adopts a particular standpoint (which itself is rather traditional): the soul exists (p. 32); the soul moves the body (p. 36, line 12); the soul is an incorporeal substance (p. 40, line 10);<sup>15</sup> souls are created (p. 43); they are many in number (p. 47, line 10); new souls are created every day (p. 48, line 31); they are created out of prime matter (p. 58, line 13); the soul is immortal (p. 63, line 41); of all faculties of the soul only memory and the contemplative faculty remain after the death of the body (p. 103, line 10).

12. Gundissalinus, *De anima*, p. 31. The vocabulary is still similar to Avendauth's and his preface to Avicenna's *De anima* (parallels in wording are indicated by underlining): 'Quapropter quicquid de anima apud philosophos rationabiliter dictum inveni, simul in unum colligere curavi. Opus siquidem latinis hactenus incognitum utpote in arcanis graecae et arabicae tantum linguae reconditum, sed iam per Dei gratiam quamvis non sine multo labore ad notitiam latinorum est deductum ut fideles, qui pro anima tam studiose laborant quid de ipsa sentire debeant, non iam fide tantum sed etiam ratione comprehendant'.

13. Earlier Western treatises on the soul with similar questions: Cassiodorus, *De anima*, p. 536 ('quare anima dicatur'), p. 538 ('de definitione animae'), p. 551 ('de origine animae'), p. 565 ('quid agant animae post hanc vitam'); Augustine, *De natura et origine animae*, III, 15.22 ('animam non ex nihilo sed de se ipso deum fecisse ... - ... semper deum animas dare'). On immortality, Augustine's treatise *De immortalitate animae*; Alcuin, *De ratione animae*, p. 645 ('origo vero animarum ...'); Hrabanus Maurus, *Tractatus de anima*, p. 1109 ('de diffinitione animae quare anima dicatur vel quid sit anima, nec non et de origine ipsius'), p. 1111 ('quod autem immortalis sit'); Pseudo-Augustine, *Liber de spiritu et anima*, p. 781 ('animus quid sit'), p. 788 ('animae definitio'), p. 793 ('quomodo anima immortalis'), p. 814 ('animarum origo').

14. The heading 'Quomodo anima movet corpus' (ed. Muckle p. 33) introduces an appendix to the first chapter. There is no heading in MSS V, M and A (= Abeloos, 'Un cinquième manuscrit'). The heading 'De viribus animae' (ed. Muckle p. 64) does not appear in MSS V, M and A either. Instead, one would like to read the heading (of V and A): 'Anima exuta a corpore quas retineat vires et quas non, quod ut appareat de viribus animae [A: eius] est tractandum'. This heading makes sense since it recalls a similar sentence in the prologue.

15. Gundissalinus favours the Platonic definition over the Aristotelian definition of the soul. After having explicitly said that Plato's definition is true (p. 40, line 11), he discusses Aristotle's view, but only to come back to the view of the soul as a spiritual substance (p. 42, line 6).

Let us now examine Gundissalinus's attitude to the philosophers and especially Avicenna. He names only two of them, Plato and Aristotle, the 'princes of the philosophers' ('principes philosophorum'), as he calls them.<sup>16</sup> It would be wrong to deduce from this that Gundissalinus's main source is Aristotle and that Avicenna is used only to shed light on the Greek philosopher – implying that Gundissalinus in fact had written a commentary.<sup>17</sup> One should be careful not to apply categories of the late thirteenth century to earlier writings, as one scribe did who added the phrase 'Explicit commentum de anima' in a thirteenth-century manuscript of Gundissalinus's work.<sup>18</sup> A commentary is about explaining Aristotle, whereas a treatise is about knowledge of the soul, and Gundissalinus, as his prologue indicates, certainly wrote a work of the latter kind.

One might rather ask why Gundissalinus shows so little interest in Aristotle whom he quotes, as he does Plato, only at second hand from Costa ben Luca's *De differentia spiritus et animae*. It is interesting to see Gerard of Cremona and Gundissalinus working and translating at the same time in Toledo but choosing very different works for translation. While Gerard translated several Aristotelian treatises from Arabic into Latin (*Analytica posteriora*, *Physics*, *Meteorologica*), Gundissalinus concentrated exclusively on Avicenna and other Islamic writers like Alkindi, Alfarabi and Algazel.<sup>19</sup> He might have been influenced by his fellow translators or in general followed a vogue among the Jewish scholars he was in contact with. The fact that the psychology of Abraham ibn Daud – who was probably the same as Gundissalinus's collaborator Avendauth – is based mainly on Avicenna and not on Aristotle, fits into such a picture.<sup>20</sup>

How does Gundissalinus make use of Avicenna's *De anima*? I have stated already that he takes large sections from the original and reproduces them verbatim. Of the two versions in which Avicenna's *De anima* is extant he uses version A (*leçon A*),

which is not the text printed in Van Riet's edition.<sup>21</sup> Avicenna is most extensively quoted in the fourth part, which consists of thirty-six pages of Avicenna quotations and six pages of Christian theories about the afterlife. Gundissalinus here reproduces the entire system of faculties developed by Avicenna. It is not true, however, that the *Liber de anima* is a 'mediocre compilation'.<sup>22</sup> Not only is it well-structured, as has been shown above, it also reveals an excellent knowledge of Avicenna's text. An example is his presentation of Avicenna's distinction between the practical and the contemplative intellect (pages 84–6) where scattered passages from chapters I,5, V,1 and V,2 are connected in a masterly way, thus forming a more coherent theory of the practical intellect than the one in Avicenna's book.<sup>23</sup> What Gundissalinus presents here is his own reading of Avicenna's *De anima*, a reading which is not 'mediocre'. When he, for instance, quotes Avicenna's scheme of the four intellects, he omits all phrases containing the word *comparatio*, which are residual traces of Avicenna's original idea of modelling intellection on visual perception. Gundissalinus thus links the scheme of the intellects more directly with the preceding passage about different kinds of potentiality – which is his own interpretation of *De anima*.<sup>24</sup> Other omissions point to the interests of the compiler: Gundissalinus does not include a single quotation from the lengthy third book of *De anima*, on optics, which he knows very well from his own translation. In general, one can see that he is much less interested in the theory of the senses than was Avicenna. A conspicuous omission is Avicenna's rather daring theory of prophecy by will-power and by intuition, which is the only part of chapter IV,4 which Gundissalinus does not quote: 'quia longum est de eis disserere' ('because the discussion would take too long').<sup>25</sup> To conclude: the *Liber de anima* is certainly a compilation, but compilations can be clever or unintelligent, and this is a clever one.

An open question is what influence the book may have had. Callus has claimed that the influence is 'outstanding'. This judgement, which is repeated by other scholars,<sup>26</sup> is based on the studies of Wittmann, Kleineidam and Lottin, who in turn juxtapose the standpoints of different scholastic writers, without any textual

16. Gundissalinus, *De anima*, 2, p. 37, line 6. This passage betrays the influence of Costa ben Luca's *De differentia spiritus et animae* (ed. Wilcox, p. 167, on the definition of the soul): 'diversitas et discordia praecipuorum philosophorum, Platonis scilicet atque Aristotelis'. For the use of the term *princeps*, see Schneider, 'Die abendländische Spekulation', pp. 3–5, and Hasse, 'King Avicenna', p. 234.

17. Van Steenberghen, *Die Philosophie im 13. Jahrhundert*, pp. 179–80: '... doch ist auch hier Avicenna die sekundäre Quelle, deren Funktion es ist, die Hauptquelle, d.h. Aristoteles, zu erhellen'.

18. Gundissalinus, *De anima*, p. 29 (Paris BN Lat 16613, f. 42v).

19. Burnett draws attention to this discrepancy in 'The Coherence of the Arabic-Latin Translation Programme', pp. 12–15 (also in *The Introduction of Arabic Learning*, pp. 67–71). For introductions to Gundissalinus and Gerard of Cremona, see the respective articles in the *Dictionary of Scientific Biography*: Kren, 'Gundissalinus, Dominicus' (1972), pp. 591–3, and Lemay, 'Gerard of Cremona' (1978), pp. 173–92.

20. See Fontaine, *In Defence of Judaism: Abraham ibn Daud*, p. 82 and pp. 262–3. The preface to the translation of Avicenna's *De anima* indicates that Avendauth (and Gundissalinus?) conceived of Avicenna's book as a collection of what Aristotle had said about the soul in different books of his (*De anima*, ed. Van Riet, p. 4, translated above, p. 6 with n. 11). Perhaps Gundissalinus thought of Avicenna's collection as a forerunner of his own *Liber de anima*.

21. Van Riet, 'La Traduction latine du De anima', pp. 99\*–100\*.

22. Gilson, 'Les Sources gréco-arabes', p. 79: 'médiocre compilation' (reading 'compilation' for 'complication'). Cf. Callus, 'Gundissalinus's "De anima" and the Problem of Substantial Form', p. 339: 'the mediocrity of its contents'.

23. Gundissalinus, *De anima*, pp. 84–6. See Hasse, 'Das Lehrstück von den vier Intellekten', pp. 41–4.

24. Gundissalinus, *De anima*, p. 87, line 1 to p. 88, line 5.

25. Gundissalinus, *De anima*, p. 77, lines 27–8.

26. Callus, 'Gundissalinus's "De anima" and the Problem of Substantial Form', p. 339. Repeated in Callus, 'Introduction', p. 25 ('amazing'); picked up by Weisheipl, 'Albertus Magnus and Universal Hylomorphism', p. 244, and Dales, *The Problem of the Rational Soul*, p. 15: 'this treatise was to be of seminal importance in subsequent Latin discussions of the soul'.

evidence that Gundissalinus's book was used.<sup>27</sup> To my knowledge, Anonymous (Gauthier) and Albertus Magnus are the only writers to quote Gundissalinus's *De anima*,<sup>28</sup> and apart from John Blund and these two writers, no one has been shown even to have known the book, which is extant only in six manuscripts.<sup>29</sup> The situation is different in the Hebrew tradition. An anonymous scholar translated *De anima* into Hebrew at some time between 1160 and the late thirteenth century when the encyclopaedist Gershon ben Solomon of Arles inserted large sections of this translation into his *Ša'ar ba-šamayim* ('The Gate of the Heavens').<sup>30</sup> Hillel ben Samuel of Verona (about 1220/25 to 1291/95) also quotes 'expanded sections' in his *Sefer tagmulé ba-nefes* ('Retributions of the Soul'), translating directly from the Latin original.<sup>31</sup> Thus the influence of Gundissalinus's *De anima* was perhaps more significant in Hebrew than in Latin.

## 2. JOHN BLUND

John Blund is the first master of arts we know of who wrote a treatise on the soul. This is his *Tractatus de anima*, rediscovered in the 1940s by Callus.<sup>32</sup> The *Tractatus* is quoted by Blund's teacher Alexander Neckam in his *De naturis rerum*, written between 1197 and 1204, which fixes the date of Blund's work around 1200.<sup>33</sup> From a poem written by Henry of Avranches in 1232, recommending John Blund for the post of archbishop of Canterbury, we know that he lectured on Aristotle in Oxford and Paris,<sup>34</sup> very probably at the beginning of the century. He was made chancellor

27. The question of Gundissalinus's influence needs to be reexamined. See Wittmann, *Die Stellung des hl. Thomas von Aquin zu Avencebrol*, pp. 17–19, p. 25; Kleineidam (who has most information on the problem), *Das Problem der bylomorphen Zusammensetzung*, pp. 12–14, 16, 19–22; Lottin, 'La Simplicité de l'âme humaine', pp. 436–7; Lottin, 'L'Unité de l'âme humaine', p. 463.

28. Anonymous (Gauthier), *De anima et de potentiis eius*, p. 29, line 42: 'Toletanus autem translator utrumque intelligit esse ponendum in diffinitione animae, hoc modo ...'. For Albertus Magnus, see n. 3 above.

29. See n. 2 above.

30. Furlani, 'Contributi alla storia della filosofia Greca in Oriente', pp. 117–21 (as cited by Callus, 'Gundissalinus's "De anima"', p. 341). Teicher, 'Geršon ben Šelomoh e Gundissalino', pp. 6–25 and id., 'The Latin-Hebrew School of Translators', pp. 403–16. The Hebrew translation or adaptation is preserved in Cambridge University Library, MS Add. 1858, ff. 183r–230r. Sirat, *A History of Jewish Philosophy*, p. 233. For a critical evaluation of Teicher's judgements see Zonta, *La filosofia antica nel Medioevo ebraico*, pp. 125, 154, 194–5.

31. Sermoneta, *Hillel ben Šemu'el of Verona*, p. vi: '... to which are added expanded sections from the *Liber de anima* written by the Christian scholar and translator Dominicus Gundissalinus'. See also Sirat, *A History of Jewish Philosophy*, pp. 268–9; Zonta, *La filosofia antica nel Medioevo ebraico*, p. 227.

32. John Blund, *Tractatus de anima*, ed. by D. A. Callus and R. W. Hunt (1970). The finding was first announced in Callus, 'Introduction of Aristotelian Learning' (1943), pp. 21–2. The work is extant in three manuscripts, one of which bears the heading: 'Tractatus de anima secundum Iohannem Blondum'. The other manuscripts do not contain any heading or author's name.

33. Hunt, 'Introduction', p. xi.

34. Henry of Avranches, *The Shorter Latin Poems*, p. 131, line 77: 'Adde quod a puero studiis electus inhaesit, / primus Aristotelis satagens perquirere libros, / quando recenter eos Arabes misere Latinis, / quos numquam fertur legisse celebrius alter / aut prius, ut perhibent Oxonia Parisisque'. For further

of York Cathedral in 1234 and died in 1248.

As one might expect from a master of arts, John Blund's approach to psychology is different from that of the translator in Toledo and of the many theological writers on the subject. His standpoint is most clearly presented in a well-known passage answering the question of whether the study of the soul is the province of the theologian:<sup>35</sup>

The theologian has to inquire how the soul may earn merit and demerit and what leads to salvation and what to damnation. But it is not his task to inquire what the soul is, to what category it belongs, and how it is infused into the body. Consequently, knowledge of these things pertains to someone of another faculty. Therefore, since the theologian only has to teach how to earn merit and demerit, it is not his proper task to teach what the soul is and what its essence is.<sup>36</sup>

We shall meet with similar demarcations of the respective realms of the philosophers and theologians in the thirteenth century; the latter group will define their own territory in much broader terms than John Blund grants them.<sup>37</sup> His sharp words witness to the growing competition between the faculties of arts and theology at the newly founded universities.<sup>38</sup>

How then does John Blund approach the self-appointed task of the philosophical discussion of the soul? The common answer among scholars today is that Blund's main source and inspiration is Avicenna, whom he follows very closely as a guide in his reading of Aristotle.<sup>39</sup> There is an apparent contradiction here: either

information see Callus, 'Introduction of Aristotelian Learning', pp. 16–17; Callus, 'The Treatise of John Blund', pp. 471–4; Hunt, 'Introduction', pp. vii–viii.

35. The passage is discussed by Callus, 'The Treatise of John Blund', pp. 481–2; Callus, 'The Function of the Philosopher', pp. 156–7; Bertola, 'Le proibizioni di Aristotele', pp. 730–31; Gardinali, 'Da Avicenna ad Averroè', pp. 377–8.

36. John Blund, *Tractatus de anima*, 2, p. 7, line 14: '(Forte dicet aliquis quod theologi est tractare de anima. Contra) Theologus habet inquirere qua via contingat animam mereri et demereri, et quid sit ad salutem, quid ad poenam. Quid autem anima sit, et in quo praedicamento sit et qualiter infundatur corpori, non habet ipse inquirere. Ex quo ista scire magis pertinent ad alium artificem. Ex quo ergo theologus solum habet docere qualiter sit merendum et demerendum, non habet ipse proprie docere quid sit anima nec quid sit eius essentia'.

37. See below p. 38 on Roland of Cremona and p. 43 on William of Auvergne.

38. Callus, 'The Function of the Philosopher', p. 156.

39. Callus, 'The Treatise of John Blund' (1955), p. 486: 'There can be no doubt that Blund's main inspiration is Avicenna'; Callus, 'Introduction of Aristotelian Philosophy' (1943), p. 38: '... to expound the doctrine of Aristotle' (said of Avicenna, Gundissalinus and Blund); Van Steenberghen, *Die Philosophie im 13. Jahrhundert* (1977), p. 167: '<die Hauptquellen Avicenna und Algazel> dienen ihm als Führer bei der Aristoteleslektüre'; Mojsisch/Jeck/Pluta, 'Die Seele' (1995), p. 14: 'John Blund führt eine auffällig selbständige Auseinandersetzung mit Aristoteles, dies bes. im Rekurs auf Avicennas "Liber de anima" und die Schrift "De anima" des Dominicus Gundissalinus'. Further secondary literature on John Blund not mentioned so far: Lottin, 'Textes nouveaux sur la nature du libre arbitre' (1949), pp. 610–17; Callus, 'The Origins of the Problem of the Unity of Form' (1961), pp. 277–9; Bertola, 'La dottrina dell'immortalità' (1966), pp. 28–48; Bertola, 'È esistito un avicennismo latino' (1971), pp. 309–312; Dales, 'A Twelfth-Century Concept' (1978), pp. 190–92; Jolivet, 'The Arabic Inheritance' (1988), pp.



Avicenna is the main inspiration or he is only the secondary source. Let us therefore reassess Blund's attitude towards Aristotle and Avicenna.

As far as we know, Blund's treatise marks the entry of Aristotle's *Peri psychēs* into psychological theory in the Latin West. Not only does Blund quote Aristotle's treatise frequently, he is also credited in the above-mentioned poem of 1232 to have been one of the very first to study the newly translated Aristotelian books ('primus Aristotelis satagens perquirere libros / quando recenter eos Arabes misere Latinis') – which obviously included *Peri psychēs*.<sup>40</sup> Blund's work is an early example of a fully-fledged *quaestio* scheme in psychological literature, presenting questions, arguments pro and contra, the solution and answers to the objections. The question for us then is whether this treatise is meant to expound Aristotle in the manner of the later *sententiae cum quaestionibus* (for instance by Pseudo-Petrus Hispanus, about 1240). An argument in support of this thesis is that John Blund calls Avicenna 'commentator' and his *De anima* 'commentum' or even 'commentum super librum de anima', just as later writers would do with Averroes and his commentary.<sup>41</sup> But Blund's term is exceptional; usually Avicenna's book is referred to as the *Liber de anima* or the *Liber sextus de naturalibus*.<sup>42</sup> It may be that Blund's manuscript of the work was headed 'Commentum'.<sup>43</sup> It seems more likely, however, that this is his personal way of referring to a work of the Peripatetic tradition, since he also calls Algazel's *Metaphysica* a 'commentum primae philosophiae', again a phrase without parallel in the West, to my knowledge – and a very inappropriate phrase if we take it to mean 'commentary'.<sup>44</sup> The meaning of the term *commentum* or *commentarium* in the context of translation literature is not fixed; it was also employed, for instance, for Latin reworkings of translated texts by Euclid and Theodosius in the course of teaching.<sup>45</sup> John Blund, who knew his Avicenna too well to conceive of it as a commentary, must have meant something like this, a work written in the tradition of a specific Aristotelian book.

This interpretation is confirmed by the structure of the *Tractatus de anima*, which, as has been said, is modelled on Avicenna's *De anima*.<sup>46</sup> One may add that chapters five to twenty (of the twenty-six), which comprise the discussion of the

faculties of the soul, follow closely the arrangement of the faculties in chapter I,5 of Avicenna's book, a procedure we will encounter also with other writers. In fact, each of the vegetative and animal faculties is introduced with a quotation from that chapter in Avicenna, before Blund enters the discussion of a particular *quaestio*. This resembles the pattern of the later *sententiae cum quaestionibus*, where Aristotle is the authority quoted at the beginning. It has been suggested by different scholars that Blund's *Tractatus* grew out of the classroom and 'represents the sum and substance of his oral teaching'.<sup>47</sup> We cannot prove this. But if there had been a textbook, it must have been *De anima* of Avicenna and not the *Peri psychēs* of Aristotle.

This is reflected also in the content of the *solutiones* that Blund arrives at, and in the content of the descriptive passages which are not part of a *quaestio*. Compare the number and weight of *solutiones* and descriptive passages based on Aristotle's *Peri psychēs* with those based on Avicenna's *De anima*:

(1) Aristotle:

- the definition of the soul (pp. 5–6)
- the thesis that psychology is a part of natural philosophy (p. 7)
- the refutation of divergent opinions on the soul (p. 9)
- the thesis that sense perception does not perceive universals (p. 23)
- that consonance is a kind of measure (p. 43)
- that there is no taste without saliva (p. 58)
- that touch is necessary for the survival of a living being (p. 59)
- that the common sense exists (p. 65)
- the definition of memory (p. 71)

(2) Avicenna:

- the argument for the existence of the soul (p. 1)
- the thesis that the soul is one soul (p. 12)
- the definition of the vegetative soul (p. 13)
- the definition of the perceiving soul (p. 16)
- the thesis that sense perception does not perceive universals (p. 23)
- the definitions of vision, hearing, smell, taste<sup>48</sup> and touch (pp. 24, 39, 51, 56, 58)
- that touch is located in the whole living being (p. 59)
- the definition of common sense (p. 63)
- the argument that common sense exists (p. 65)
- the definitions of imagination, estimation and memory (pp. 67, 68, 71)<sup>49</sup>

47. Callus, 'The Treatise of John Blund', p. 483; Bertola, 'La dottrina dell'immortalità', p. 36.

48. John Blund cites only a rudimentary version of Avicenna's definition (*De anima*, I,5, p. 84). The reason seems to be that he wants to dispense with Avicenna's theory that parts of the tasted object are mingled with the saliva.

49. John Blund does not acknowledge an intermediate faculty ('imaginative/cogitative faculty') between imagination and estimation, as Avicenna does; cf. his discussion of *cogitatio* on pp. 94–5.

146–7; Burnett, 'The Introduction of Arabic Learning' (1994), pp. 51–2.

40. See n. 34 above.

41. John Blund, *Tractatus de anima*, pp. 19, 24, 32, 39, 51, 63, 66, 68, 69, 92.

42. Cf. Albertus's terminology, p. 64, n. 293.

43. Only four of the fifty manuscripts refer to the work as a commentary. See d'Alverny, *Codices*, pp. 162, 192, 257, 262.

44. John Blund, *Tractatus de anima*, p. 27, line 28: 'sicut testatur tam Avicenna quam Algazel in commento primae philosophiae'. The usual title is: *Summa theoriae philosophiae* (comprising logic, metaphysics and physics) or *Metaphysica* (only referring to the metaphysical part). See d'Alverny, *Codices*, p. 432.

45. See Burnett, 'The Institutional Context of Arabic-Latin Translations', pp. 216–17.

46. Callus, 'The Treatise of John Blund', pp. 483–6.

- the introduction to the questions of incorporeality and immortality (pp. 80 and 86)
- the definition of the faculties of the rational soul (pp. 91–2)
- the theory of the four intellects and their definitions (p. 93)
- the imprinting of the formal intellect into the soul by the giver of forms (p. 94)<sup>50</sup>

Note that all the theories of Aristotle mentioned can be found also in Avicenna, but that most of Avicenna's theses go beyond Aristotle's philosophy. This is especially true of the Avicennian definitions and descriptions of the external and internal senses.

This list is certainly a rather crude outline of doctrines – they will be discussed in more detail and in the context of the Peripatetic tradition later in this book. There we will find that John Blund occasionally chooses a compromise between Aristotle and Avicenna, for instance in the question of the organ of touch.<sup>51</sup> He has a more marked interest in optics than most other writers on psychology but falls victim to the serious shortcomings of the Latin translation which leads him to misrepresent totally Avicenna's theory of vision.<sup>52</sup> He shows an excellent understanding of Avicenna's complex theory of *aestimatio* and *intentiones*, which he rephrases in his own words.<sup>53</sup> In general one can say that he is more indebted to Avicenna's theory of the vegetative and animal faculties than to his theory of the intellect, a recurring feature in the history of Avicenna's influence. He transforms the doctrine of the four intellects,<sup>54</sup> and the treatment of the questions of immortality and incorporeality is different in the two writers, even though the questions and conclusions are the same.<sup>55</sup> He does not identify the active intellect with God and therefore cannot be counted among the adherents of Avicennized Augustinianism.<sup>56</sup>

As for the technical side of Blund's reading of Avicenna's *De anima*, it can be shown that he uses version A of the manuscript tradition, as did Gundissalinus.<sup>57</sup> He

quotes Avicenna's *De anima* directly, that is, not from a secondary source like Gundissalinus's *Liber de anima*. It is difficult to answer the question of whether John Blund knew Gundissalinus's work at all; there are some passages which seem to point in this direction, but Blund may also be drawing on a different source.<sup>58</sup> The influence of Gundissalinus's *Liber de anima* certainly is very limited.<sup>59</sup>

In conclusion, it can be said that telling the story of the growing interest in Aristotle backwards from the thirteenth century has led some historians to a misconception regarding Blund's treatise. John Blund did not in fact use Avicenna as a guide to understanding Aristotle; this was not his aim. His main interest, as he said himself, was to inquire what the soul is. He had two new sources at his disposal, Aristotle's *Peri psychês* and Avicenna's *De anima*, and of these he very much preferred the latter.<sup>60</sup>

### 3. MICHAEL SCOT

Michael Scot, the Toledan translator and later court astrologer of Frederick II, is known not only for his Arabic-Latin translations of Alpetragius, Aristotle, Avicenna and Averroes, but also as the author of a comprehensive introduction to astrology, the *Liber introductorius*. It comprises three books, the *Liber quatuor distinctionum*, *Liber particularis* and *Liber physionomiae*, which probably for the first time fully adapt astrological texts of Arabic provenance to Christian culture.<sup>61</sup> Despite its significance, the text has not yet received a critical edition, perhaps because of its very complicated textual history. The four principal manuscripts of the *Liber quatuor distinctionum* differ considerably from each other, with interpolations and

50. For the meaning of the term *dator formarum* see pp. 188–9 below.

51. See p. 103 below.

52. See pp. 114–15, and 124 below.

53. See pp. 145–6 below.

54. Hasse, 'Das Lehrstück von den vier Intellekten', pp. 45–6.

55. See Bertola's article 'La problema dell'immortalità' for this doctrinal complex.

56. Cf. Bertola, 'È esistito un avicennismo latino', pp. 309–12. For the definition of Avicennized Augustinianism see pp. 203–5 below.

57. Compare the following passages in John Blund and Avicenna: *Tractatus* p. 13, line 23, ('generationem et complexionem') and *De anima*, I,5, p. 82, line 38 ('generari et commisceri'; manuscripts NV [= version A]: 'generationem et complexionem'); *Tractatus*, p. 24, lines 5–8 ('in nervo concavo' and 'corporum coloratorum') and *De anima*, I,5, p. 83, lines 59–61 ('in nervo optico' and 'corporum habentium colorem'; PNV: 'in nervo concavo' and 'corporum coloratorum'); *Tractatus*, p. 91, line 11 ('quas ipse eligit') and *De anima*, I,5, p. 90, lines 65–6 ('quae sunt propriae cogitationis ...'; PNV: 'quas praecipue sibi elegerit/eligit/elegit').

58. (I) The same quotation from Avicenna's *De anima*, I,1, pp. 14–15, is used by both John Blund and Gundissalinus as an answer to the question 'an anima sit' (*Tractatus*, p. 1, and Gundissalinus, *Liber de anima*, p. 32). (II) Both open their chapter 'De anima sensibili' with a general statement about the perceiving soul, linking it with the faculty of movement; this sentence is not in the corresponding passage in Avicenna (I,5, p. 82, line 40). Gundissalinus (p. 67): 'Secundum autem quod anima est sensibilis duo operatur, scilicet sensum et motum voluntarium'. John Blund (p. 16): 'Anima sensibilis est anima movens corpus voluntarie'. (III) John Blund says on p. 94: 'vel, ut plures auctores videntur velle, est illa forma impressio ab intelligentia ut ministerio eius, et a primo datore formarum ut auctoritate ipsius. Illa autem intelligentia a multis auctoribus dicitur esse angelus'. This may go back to Gundissalinus, p. 51: 'Hoc autem quod philosophi probant animas non a Deo sed ab angelis creari, sane quidem potest intelligi, scilicet non Dei ministerio sed angelorum. ... Sic et angeli creant animas ministerio tantum, non auctoritate'. A similar passage is in Gundissalinus's *De processione mundi*, p. 51. Alonso has drawn attention to a passage in Peter Lombard, *Sententiae*, IV.5.3: 'Ita etiam posset Deus per aliquem creare aliqua: non per eum tamquam auctorem sed ministrum' (Alonso, 'Gundisalvo y el "Tractatus de anima"', p. 77).

59. Pace Mojsisch/Jeck/Pluta, 'Die Seele', p. 14 (see n. 39 above).

60. A recent misjudgement about John Blund can be found in Dales, *The Problem of the Rational Soul*, p. 20, quoted below (p. 224, n. 2).

61. For an assessment of its significance in the history of astrology, see Burnett, 'Michael Scot and the Transmission of Scientific Culture', p. 117. The title *Liber Introductorius* applies to all three books, not only to the first (see Burnett, *ibid.*, p. 101, n. 4).



additions.<sup>62</sup> They represent two different redactions of the text, a longer and a shorter, and there is no agreement among scholars about the chronology of the two. But there is a consensus that Michael Scot is the author of most of the material.<sup>63</sup>

The first book of the *Liber introductorius* is important for the history of psychology because one of the four manuscripts – MS Escorial f. III. 8, representing the shorter redaction – contains a long treatise on the soul (ff. 34ra to 53vb), which for several already established reasons is probably an authentic part of Michael Scot's work.<sup>64</sup> The most important clue is that there is a reference to the section on the soul in one of the other manuscripts, which is now in Munich. At the very point where the Escorial manuscript inserts the psychological treatise, the Munich manuscript postpones treating the soul to a chapter in the fourth *distinctio*: 'Quae ... sint virtutes ... animae ... nunc relinquimus dicere in hoc loco cum sit certum capitulum in quarta distinctione ubi sufficienter enarratur de illa'.<sup>65</sup> Other cross-references point to the same conclusion: the chapter on the soul in the Escorial manuscript is part of the otherwise lost fourth *distinctio* of the first book of the *Liber introductorius* and was inserted by a later redactor at a suitable point in the first *distinctio*.<sup>66</sup> In one reference the chapter is called the 'Capitulum animo-as' after the opening sentence of the section on the soul: 'Animo <anim>as est verbum et significat confortare' – '*I animate/you animate* is a verb and means "to strengthen"'.<sup>67</sup>

There is also internal evidence for the authorship of Michael Scot, namely the noticeable astrological tone of some passages, a very uncommon feature among the psychological works examined. Morpurgo was the first to sketch an outline of the

62. Paris, Bibliothèque Nationale, MS nouv. acq. Lat. 1401, ff. 11r–128r, c. 1279. Munich, Bayerische Staatsbibliothek, MS Clm. 10268, ff. 1r–146r, c. 1320. Escorial, Real Biblioteca, MS f. III. 8, ff. 1r–126v, late 14th century. Oxford, Bodleian Library, MS Bodley 266, ff. 1r–222v, late 15th century. See the following note for literature on the manuscripts.

63. Haslins, *Studies in the History of Medieval Science* (1924), 245–6; Thorndike, 'Manuscripts of Michael Scot's "Liber Introductorius"' (1961), p. 427; Edwards, 'The Two Redactions of Michael Scot's "Liber Introductorius"' (1985), pp. 329–40; Burnett, 'Michael Scot and the Transmission of Scientific Culture' (1994), pp. 101 and 107–21. For general information on Michael Scot see: Thorndike, *Michael Scot* (1965); Minio-Paluello, 'Michael Scot' (1974), pp. 361–5; Manselli, 'La corte di Federico II e Michele Scotto' (1979), pp. 63–80; Ackermann, 'Michael Scotus' (1993), pp. 606–607.

64. See Thorndike, 'Manuscripts of Michael Scot's "Liber Introductorius"' (1961), pp. 432 and 433; Thorndike, *Michael Scot* (1965), p. 85; Morpurgo, 'Fonti di Michele Scotto' (1983), pp. 60–61; Edwards, 'The Two Redactions' (1985), p. 335.

65. MS Munich, f. 15rb; quoted after Edwards, 'The Two Redactions', p. 335. Edwards remarks that the scribe of the Escorial manuscript did not take care to erase the phrase 'nunc relinquimus dicere in hoc loco', thus contradicting himself, since it follows the chapter on the soul which he inserted.

66. A second cross-reference is in the chapter on the soul itself: 'secundum quod dicimus in prooemio primae distinctionis huius primi libri deum diffinientes' (MS Escorial, f. 44ra). For a third cross-reference see the following note.

67. This reference is given by Morpurgo ('Fonti di Michele Scotto', n. 9). It comes from the *Liber physiognomiae*, MS Oxford, Bodleian Library, Canon Misc. 555, f. 64va: 'De proprietate autem animae satis praedictum est in primo libro <i.e. the *Liber quatuor distinctionum*>, circa principium quartae distinctionis, capitulo animo-as'.

chapter;<sup>68</sup> it is now possible to be more precise about its contents and sources. The author of the 'Capitulum animo-as' – who from now on will be referred to as Michael Scot – makes it clear in one of the first sentences that he is writing for scholars of astrology:

Although the theory of the soul ('scientia animae') is difficult and dangerous for every researcher, nevertheless we shall say something here about the soul, as about something familiar to us and to everyone else, as far as God, the creator of every single thing, will grant us his grace, not to our own praise, but to the honour of God and for the use of modern scholars in this art of astrology ('scholarium modernorum in hac arte astronomiae').<sup>69</sup>

This statement is in accordance with what Michael Scot says in the prooemium of the *Liber introductorius*, where he sets out his task of writing a book which comprehends everything pertaining to the 'ars astronomiae' for the use of beginners, 'novitii scholares'.<sup>70</sup> This latter phrase appears also in a passage in the 'Capitulum animo-as', where he modestly refers his readers to more well-known writers on psychology:

Since so very many and so important things about the soul have been said and discussed by wise men such as Aristotle, Jerome, Augustine and others in detailed investigations, this little booklet ('opusculum') should be enough for the beginner ('nunc sufficiat scolari novitio adnotandum').<sup>71</sup>

I have noted three further passages which address astrological topics. One of them occurs in the context of original sin. Michael Scot maintains that the reason for a wrong deed may either be God, who influences the soul, or the constellation of the firmament, which influences the body.<sup>72</sup> This statement is preceded by a short justification of the thesis that the constellation of the firmament has some influence. In a second passage Michael Scot reveals his high regard for the profession of the

68. Morpurgo, 'Fonti di Michele Scotto' (1983), pp. 59–71. I am grateful to Piero Morpurgo for supplying me with a microfilm of the Escorial manuscript.

69. MS Escorial, f. 34ra: 'Licet autem scientia animae sit gravis et periculosa omni inquisitori tamen aliqua hic dicemus de ipsa ut de nostro et alieno, sicut deus auctor omnium et singulorum gratiam concedit nobis, nec ad nostri laudem, sed ad honorem dei et ad utilitatem scholarium modernorum in hac arte astronomiae'.

70. This passage is printed in Edwards, 'The Two Redactions', p. 330, n. 7 (MS Munich, f. 19v): 'Sed antequam ulterius procedamus in sermone incepto, intendentes multa dicere de caelestibus et terrestribus quae sunt secreta philosophorum et omnino pertinent arti astronomiae, volumus librum totius artis collectum pro novitiis scholaribus incipere ordinate, quae merito dici potest Introductorius'.

71. MS Escorial, f. 51ra: 'Cum ergo tot et tanta de substantia animae si <n>t a sapientibus relata et disputata ut ab Aristotele, Jeronimo, Augustino et ceteris subtili investigatione, hoc solum opusculum nunc sufficiat scolari novitio adnotandum'.

72. MS Escorial, f. 39vb: 'Ratione animae iudicium dei est. Ratione vero corporis est constellatio firmamenti et utrumque iudicium est latens'. And f. 40ra: '... constellatione quae locum habet in regione corporis, sed in anima nequaquam quae soli deo est subiecta et aliter libera est'.

astrologer. A good astrologer, he says, who in his inquiry finds perfect delight in God, already begins to surpass the order of the Seraphim in pleasing God; it is plausible, therefore, that the astrologers by virtue of their science are much closer to God than artisans (just as theologians are closer to God than farmers), and that they will have a place next to God in the divine realm.<sup>73</sup> Finally, Michael Scot introduces an astrological tone into his adaptation of Avicenna's theory of estimation, as we will see later.<sup>74</sup>

Michael Scot's approach differs from that of the other writers on psychology of his time, but his psychology does not. Morpurgo has characterized it as a mixture of Augustinian theories of the twelfth century and new Avicennian material, indirectly transmitted through Gundissalinus.<sup>75</sup> I should like to point out that there is indeed much Augustinian material in the treatise, but that Michael Scot has first-hand knowledge of Avicenna's *De anima*, that he does not use Gundissalinus's book on the soul, and that he draws on the medical tradition which originated in eleventh-century Italy.

It is difficult to give an outline of the 'Capitulum animo-as', since it is very loosely structured. The first 'section' of the treatise (ff. 34ra–36rb) is concerned with different definitions of the soul, such as that of Aristotle (f. 34rb) and those to be found in the Bible (ff. 34vb–35ra). The next part (about ff. 36va–37vb) deals with the relation of the soul to the body and contains a hierarchy of faculties derived from Avicenna's *De anima*. Then follows a long discussion of questions concerning the origin of the soul, its future life and its similarity to the creator, the most Augustinian section of the work (ff. 37vb–44ra); here we meet with theories such as the mirroring of God's trinity in will, reason and memory (f. 43rb). Michael Scot proceeds by announcing a collection of the opinions of different philosophers. What follows looks like an adaptation of the first book of Aristotle's *Peri psychēs*, which discusses the opinions of the pre-Socratic philosophers, but is in fact mainly based on Avicenna's *De anima*, chapter I,2 (see below). After this section (stretching roughly from f. 44ra to f. 45vb) there comes a rather long passage which draws on the medical tradition (ff. 46ra to 48vb); it explains the vegetative and the animal soul in terms of the theory of the spirits and contains much physiological teaching. The last section of the treatise (ff. 49ra to 53vb) is a mixture of different topics and questions known already in early medieval psychology: the unity of the soul, its many names, visions, sensuality, sense, imagination, reason, memory, the soul as the

73. MS Escorial, ff. 50va to 50vb: 'Quare dicendum est quod qui perfecte in deo delectatur opere damnationis carnis praetermissio inquisitione physicae, iam incepit transcendere ordinem seraphym ad placendum deo. Sic omnis astronomus bene se habens iam transcendere incipit ordinem cherubym et cetera. Unde credibile est quod astronomus ratione scientiae plus deo vicinat quam faber et theologus quam agriculator et in divina patria domino vicinius locabuntur'.

74. See p. 146 below.

75. Morpurgo, 'Fonti di Michele Scotto', p. 69.

likeness of everything ('omnium similitudo'), etc.

One might say that this is rather a hodge-podge of contradicting psychological traditions, but I would prefer to stress its open-mindedness and broad approach, unparalleled in other writings of the time, and perhaps a result of Michael Scot's objective of writing not only for students of the arts or theology, but for anyone interested in astrology.

It is noteworthy that this early adaptation of Avicennian theories is closely linked to the medical tradition. It can be shown by textual analysis, firstly that the treatise is early because it does not betray any knowledge of Aristotle's *Peri psychēs*, secondly that Avicenna's *De anima* is used directly and not by way of Gundissalinus, and thirdly that there are indeed traces of the medical tradition in the 'Capitulum animo-as'.

Michael Scot mentions Aristotle's *Peri psychēs* once, but only to introduce a quotation from Avicenna's *De anima*, as Morpurgo has already pointed out.<sup>76</sup> Aristotle is referred to five times by name and three times as a *philosophus*, but passages from his psychological work are not quoted.<sup>77</sup> As a test case for Michael Scot's knowledge of *Peri psychēs* – which, according to only one manuscript, Michael Scot himself translated from Arabic into Latin together with Averroes's commentary<sup>78</sup> – we shall take his discussion of the philosophers' opinions (ff. 44va–b), which closely resemble Aristotle's refutation of the pre-Socratic philosophers in *Peri psychēs*, book I. In fact, three of these opinions certainly derive from Avicenna's *De anima*, I,2: that the soul is natural heat, that the soul is blood and that the soul is God.<sup>79</sup> This last passage, incidentally, is therefore not an attack

76. Perhaps there is a corruption in the manuscript tradition. See Morpurgo, 'Fonti di Michele Scotto', p. 65, n. 24. The sentence in question is on f. 44rb: 'Huius vero ambiguitatis illa est solutio quam ponit Aristoteles in libro de anima quod <sunt> tres species motus videlicet naturalis, violentus et animalis'. Compare Avicenna, *De anima*, I,2, ed. Van Riet, p. 45, line 48: 'Si autem fuerit localis <scil. motus> necesse est ut sit aut naturalis aut violentus aut animalis'. Aristotle only discerns between natural and violent movement (406a22–26). Cf. also the passages given by Bonitz, *Index Aristotelicus*, p. 137a, s.v. βίαιος κίνησις.

77. Apart from the definition of the soul as the 'perfectio (or 'endelechia' or 'primus actus') corporis organici potentia vitam habentis' (ff. 34rb, 37rb, 44ra, 45rb–va), which belongs to the common lore of 12th-century psychology. Callus conveniently juxtaposes the different wordings in 12th and 13th-century sources in his 'The Treatise of John Blund on the Soul', pp. 490–91. The definition on f. 37rb adds 'physici' which may signal the influence of the Greek-Latin version of *Peri psychēs*; see the chapter on Anonymous (Vat. lat. 175), p. 32, n. 106.

78. See Crawford's preface to his edition of Averroes's *Commentarium magnum in Aristotelis de anima libros*, p. xi. The other 56 (!) manuscripts do not mention Michael Scot.

79. MS Escorial, f. 44va: 'Fuerunt alii dicentes animam esse calorem naturalem quia vita permanet cum ipsa indeficiente'. Cf. Avicenna, *De anima*, I,2, p. 43, line 20: 'Sunt quidam qui dixerunt quod anima est calor naturalis, ideo quia cum ipso est vita.' MS Escorial, f. 44va: 'Fuerunt alii dicentes ipsam esse sanguinem quae cum extrahitur vita finitur.' Cf. Avicenna, *ibid.*, p. 43, line 26: 'Quidam autem dixerunt animam esse sanguinem, cum enim effunditur, vita destruitur.' MS Escorial, f. 44vb: 'Fuerunt alii dicentes animam esse deum tantum sicut haeretici, credentes quod in quibusdam deus est natura sicut in elementis, in quibusdam est anima sicut in animatis corporibus, et in quibusdam est purus intellectus

on Amalricus of Bene and David of Dinant.<sup>80</sup> Only one of these opinions comes close in wording to Aristotle's *Peri psychês*, but even in this case the source seems to be Avicenna.<sup>81</sup> It would not be difficult for a Latin reader who knows Aristotle's work to see that Avicenna's discussion ultimately derives from *Peri psychês*, book I, and we can assume that Michael Scot, who shows such interest in these opinions, would have used Aristotle's book if he had known it.

We can draw another conclusion from this passage. Gundissalinus's *Liber de anima* does not contain the mentioned quotations from Avicenna's *De anima*, I,2. As for the other quotations and adaptations from Avicenna which are found in the 'Capitulum animo-as' (about twenty),<sup>82</sup> there seems to be only one which is possibly mediated by Gundissalinus. The argument, however, is far from conclusive.<sup>83</sup> It cannot be ruled out that Michael Scot got his knowledge of Avicenna from a source still unknown to us; it is not Gundissalinus's *Liber de anima*.<sup>84</sup> Given the fact that Michael Scot once refers to Avicenna's book and uses the correct title, i.e. *In sexto de naturalibus*, it can be assumed provisionally that he has first-hand knowledge of the book.<sup>85</sup>

These findings help to fix the date of the 'Capitulum animo-as' between about 1160, when Avicenna's *De anima* was translated, and 1230 or perhaps even 1220,

et bonus sicut in planetis et in angelis seu in omnibus intelligentiis'. Cf. Avicenna, *ibid.*, p. 43, line 32: 'Quidam autem putaverunt quod anima Deus est qui est sublimis super omne quod de illo dicunt haeretici; dicunt etenim quod ipse in aliquibus est natura et in aliquibus anima et in aliquibus est intellectus'.

80. As Morpurgo suggests ('Fonti di Michele Scotto', p. 60, n. 6).

81. MS Escorial, ff. 44rb-va: 'Fuerunt alii qui posuerunt animam esse principium omnium aliarum rerum, per hanc rationem solum simile cognoscitur a suo simili. Sed habet anima cognitionem omnium rerum, oportet igitur ipsam esse principium omnium rerum'. Cf. Aristotle, *Peri psychês*, Greek-Latin version, 405b15: 'Dicunt enim simile cognosci simili. Quoniam autem omnia anima cognoscit, constituunt ipsam ex omnibus principiis'. It is conspicuous, however, that the term *principium omnium rerum* does not appear in Aristotle. It very probably comes from Avicenna, *De anima*, I,2, p. 41, line 7: 'Omnes autem isti dicebant quod anima non scit omnia nisi ex hoc quod est de essentia principii omnium rerum'.

82. See Index locorum, I.1.i; I.2.b-e; I.5. *passim*; II.4.i; IV.1.f; IV.2.g, i.

83. MS Escorial, f. 43va: '... cuius <scil. spiritus> motus est quadruplex, scilicet in substantia, in quantitate, in qualitate et in loco i<d est> localiter'. Avicenna's text does not have the category *substantia* (but only *aliud*): Avicenna, *De anima*, I,2, p. 45: 'Item hic motus quo movetur anima necesse est ut aut sit secundum locum aut secundum quantitatem aut secundum qualitatem aut secundum aliud'. Cf. Gundissalinus, *Liber de anima*, pp. 33-4: 'Aliquo sex motuum movetur <scil. anima> quia aut movetur secundum substantiam aut secundum quantitatem aut secundum qualitatem aut secundum locum'. Still, Michael Scot may have had a source different from the two.

84. Pace Morpurgo, 'Fonti di Michele Scotto', p. 69, notes 42 and 45. I am sceptical in general that Michael Scot had any knowledge of Gundissalinus's *Liber de anima*.

85. MS Escorial, f. 44rb: 'Cuius ambiguitatis illa est solutio quam tangit Avicenna in sexto de naturalibus quod duplex est rei perfectio, scilicet prima et secunda. Prima enim perfectio est illa quae dat esse rei simplex velut figura in ense, imago in speculo et igneitas in igne. Secunda perfectio est quae non dat esse rei simplex, sed compositae, rem tamen (*lacuna*) aptans in suum finem sicut incidere est in cultello, bene operari in homine, sol (?) in orbe lucem et cetera'. The passage is a partly changed, partly literal quotation from Avicenna, *De anima*, I,1, p. 27, line 40 to p. 28, line 46.

when Aristotle's *Peri psychês* was known to most writers on psychology in the West. It is unlikely that it was written much earlier than 1200 since Michael Scot knows of the name of Averroes (d. 1198), whom he mentions once.<sup>86</sup> In about 1235, Bartholomaeus Anglicus borrows extensive passages from the physiological section of the 'Capitulum animo-as' into his encyclopedia *De proprietatibus rerum*.<sup>87</sup>

Michael Scot is thus one of the earliest writers to adopt parts of Avicenna's psychology. Apart from the teachings mentioned, i.e. the divergent opinions of the ancient philosophers on the soul, and the quotation mentioning Avicenna's name,<sup>88</sup> he chooses the following doctrines, which derive exclusively from *De anima*, I,5: the distinction between the animal faculties of perception and motion (f. 46rb) and between external and internal senses (f. 46rb), the description of the five external senses (f. 37rb), the definition of touch (f. 48ra), the description of the internal senses (f. 37rb and partly 46va), the distinction between the practical and the contemplative intellect (f. 37vb and perhaps f. 49ra), and the quadripartite division of the intellect (f. 37va).

It can be shown that for some of these topics, and especially for the doctrine of the animal faculties, Michael Scot also draws on the medical writers. A number of passages present teachings which derive from the *Pantegni* of Constantine the African; they concern the *virtus vitalis*,<sup>89</sup> the imagination, reason<sup>90</sup> and memory,<sup>91</sup> the *virtus sensibilis*<sup>92</sup> and the external senses of vision,<sup>93</sup> smell<sup>94</sup> and taste.<sup>95</sup>

86. MS Escorial, f. 45rb: 'Averois dixit anima est substantia quaedam nobilitate cuius a nobis veraciter comprehendere non potest quod non sit nec diffiniri quid ipsa sit'. I was not able to trace this quotation, which looks like a summary of Avicenna's *De anima*, I,1 (the story of the Flying Man) showing that one cannot imagine that the soul does not exist, see below, chapter 'The Flying Man'. In any case, if Michael Scot does not yet know Aristotle's *Peri psychês*, he cannot know Averroes's commentary on it.

87. This is a discovery of Morpurgo's (*L'idea di natura nell'Italia Normannosveva* (1993), p. 54, n. 234). It is not true, however, that the *Capitulum animo-as* is taken over almost entirely ('pressochè integralmente') by Bartholomaeus. I have found literal quotations only from folios 46ra to 49rb, which is the section presenting physiological teachings (*De proprietatibus rerum*, Lib. III, cap. 8 quotes f. 46ra; cap. 9 quotes ff. 46ra-b; cap. 10 quotes f. 46rb; cap. 11 quotes f. 46va; cap. 12 quotes ff. 46va-b; cap. 13 quotes ff. 49ra-b; cap. 14 and 15 quote f. 47ra; cap. 16 quotes ff. 47ra-b; cap. 17, 18 and 19 quote f. 47va; cap. 20 quotes f. 47vb; cap. 21 quotes ff. 47vb-48ra). Michael Scot is the source of Bartholomaeus and not vice versa for the reason that Bartholomaeus adds authorities such as Aristotle's *Peri psychês* which are not known to Michael Scot.

88. From *De anima*, I,1, see n. 85 above.

89. MS Escorial f. 47ra: 'Fundamentum vero huius virtutis sive proprium domicilium est cor a quo videtur procedere vita corporis et conservatio virtutis ad omnia membra vivificanda potentialiter'. Cf. Constantine, *Pantegni*, Lib. IV, cap. 5: '... cuius fundamentum est cor a quo vita ad membra corporis procedit vivificanda'.

90. MS Escorial, f. 47rb: 'Ratio est illa virtus animae quae recipit totum actum imaginationis ad refrenandum (?) et haec velut iudex iudicat et diffinit'. Cf. Constantine, *Pantegni*, Lib. IV, cap. 9: 'Intellectus iudex est et discretor rerum quas ab imaginatione rationabiliter sive solo intellectu suscipit'.

91. MS Escorial, f. 47rb, about memory: '... et donec omnia praedictorum ad actum reducat, quaeque conservat firmiter et custodit'. Cf. Constantine, *Pantegni*, Lib. IV, cap. 9: 'Memoria format intus posita custodiens ea donec ad actum ducat'.

92. MS Escorial, f. 47rb: 'Sensus igitur visus subtilior est et nobilior omni alio sensu et est prior ad iudicandum cum natura eius sit ignea. Sensus auditus ..., olphatus ..., gustus ..., tactus ...'. Cf.

If we compare Avicenna's and Constantine's doctrines, we find that there are differences, for instance in the number and definition of the internal senses and in respect to the function, object and organ of the external senses, but that Michael Scot has chosen doctrines from both writers which are relatively similar and compatible with each other. In some cases they are hardly distinguishable. To take the example of the organ of smell: Avicenna and Constantine mention that the organ of smell consists of two small pieces which hang from the brain and resemble the nipples of breasts. Michael Scot mentions them twice: once (f. 37rb) he says that the organs of smell are 'similes capitibus mamillarum', whereas in the other passage (f. 48vb) he uses the wording 'frustula carnis mamillis assimilantur quae a cerebro dependent'. The first is a quotation from Avicenna, the second from the *Pantegni*.<sup>96</sup>

One of Michael Scot's motives for reading and using Avicenna as a primary source thus seems to be the compatibility of Avicennian psychology with the physiological tradition of the twelfth century. One should note that the theory of the active intellect, which attracted so many later scholastics, does not appear in the 'Capitulum animo-as'.

#### 4. ANONYMOUS (VAT. LAT. 175): *DUBITATIONES CIRCA ANIMAM*

In 1952 Ermenegildo Bertola drew attention to a manuscript in the Vatican Library which contains – apart from works of Pseudo-Dionysius, John of Damascus, Boethius and Anselm of Canterbury – four predominantly psychological treatises.<sup>97</sup> One of them can be identified as Gundissalinus's *De anima*, the other three are anonymous. Whereas two of these are less relevant for the present purpose since their psychological parts focus on the one question of the immortality of the soul, the remaining anonymous treatise is of considerable interest.

Constantine, *Pantegni*, Lib. IV, cap. 10: 'Virtus visus est subtilior aliis quippe cum eius natura sit ignea ...'.

93. MS Escorial, f. 47va: 'Sensus enim visus cum sit igneus est subtilissimus omnium sensuum et ideo remotissimum subito comprehendit'. Cf. Constantine, *Pantegni*, Lib. IV, cap. 11: 'Visus cum sit sensus igneus ... necesse est aliis subtilior habeatur quod illud comprobatur quod comprehendit longe remotissima'.

94. See n. 96 below.

95. MS Escorial, f. 48vb: '... ad quam <scil. linguam> nervus mittitur a cerebro qui divertitur per eam ut sibi det sensum gustus qui sic efficitur. Res enim gustanda cum pervenit ad linguam et ipsa eius tangat essentiam secundum suam proprietatem in ea operatur quippe ut lingua in sui complexionem mutetur'. Cf. Constantine, *Pantegni*, Lib. IV, cap. 14: '... procedit vero quidam nervus a cerebro qui ... hic per linguam dividitur, ut gustus det sibi sensum qui sic efficitur. Res gustanda cum ad linguam veniat, et eius essentiam tangat suam naturam in ea operatur, ut lingua in sui naturam mutetur'.

96. Avicenna, *De anima*, I, 5, p. 84, line 69: '... est vis ordinata in duabus carunculis anterioris partis cerebri similibus mamillarum capitibus'. Constantine, *Pantegni*, Lib. IV, cap. 13: '... huius instrumenta duo diximus esse frustula a cerebro proceduntia mamillis assimilantia'.

97. Bertola, 'I "De anima" del Vat. lat. 175' (1953), pp. 253–61.

Bertola has given a detailed description of the treatise;<sup>98</sup> it opens with a prologue and a description of contents and then deals with the following questions: 1) 'An sit anima'; 2) 'Quid sit anima realiter'; 3) 'Quid sit diffinitio'; 4) 'Utrum fuerit ab aeterno'; 5) 'Utrum de aliquo vel de nihilo procedant in esse'; 6) 'Utrum omnes animae rationales sint simul creatae'; 7) 'Utrum creentur ante infusionem'; 8) 'Utrum immediate procedant a deo'. The text is incomplete – it ends abruptly in the middle of a word ('am<plius>'). From the description of contents at the beginning we know that what is extant today is most of the first part of the treatise, which concerns the soul's being ('Circa esse'). The second part is lost or was never written; it was called 'On what preserves the <soul's> being' ('Circa conservans esse') and comprised two sections, one on essence ('essentia') and one on power (or faculty: 'potentia').<sup>99</sup> Bertola has found references to Augustine, Aristotle, Avicenna, Plato, John of Damascus, Remigius of Auxerre and the *De motu cordis* (of Alfred of Shreshill).<sup>100</sup> He argues that the work was written by a master of arts between 1180 and 1210.<sup>101</sup>

We learn that much from Bertola, whose analysis is sound, apart from the last mentioned conclusion. The framework employed by the unknown author clearly points to a theologian; compare the psychological works of masters of arts (John Blund, Anonymous (Gauthier), Petrus Hispanus) who structure their treatises after Peripatetic models and not according to a traditional set of questions.<sup>102</sup> As for the date of the treatise – for which I shall use the title *Dubitaciones circa animam*<sup>103</sup> – it is unlikely to be earlier than 1200. One has to take into account that the author's most recent source is Alfred of Shreshill's *De motu cordis*,<sup>104</sup> which was written

98. Bertola, 'Psicologia platonico-agostiniana e psicologia aristotelico-avicenniana in una inedita trattazione sui problemi dell'anima' (1969), pp. 271–99.

99. The description of contents is printed in Bertola, 'Psicologia platonico-agostiniana', p. 274, n. 3.

100. Bertola, 'Psicologia platonico-agostiniana', p. 275.

101. Bertola, 'Psicologia platonico-agostiniana', pp. 294–5.

102. See the chapters on John Blund, Anonymous (Gauthier) and Petrus Hispanus. Cf. also the anonymous author's prologue where he differentiates between the theologians' and the philosophers' theory of the soul (f. 219ra): 'Anima iterum ordinatur ad summum bonum cuius est capax et sic (?) theologus tractat de ipsa et ideo philosophans in naturis tractat principaliter de anima secundum omnem sui differentiam, theologus vero principaliter de anima rationali quae sola ordinatur ad beatitudinem et incidentaliter de aliis, philosophus igitur ipsam considerat in quantum comparatur ad suam materiam, theologus in quantum ad finem, ille in quantum ad suum inferius, iste in quantum ad suum superius comparatur'. Note that the anonymous treatise mainly deals with the rational soul and its origin.

103. There is no title mentioned in the manuscript. The phrase *Dubitaciones circa animam* is used by the author in his description of contents, MS Vat. lat. 175, f. 219ra: 'Dubitacionum igitur quae circa animam sunt, aliae circa esse, aliae circa conservans esse'. See also n. 117 below.

104. Alfred of Shreshill's important treatise is not treated in the present study of psychological treatises because its focus is not the soul but the heart; cf. Alfred of Shreshill, *De motu cordis*, p. 4: 'Huius <scil. animae relatae> ergo primum et praecipuum organum cum eiusdem virtutibus et operationibus, nostris adhuc ignotum inemptatumque phisicis, declarare institui'.

around 1200 at the earliest and 1217 at the latest.<sup>105</sup> The author quotes at least once the Greek-Latin version of Aristotle's *Peri psychēs* (remember that this could not be proved for Michael Scot's 'Capitulum animo-as'),<sup>106</sup> and also mentions Aristotle's *Prima philosophia* and *De animalibus*.<sup>107</sup> It may be that the author is dropping names (I was not able to trace the passages in the last two works), but even this suggests a rather late dating, perhaps in the 1220s.

What makes this writer and his *Dubitaciones circa animam* important for the history of psychology, is that he is independent, that is, he does not simply copy a source known to us, and that on the other hand there are obvious links with Michael Scot and Jean de la Rochelle. He has in common with Michael Scot the fact that he quotes large portions of chapter I,2 of Avicenna's *De anima*, which receives hardly any attention in subsequent Latin writings. This chapter is a presentation and refutation of previous theories on the soul and is very much akin to Aristotle's *Peri psychēs*, book I. Just like Michael Scot, the anonymous author mentions Aristotle and Avicenna but draws exclusively on Avicenna, even more extensively than Michael Scot.<sup>108</sup> This is the passage with the references to the two philosophers:

These and similar <doctrines> are presented sufficiently in the first book of Aristotle's *De anima* and in the *Sextus de naturalibus* of Avicenna. But there is no need to invest much labour into their refutation, partly because all of them are

105. See Otte, 'The Life and Writings of Alfredus Anglicus', pp. 277–8. Cf. Anonymous, MS Vat. lat. 175, f. 219vb: '... a quodam sapiente in libro de motu cordis ubi dicit: anima est substantia incorporea intellectiva illuminationum a primo ultima relatione susceptiva', and Alfred of Shreshill, *De motu cordis*, p. 2: 'In se enim considerata <scil. anima> substantia est incorporea, intellectiva, illuminationum quae a primo sunt ultima ratione perceptiva'.

106. Cf. Anonymous, MS Vat. lat. 175, ff. 220rb–va: 'Amplius philosophus dicit in libro de anima et in prima philosophia quod anima se habet ad corpus sicut nauta ad manem (probably: *navem*)' and Aristotle, *De anima*, Greek-Latin version, 413a9: '... sic sit actus corporis anima sicut nauta navis'. The Arabic-Latin version has 'sicut gubernator navi'. Further, cf. Anonymous, MS Vat. lat., f. 219va: 'Secundum primum modum datur haec diffinitio tracta ab Aristotele et ab Avicenna: anima est prima perfectio corporis physici organici potentia vitam habentis', and the list of different versions of this definition in Callus, 'The Treatise of John Blund', pp. 490–91: The terms *perfectio*, *organici* and *vitam habentis* are already in Calcidius, but the combination *physici organici* is introduced by the Greek-Latin translation (412b5–6). The Arabic-Latin translation has 'naturalis organici'.

107. For the *Prima philosophia* see the preceding note, for *De animalibus* see Anonymous, MS Vat. lat. 175, f. 220va: 'Amplius dicit philosophus et probat in libro de animalibus quod operationes quae sunt in sensibilibus sunt a virtute animae ut augmentum et diminutio et huiusmodi'. Bertola incorrectly refers to this passage as 'Aristoteles nel suo trattato sull'anima' ('Psicologia platonico-agostiniana', p. 288).

108. Anonymous, MS Vat. lat. 175, f. 219rb: '... fuit quaedam sententia circa creatorem dicens quod anima sit ipse qui in quibusdam est natura in quibusdam intellectus sublimior et hos vocat Avicenna haereticos' (from Avicenna, *De anima*, I,2, ed. Van Riet, p. 43, line 32 – p. 44, line 35). Ibid.: 'Fuerunt vero circa creaturas philosophorum sententiae et hae quadripartitae. Alii enim respicientes ad vitam animati, alii ad motum, alii ad intellectum vel ad apprehensionem, alii ad utrumque scilicet motum et apprehensionem ...' (from *De anima*, I,2, p. 38, lines 71–5). The anonymous author then quotes almost every line of pages 39–42 and of page 43 in Van Riet's edition of Avicenna's *De anima*.

sufficiently disproved by arguments in these books, partly because nobody today holds these doctrines and partly because it will become clear in the course of the following investigation what the soul in fact is.<sup>109</sup>

Here the author of the *Dubitaciones* displays an awareness of the distance in time between himself and his philosophical sources – an awareness lacking in Gundissalinus and Michael Scot.

The connection between our anonymous author and Jean de la Rochelle, is the way in which he deals with the first question: 'an sit anima' ('whether the soul exists'). For he uses two arguments which appear in a similar, but not identical and not dependent version in Jean de la Rochelle's *Summa de anima*: Avicenna's Flying Man<sup>110</sup> and a quotation from Pseudo-Augustine's *Liber de spiritu et anima*.<sup>111</sup> It is very unlikely that Jean de la Rochelle is the source for the anonymous author, because this would move the date of the *Dubitaciones circa animam* to the 1240s at the earliest, which is clearly too late for a treatise with a rather restricted knowledge of Aristotle and Avicenna (and no knowledge of Averroes) and a number of similarities with Michael Scot and Gundissalinus.<sup>112</sup> The connection with Jean de la Rochelle is important because the extra information from the anonymous author shows that there is a tradition of using Avicenna's Flying Man in the opening questions of theological psychology: examples are Gundissalinus, Anonymous (Vat. lat. 175) and Jean de la Rochelle. Unfortunately, it is again difficult to prove the influence of Gundissalinus's *Liber de anima*; the Flying Man has a different wording in each of the three writers.<sup>113</sup> I suspect there is at least an indirect influence of Gundissalinus on the presentation of the question 'an sit anima' and also on the structure of the treatise as a whole.<sup>114</sup>

109. Anonymous, MS Vat. lat. 175, f. 219rb: 'De his et similibus sufficienter habetur in primo Aristotelis de anima et in sexto de naturalibus Avicennae. Non oportet autem laborare ad horum destructionem tum quia ibi sufficienter haec omnia per rationes reprobata sunt, tum quia nullus haec hodie ponit, tum autem quia ex investigatione eius quod vere est anima in sequentibus patebit'.

110. Anonymous, MS Vat. lat. 175, f. 219ra; for the text see p. 89, n. 50 below. Cf. Jean de la Rochelle, *Summa de anima*, ed. Bougerol, I.1, p. 51: 'Ad hoc est ratio Avicennae talis ...'.

111. Anonymous, MS Vat. lat. 175, f. 219rb: '... hoc est quod dicit Augustinus in libro de spiritu et anima: nihil tam novit mens quam quod sibi praesto est ... se cognoscere, se iudicare et huiusmodi'. Cf. Jean de la Rochelle, *Summa de anima*, I.1, p. 51.

112. Also, all other treatises in the manuscript are much older than 1240. See also Bertola, 'I "De anima" del Vat. lat. 175', p. 253: 'L'esame della scrittura ci permette di affermare con buona certezza che esso <il manoscritto> è della fine del XII secolo o dell'inizio del XIII'.

113. See p. 87–92 below, and Index locorum, I.1.m for the references.

114. Cf. Gundissalinus, *De anima*, p. 31, line 19: '... deinde an sit creata vel increata; sed si creata, an una vel multae; si multae, an simul creatae ab initio mundi, an non simul ab initio mundi, sed cotidie novae creentur; si autem cotidie novae creantur, tunc an de nihilo an de aliquo', and Anonymous, MS Vat. lat. 175, f. 219ra: '... et ideo primo quaeritur an fuerint ab aeterno; habito vero quod non, quaeritur secundo utrum sint de aliquo quod est fieri vel de nihilo quod est creari; tertio habito quod creentur, quaeritur utrum omnes simul; quarto habito quod non omnes simul quaeritur utrum creentur ante infusionem ...'. For the complete text of the description of contents, see Bertola, 'Psicologia platonico-agostiniana', p. 274, n. 3.

The fact that there are interconnections between the treatises mentioned, but not direct dependencies (to the best of my knowledge), indicates that the psychological tradition between 1200 and 1240 was much broader than the few testimonies we have.

What then is the place of this anonymous treatise in the history of psychology? It has been said that it is a theologian's work, and in fact it distinguishes carefully between theological and philosophical psychology in its prologue.<sup>115</sup> The aim of the treatise is to collect what the philosophers and also the doctors of theology have said, in order to improve knowledge about the soul: 'In hoc autem opusculo colliguntur quae dixerunt philosophi et etiam doctores theologi ad habendam de anima scientiam latiore.'<sup>116</sup> Unfortunately, we do not know the exact amount of influence exerted by the new Peripatetic learning, because we only have the author's section on the soul's being ('Circa esse'), but not on its essence and – more importantly – on its 'potentia'.<sup>117</sup> If the treatise is a forerunner of that of Jean de la Rochelle (and of Anonymous (Callus), who will be mentioned shortly) then the section 'Circa potentiam' may well have contained a division of the soul's faculties. There we would have met with the powers of the vegetative, animal and human soul, which are not mentioned in the extant text.

Even without this, the anonymous treatise is significant as an example of the early reception of Aristotle and Avicenna: the author knows both treatises on the soul, but it is to Avicenna's Flying Man that he assigns the prominent place in the opening question, and it is Avicenna's account of divergent theories of the soul which is quoted extensively, and not Aristotle's.

# 5. ANONYMOUS (GAUTHIER) AND ANONYMOUS (CALLUS)

From about the years 1225 and 1230 respectively, there survive two anonymous treatises on the soul, of which the latter copies the earlier: *De anima et de potentiis eius*, edited by René Gauthier, and the *De potentiis animae et obiectis*, edited by Daniel Callus. I shall not discuss in detail these two treatises, which have been well studied by the two editors.

The first treatise is particularly precious, because it is one of the few witnesses to the psychological doctrine of masters of arts before 1240 (the only other example being John Blund).<sup>118</sup> The treatise starts off with Aristotle's definition of the soul (in the Greek-Latin version), explains it briefly, and, after establishing the criteria

115. See n. 102 above.

116. Anonymous, MS Vat. lat. 175, f. 219ra (the complete text of the prologue can be found in Bertola, 'I "De anima" del Vat. lat. 175', pp. 260–1).

117. Anonymous, MS Vat. lat. 175, f. 219ra: 'Dubitationes autem quae circa potentiam sunt, multae sunt et diversae ut post patebit'.

118. Anonymous (Gauthier), *De anima et de potentiis eius*, ed. R. A. Gauthier, 'Le Traité *De anima et de potentiis eius* d'un maître ès arts (vers 1225)' (1982), pp. 27–55.

for distinguishing the powers of the soul, goes through the whole range of Avicennian faculties: the three vegetative faculties, the five external and the five internal senses, the motive faculties, the practical and the contemplative intellect. The author rejects Avicenna's theory of the separate active intellect, but ingeniously connects the Avicennian doctrine of the four intellects with Western discussions of the demonstrative method.<sup>119</sup> Averroes's long commentary on *Peri psychēs* is used for the first time, but one should not overemphasize its influence;<sup>120</sup> the treatise is thoroughly Avicennian in its structure (and most of its content), and one has to wait until the first commentaries on Aristotle's *Peri psychēs* in about 1240 before Averroes's book receives serious attention.<sup>121</sup>

The second treatise, the anonymous *De potentiis animae et obiectis*,<sup>122</sup> draws heavily on the first, and inherits both structure and content from Anonymous (Gauthier).<sup>123</sup> The anonymous author is a theologian, as is apparent from the changes and additions he makes to his source: he omits the first section on Aristotle's definition, but keeps the criteria for distinguishing the powers of the soul; like many other theologians, he misses out the vegetative faculties,<sup>124</sup> and then goes through the Avicennian external and internal senses, the different kinds of intellects and the motive faculties. He finally departs from his *Vorlage* and adds a long theological second part, which deals with the innate, infused and acquired *habitus*. The treatise is one of the earliest examples of a 'divisio potentiae animalis' (or 'animae') which appears in later theologians such as Jean de la Rochelle, Alexander of Hales (or rather the *Summa fratris Alexandri*) and Albertus Magnus;<sup>125</sup> it has been shown, in fact, that Jean de la Rochelle's *Tractatus* quotes our author.<sup>126</sup> By arranging the purely philosophical theories of the soul under 'divisio potentiae', the anonymous theologian has found (or perhaps adopted from an unknown source) a convenient way to juxtapose, and thus distinguish between, theological and philosophical psychology.

119. See below, pp. 191–5. Anonymous (Gauthier), *De anima et de potentiis eius*, p. 51, line 453: 'Et in hoc erravit Avicenna quia posuit intellectum agentem separatim ab anima, puto intelligentiam sive angelum'.

120. For a critique of Gauthier's misleading term 'First Averroism', see below p. 205, n. 709.

121. Gauthier's claim that between 1225 and 1240 there was a fight ('lutte') between Avicennist Aristotelianism and Averroist Aristotelianism, does not have a basis in the sources (Gauthier, 'Le Traité *De anima et de potentiis eius*', p. 25). If there was a fight at all, it was between Avicennian psychology and Aristotelian psychology; Averroes's book was widely ignored before 1240.

122. Anonymous (Callus), *De potentiis animae et obiectis*, ed. D. A. Callus (1952), pp. 146–70.

123. Gauthier compares the two treatises in the introduction to his edition; see 'Le Traité *De anima et de potentiis eius*', pp. 6–19.

124. See p. 38, n. 147 below.

125. Anonymous (Callus), *De potentiis animae et obiectis*, p. 147, line 13: 'Quaestio autem est de divisione potentiae animalis. Dimittamus autem potentiam animae vegetabilis et dividamus potentiam animae sensibilis et rationalis'.

126. Callus, 'The Powers of the Soul', pp. 131–2; Michaud-Quantin, introduction to the edition of Jean's *Tractatus*, p. 19; Gauthier, 'Le Traité *De anima et de potentiis eius*', p. 22; Gauthier, 'Notes sur les débuts', pp. 335–6.



# 6. ROLAND OF CREMONA

Roland of Cremona was the first Dominican master to teach theology in Paris and, after 1229, in Toulouse. His reputation today rests less on the impact of his writings, which are extant only in a few manuscripts and seem to have had very limited influence, than on the fact that they show a remarkable interest in matters philosophical, medical and scientific, and witness to a comprehensive knowledge of Aristotle's writings.<sup>127</sup> We know of two works by Roland: a commentary on the book of Job (*Postilla super Job*) and a large theological *Summa* in four books which is extant in four manuscripts<sup>128</sup> and is referred to under different titles: *Liber quaestionum* (Roland's own term),<sup>129</sup> *Quaestiones super quatuor libros sententiarum*,<sup>130</sup> *Summa* (Roland's own term),<sup>131</sup> *Summa fratris Rolandi*.<sup>132</sup> Only the third book of the *Summa*, as the work is commonly called in modern literature, has been published.<sup>133</sup> The work is structured after Peter Lombard's *Sententiae*, but its main immediate sources are Praepositinus of Cremona and William of Auxerre.<sup>134</sup> Since Roland also quotes the commentary on the *Sentences* by Hugh of Saint-Cher of about 1231–2, he probably wrote the *Summa* not long after his return to Italy from Toulouse in 1233.<sup>135</sup>

127. Filthaut, *Roland von Cremona O.P. und die Anfänge der Scholastik im Predigerorden* (1936), pp. 86 and 195. Filthaut's book is the main tool for scholarship on Roland of Cremona. It should be read in combination with Vansteenkiste, 'L'Editio princeps della Somma di Rolando da Cremona' (1964), pp. 421–37, who adds information about the third book of the *Summa*, which was not yet known to Filthaut. On Roland's lack of influence see Hess, 'Roland of Cremona's place in the current of thought' (1968), p. 429: 'All three <Filthaut, Lottin, Breuning> ... could find no certain evidence that he had influenced any other writing'. A possible exception to this rule is Albertus's passage on the shellfish in *De motibus animalium*; see pp. 97–8 below. Further secondary literature on Roland's *Summa*: Ehrle, 'S. Domenico ... e la Somma teologica ...' (1923), pp. 109–15; Ehrle, 'L'Agostinismo e l'Aristotelismo' (1925), pp. 536–44; Lottin, 'Roland de Crémone et Hugues de Saint-Cher' (1960), pp. 171–80; Breuning, *Die hypostatische Union* (1962), pp. 217–19; Cremascoli, 'La "Summa" di Rolando da Cremona' (1975), pp. 825–76; Vicaire, 'Roland de Crémone' (1977), pp. 75–86; Biffi, 'La "regalità" della teologia' (1992), pp. 155–93. Only two studies deal with Roland's psychology: Filthaut, *Roland von Cremona*, pp. 97–110, and Hess, 'Roland of Cremona's place', pp. 437–49.

128. Paris, MS Bibliothèque Mazarine 795, ff. 1r–135r (books I, II and IV). Vatican City, MS Vat. Barb. 729, ff. 1r–264v (books I–III). Bergamo, MS Bibl. Civ. 6. 129 (Δ 9. 13) (book III). Florence, MS Bibl. Naz., Conventi soppressi da ordinare, n. 282, ff. 1–234 (books II–III). Cf. Kaeppli, *Scriptores Ordinis Praedicatorum Medii Aevi*, 198, III, pp. 330–31.

129. Dondaine, 'Un commentaire scripturaire de Roland de Crémone "Le livre de Job"' (1941), p. 119, n. 20.

130. This is the heading in MS Mazarine 795 (13th century), f. 1r. Filthaut dates the heading to the 14th or 15th century (*Roland von Cremona*, p. 40).

131. In a passage of the 3rd book (ed. Cortesi, n. 133 below, p. 322): '... hoc dictum est in principio Summae'. Cremascoli drew attention to this fact ('La "Summa" di Rolando da Cremona', p. 829).

132. Titles in medieval Dominican and Papal catalogues. See Filthaut, *Roland von Cremona*, p. 34.

133. Roland of Cremona, *Summae Magistri Rolandi Cremonensis O.P. Liber Tercius. Editio princeps ex membranis codicibus ...*, ed. by A. Cortesi (Monumenta Bergomensia 7) (Bergamo, 1961). I have not been able to consult this book. The prologue of the *Summa* was edited by Cremascoli, 'La "Summa" di Rolando da Cremona', pp. 858–76.

134. Filthaut, *Roland von Cremona*, pp. 81–4.

135. The Italian origin helps to explain why the *Summa* exerted no influence in Paris. See Lottin,

Roland touches upon psychological topics time and again in the *Summa*, but he is here counted among the psychological writers for a different reason. When Roland in book two of the *Summa* arrives at the discussion of the sixth day of creation, he inserts a section devoted entirely to the *vires naturales* of the human being. This passage stretches from folio 32vb to folio 34vb of the Mazarine manuscript (on which the following analysis is based), covering about twenty printed pages in transcription.

The peculiar position adopted by Roland is better understood if it is compared with the approach of one of his sources, Hugh of Saint-Cher. In his commentary on the *Sentences* Hugh introduces new material from Avicenna's *De anima* and Aristotle's *Peri psychês*, but he does not take over the structure of these philosophical works.<sup>136</sup> An example is his chapter on book two, distinction 24 of the *Sentences*: He gives short explanations of passages in Peter Lombard and discusses at some length a number of questions. They concern the status of man before the original sin,<sup>137</sup> the definition of free will,<sup>138</sup> the two parts of the faculty of reason,<sup>139</sup> the identification of *synderesis* with the higher part of reason and the possibility of it sinning.<sup>140</sup> An example of the Peripatetic teachings which appear in this chapter is the distinction between external and internal senses;<sup>141</sup> the shape and doctrine of

'Roland de Crémone', pp. 179–80. Gauthier recently argued ('Notes sur les débuts' (1982), pp. 330–31) that the date of the *Summa* may be as late as 1244 when Roland returned to Cremona and had a reason to take action against his *otium*: '... et prodesse modicum simplicibus et otium repellere cogitabam', as he writes in the prologue (ed. Cremascoli, p. 860, lines 25–6). However, this may well be a topos. Since we do not know at which time of his life Roland may have felt menaced by *otium*, the earlier date, which is closer to his teaching activity, remains more probable.

136. Hugh's psychology has been studied by Ehrle, 'L'Agostinismo et l'aristotelismo' (1925), pp. 544–50; Lottin, 'Roland de Crémone et Hugues de Saint-Cher' (1960), pp. 171–80; Lottin, 'Trois "quaestiones" d'Hugues de Saint-Cher' (1942), 142–8. In this latter article Lottin draws attention to the fact that in the collection of MS Douai 434 there are three questions on the soul which can be attributed to Hugh of Saint-Cher. They concern the nature of the soul, its unity and its composition of matter and form, and do not leave theological terrain. The second question is published by Lottin in his 'L'Unité de l'âme humaine' (1942), pp. 471–4. The third can be found in the mentioned article 'Trois "quaestiones"'. Kaeppli, *Scriptores Ordinis Praedicatorum* II, pp. 269–81, gives further secondary literature on Hugh of Saint-Cher and a list of the over 30 manuscripts of his commentary on the *Sentences*; I have used Vatican City, MS Vat. lat. 1098, 13th c., ff. 1r–208r.

137. MS Vat. lat. 1098, f. 64va, line 56: 'Circa secundum triplex est opinio. Quidam dicunt quod ... homo ante casum numquam (?) habuit gratiam sive virtutem'.

138. MS Vat. lat. 1098, f. 65ra, line 2: 'Circa haec multa quaeri possunt. Primo quid sit liberum arbitrium secundum essentiam ...'. This part has been published by Lottin in his 'Nature de libre arbitre', pp. 99–101.

139. MS Vat. lat. 1098, f. 65va, line 5: 'Sed quaeritur de illa parte duplici rationis quae dicitur vir et mulier ... et an sint eadem in potentia et essentia ...'.

140. MS Vat. lat. 1098, f. 65va, line 40: 'Item quaeritur si synderesis sit idem quod superior pars rationis et utrum peccare possit ...'. This part has been published by Lottin in his 'Syndérèse et conscience', p. 127.

141. MS Vat. lat. 1098, f. 66ra, line 30: '... cuius <scil. rationis> principales id est aliae vires tam motivae quam apprehensivae deintus et deforis comedent mane id est in rebus transitoriis ut mane delectentur'. Cf. Avicenna, *De anima*, I,5, p. 83, lines 56–7: '... sed vis apprehendens duplex est: alia enim vis quae apprehendit a foris, alia quae apprehendit ab intus'. For other quotations from Avicenna see

Hugh's psychology, however, is not affected by it.

Turning to Roland, one finds that the text says little about his motives for writing on the soul. Roland quite abruptly ends a discussion of whether man was created in grace with the sentence:

It seems appropriate that we shall determine in this place the natural goods of the human being, which are the natural faculties. For it is said in the gospel that some man came down from Jerusalem etc. and was injured in natural things ('et vulneratus fuit in naturalibus').<sup>142</sup>

The reference is to the story of the Good Samaritan and seems to serve only as a bridge to the new topic.<sup>143</sup> Roland concludes the psychological section by returning to the story of the creation of man:

We have spoken about the natural goods in which man is created. But after man was created and put into paradise, God gave him three commands ...<sup>144</sup>

More information can be derived from the text of the section itself. There we find explicit references showing that Roland takes a particularly theological standpoint in writing about psychology. The external senses, says Roland, do not need to be treated extensively because theologians do not have to know much about them. He refers his readers to the very detailed accounts in medical books.<sup>145</sup> In the discussion of memory, Roland refrains from answering the question of how reason knows that an image has been perceived before, because this is not the province of the theologian.<sup>146</sup> Similar statements which attempt to demarcate the theologically relevant part of psychology can be found in other writers as well, for example in Philip the Chancellor.<sup>147</sup>

Index locorum, I.5.g, k, aa, dd, ff, and IV.1.a.

142. MS Mazarine, f. 32vb, line 41: 'Michi videtur quod nos debemus determinare in loco isto bona naturalia hominis quae sunt vires naturales. Dicitur enim in evangelio quod quidam homo descendebat de Hierusalem et cetera et vulneratus fuit in naturalibus'. For the discussion of man's creation in grace, see Filthaut, *Roland von Cremona*, pp. 134–5: '... quodnumquam homo ante peccatum fuit sine gratuitis' (f. 32vb).

143. Luke 10,30: 'Homo quidam descendebat ab Hierusalem in Hiericho et incidit in latrones qui etiam despoliaverunt eum et plagis impositis abierunt semivivo relicto'.

144. MS Mazarine, f. 34vb, line 1: 'Diximus de bonis naturalibus in quibus creatus est homo. Postquam enim creatus fuit homo et positus in paradiso, dedit ei deus triplex praeceptum ...'.

145. MS Mazarine, f. 32vb, line 60: 'De exterioribus viribus non oportet quod loquamur quando non sunt secundum quod debent esse notae theologo nisi pauca'. Ibid., f. 33ra, line 53: 'Haec sufficiant de sensibus exterioribus quantum ad theologum. Subtilissimae disputationes sunt apud physicos de istis sensibus, sed nihil ad nos'.

146. MS Mazarine, f. 33va, line 44: 'Sed unde videt ratio quod res illa quae comprehenditur sub illa forma prius fuit in cognitione, dico quod hoc habet ex proprietate formarum reconditarum in thesauro memoriae, fortasse ex alia causa collectioni (?), quam si prosequeremur iam ingrederemur prolixitatem, nec hoc pertinet ad theologum'.

147. Callus has collected passages in Philip the Chancellor, Hugh of Saint-Cher and Alexander Neckam ('The Treatise of John Blund on the Soul', p. 482, n. 31, and 'The Function of the Philosopher', pp. 157–8). Cf. also Grosseteste, *Ecclesia Sancta*, p. 170, line 33: '... omittentes vitam eius

We also meet with traditional questions in Roland, such as whether *synderesis* sins or not.<sup>148</sup> In contrast, however, to other theologians like William of Auxerre and Hugh of Saint-Cher, Roland does not structure his psychological section according to these questions, but according to the philosophical and medical system of faculties. We shall demonstrate this in what follows, and attempt to trace Roland's sources.<sup>149</sup>

Roland's psychological section consists of an introductory passage and eleven parts: about the external senses, common sense, the estimative faculty, memory, *ingenium*, the rational faculty, the intellect, the irascible faculty, the desiring faculty with an inserted passage on the vegetative faculty, and free will.<sup>150</sup> Roland treats *ingenium* and free will, which are common topics of early medieval psychology, only to decide that they are not faculties of the soul (*vires animae*): *ingenium* is an act rather than a faculty and free will is a power of the faculty of reason.<sup>151</sup> Roland is thus left with twelve faculties, as he explains in the prologue to the section: five external senses and five internal senses, namely common sense (which Roland says is identified with the imagination by some people), estimation, reason, intellect and memory; the other two senses are the irascible and the desiring faculty.<sup>152</sup> The number twelve is a particular feature of Roland's psychology; he compares the

vegetativam'; Anonymous (Callus), *De potentiis animae et obiectis*, p. 147, line 13: '... dimittamus autem potentiam animae vegetabilis'; Thomas Aquinas, *Prima pars Summae theologiae*, 78.1: 'Ad considerationem autem theologi pertinet inquirere specialiter solum de potentiis intellectivis et appetitivis, in quibus virtutes inveniuntur'.

148. MS Mazarine, f. 34ra, line 47: 'Solet esse quaestio utrum ipsa synderesis peccet, et videtur quod non ...'. This question is raised again (ff. 38vb–39rb) in a passage which has been published and discussed by Lottin in his 'Syndérèse et conscience', pp. 128–34.

149. Hess has traced some of the theological sources of Roland's psychology (as in n. 127 above). Filthaut remarks very generally that the main sources for Roland's psychology are Aristotle, Avicenna and Pseudo-Augustine, *Liber de spiritu et anima* (*Roland von Cremona*, p. 110).

150. MS Mazarine, f. 32vb, line 41 (Prologue): 'Mihi videtur quod nos debemus determinare in loco isto bona naturalia hominis quae sunt vires naturales'. (1) f. 32vb, line 60: 'De exterioribus viribus non oportet quod loquamur quando notae sunt secundum quod debent esse notae theologo nisi pauca'. (2) f. 33ra, line 54: 'Modo veniamus ad sensus interiores. Primus est sensus communis ...'. (3) f. 33rb, line 43: 'Consequenter dicendum est de vi estimativa ...'. (4) f. 33va, line 26: 'Consequenter dicendum est de memoria: memoria est ...'. (5) f. 33vb, line 5: 'De ingenio dubitatio est et putant quidam quod sit una de viribus animae ...'. (6) f. 33vb, line 51: 'Consequenter quaeritur de vi rationali ...'. (7) f. 34ra, line 35: 'Consequenter dicendum est de intellectu ...'. (8) f. 34rb, line 13: 'Restat videre de vi irascibili et concupiscibili. Illae sunt vires motivae ...'. (9) f. 34va, line 8: 'Consequenter dicendum est de concupiscibili ...'. (10) f. 34va, line 14: '... oportet nos incipere a vi vegetabili quae est in homine ...'. f. 34va, line 39: '... revertamus ad concupiscibilem ...'. (11) f. 34va, line 63: 'Consequenter dicendum est de libero arbitrio utrum sit vis animae vel non ...'. f. 34vb, line 1: 'Diximus de bonis naturalibus in quibus creatus est homo'.

151. MS Mazarine, f. 33vb, line 23: 'Ad primum dicimus quod in veritate ingenium non est vis animae sed est actus, loquendo secundum philosophos'. Ibid., f. 34va, line 67: 'Ad hoc dicimus quod liberum arbitrium est ipsa facultas sive facilitas rationis sicut dicit Augustinus'. The text on free will has been published by Lottin in his 'Nature de libre arbitre', pp. 103–4.

152. MS Mazarine, f. 32vb, line 53: 'Praeter naturales vires ... sunt in homine duodecim vires, quinque animales et quinque spirituales, sive quinque exteriores et quinque interiores ... , quinque sensus interiores scilicet sensus communis sive imaginatio, ut pro eodem accipiatur secundum quosdam, aestimatio, ratio, intellectus et memoria ... aliae duae sunt vis irascibilis spiritualis et concupiscibilis'.



twelve faculties to the twelve sons of Job, to the twelve cows carrying the 'iron sea' of Solomon's temple and to the apostles.<sup>153</sup>

Which then are Roland's sources? In his list of twelve senses there are two features which cannot be found in early medieval psychology:<sup>154</sup> the distinction between the external and internal senses and the faculty of estimation. Neither go back to Aristotle's *Peri psychēs* (which Roland knows and quotes), but to Avicenna's *De anima*.<sup>155</sup> For the description of the estimative faculty Roland draws on different chapters of Avicenna's book, which he seems to know well.<sup>156</sup> Another feature is distinctive: the disappearance of the faculty of imagination or *phantasia*. Roland says that common sense is called differently by medical scholars (or natural scientists: 'a physicist'), namely *phantasia*.<sup>157</sup> The only medical source I could identify for this theory is Avicenna's *Canon*, where it is said that:

one <of the internal faculties> is common sense and *phantasia*, and for medical scholars ('apud medicos') they are one faculty, but for the verifying people ('certificantes'),<sup>158</sup> who are among the philosophers, they are two.<sup>159</sup>

Another feature also may have its origin in the *Canon*. Roland just as Avicenna in the *Canon* divides the vegetative faculty into two branches, the reproductive (*generativa*) and the nutritive faculty (*nutritiva*),<sup>160</sup> and not into three, by adding the faculty of

153. MS Mazarine, f. 32vb, line 58: 'Iste sunt duodecim filii Iob, ... sunt duodecim boves sustinentes mare aeneum'. Ibid., f. 33ra, line 1: '... unde <istae vires> sunt quasi duodecim Apostoli animae sive nuntii'. Cf. III Kings 7, 25 and 44; II Par 4, 4 and 15. Roland discusses the number twelve also in his prologue to the *Summa* (ed. Cremascoli, as in n. 127 above, p. 871, lines 297–319).

154. Cf. the enumeration of *vires* in the these 12th-century writings: Isaac of Stella, *Epistola de anima*, pp. 1879–80: '... sensus corporeus, imaginatio, ratio, intellectus, intelligentia'; Pseudo-Augustine, *Liber de spiritu et anima*, 13, p. 789: '... vires sunt sensus, imaginatio, ratio, memoria, intellectus, intelligentia'.

155. Avicenna, *De anima*, I,5, p. 83, lines 56–7. For the terms 'sensus interiores' and 'sensus exteriores', see *De anima*, I,5, p. 86 *passim*, and *De anima*, IV,1, p. 1, lines 2–3. Cf. also Algazel, *Metaphysica*, p. 164: 'Virtus vero apprehendens dividitur in exteriorem ... et in interiorem ...'. This is a reworking of Avicenna, *Dānešnāme*, tr. Achena/Massé, II, p. 56.

156. See Index locorum, I.5.aa.B1 and B3; IV.3.b.

157. MS Mazarine, f. 33ra, line 54: 'Primus est sensus communis qui alio nomine a physicis vocatur phantasia eo quod in ipso fiant apparentiae et non existentiae deceptiones et errores'. There is another already mentioned passage in the prologue to the section (see n. 152 above): '... sensus communis sive imaginatio ut pro eodem accipiatur secundum quosdam'.

158. The Arabic term translated by *certificantes* is *mubāṣṣilūna*, 'those who determine the validity of something'. This is a technical term of Avicenna's philosophy, which he uses to refer to scholars who acquire knowledge by verifying philosophical teachings through a certain kind of demonstration which includes the middle term of a syllogism. The most outstanding *mubāṣṣil* according to Avicenna is Alexander of Aphrodisias. See Gutas, *Avicenna*, pp. 188–9.

159. Avicenna, *Canon*, Lib. 1, Fen I, 6.5, f. 24vb: 'Una est virtus <scilicet> comprehensiva occulte quae vocatur sensus communis et phantasia et apud medicos quidem sunt una virtus, sed apud certificantes qui sunt ex philosophis duae sunt virtutes'.

160. Compare Roland's *Summa* and the *Canon*. MS Mazarine, f. 34va, line 26: 'Prosequamur de vegetabili. Haec habet duos ramos sive duas vires, una est quae conservat speciem per generationem individuorum et haec dicitur generativa, et dicunt medici quod haec sita est in membris genitalibus, alia est quae conservat individuum quae dicitur nutritiva'. Avicenna, *Canon*, Lib. 1, Fen 1, 6.2, f. 23rb: 'Et

growth, as was usually done in the West after Constantine the African.<sup>161</sup> Roland's knowledge of the *Canon* is all the more remarkable since allusions to Avicenna's medical *magnum opus* are very rare in his time and appear only after about 1225.<sup>162</sup> One has to be careful, though, not to overemphasize his use of the *Canon*, as Ephrem Filthaut did by saying that Roland regarded Avicenna mainly as a physician. The bulk of Avicenna quotations in the *Summa* comes from the *Metaphysics* and *De anima*,<sup>163</sup> and it has been shown that Roland repeatedly refers to Avicenna (and not Aristotle) by the phrase 'dicit philosophus'.<sup>164</sup>

Turning from the structure of Roland's psychology to its content, we can distinguish at least four traditions which serve as sources: the theological, the medical, the Avicennian and the Aristotelian. As an example one may take the theory of the intellect, or better Roland's internal faculties *ratio* and *intellectus*. From Augustine he takes the distinction between *scientia* and *sapientia* and applies them to the two faculties.<sup>165</sup> The medical tradition is present insofar as Roland locates reason in the middle ventricle of the brain.<sup>166</sup> Avicenna's distinction between theoretical and practical is drawn from Algazel's *Metaphysica*, an adaption of Avicenna's *Dānešnāme*.<sup>167</sup> Avicenna's influence is also felt in the definition of *ingenium* as that power of reason which is able to grasp the middle term of a

ministratarum quidem duo sunt genera. Unum genus ministrat in re nutrientis ad hoc /23va/ ut individuum remaneat, quod in duas partitur species nutritivam et crescitivam. Alterum genus ministrat in nutriente ad hoc ut remaneat species, quod etiam in duas dividitur species in generativam et formativam'.

161. Constantine the African, *Pantegni*, Lib. IV, cap. 2: '... in tres dividitur virtutes, generativam, nutritivam, pascitivam'. Similarly, for instance, Iohannitius, *Isagoge ad Techne Galieni*, 12, pp. 153–4, and William of St-Thierry, *De natura corporis et animae*, p. 91.

162. See Jacquart, 'La Réception du Canon', p. 69.

163. Filthaut, *Roland of Cremona*, p. 74, repeated by d'Alverny, *Avicennisme en Italie*, p. 124. Filthaut counted about 42 references to Avicenna (excluding book III), without locating them. I was able to trace only 31, on the following folios of MS Mazarine: 31va (twice; *De anima*), 32vb (*De anima*), 33ra (*De anima* or Algazel), 33va (*De anima*), 35rb (*Canon?*), 40rb ('auicenus et algazel'; *Metaphysica*), 40vb (*Canon?*), 42ra ('auicenna et algazel'; 'auicenna in sua metaphysica'), 44vb, 45ra, 49rb (*Metaphysica*), 50va (*Logic*), 51ra (twice; *Canon*), 52va ('philosophus auicenus'), 58va ('auicenus et algazel'), 62ra ('auicenus qui fuit medicus'; *De anima*), 62vb (*Metaphysica*), 63ra (*Metaphysica*), 72ra (*Metaphysica*), 89vb ('auicenus medicus arabum'; *De anima*), 91rb ('in logica sua'), 93vb, 95ra (*Metaphysica?*), 104va ('auicenus in metaphysica'), 128vb ('in metaphysica auiceni'), 131va ('auicennamedicus arabum'; twice; *Canon?*). For the quotations from *De anima*, see Index locorum: I.5.h-i, u-v, aa; II.3.e; IV.1.b, f; IV.3.b; IV.4.h, k; V.1.k; V.6.s; V.8.a.

164. Vansteenkiste, 'L'Editio princeps della Somma', p. 436.

165. MS Mazarine, f. 34ra, lines 9 ('ista est scientia, dicit Augustinus, intellectus est sapientia'), 59 and 68. For Augustine's distinction see his *De trinitate*, XII, 14, pp. 374–7.

166. MS Mazarine, f. 33vb, line 65: 'Ratio inferior utitur instrumento et est permixta corpori, id est utitur spiritu qui est in medio ventriculo cerebri'. Cf. Constantine, *Pantegni*, Lib. IV, cap. 19: 'Spiritu medii ventriculi intellectus sive ratio fit', and William of St-Thierry, *De natura corporis et animae*, 25, p. 97: 'Inter quos medius ventriculus rationem continet et intellectum'.

167. MS Mazarine, f. 34ra, line 11: 'Alga<zel> dixit quod philosophia dividitur in theoreticam et practicam ...'. From Algazel, *Metaphysica*, pp. 1–2, ultimately from Avicenna, *Dānešnāme*, tr. Achena/Massé, I, p. 131.

sylogism.<sup>168</sup> Finally, Aristotle's *Peri psychês* is used when it comes to the question of the fallibility of the intellect, which is denied.<sup>169</sup> Roland's psychological section does not include either Aristotle's distinction between the active and the passive intellect or Avicenna's theory of the separate active intellect.<sup>170</sup> A similar range of traditions can be traced in Roland's discussion of the other faculties, which is equally dense.

In view of the fact that Roland adopts material from many traditions, it is all the more noteworthy that, as has been shown above, the new features in the structure of Roland's psychology come from Avicenna's *De anima*.

# 7. WILLIAM OF AUVERGNE

With William of Auvergne's *De anima* we come to a work which is remarkable for its highly critical and very engaged assessment of philosophical ideas about the soul.<sup>171</sup> William of Auvergne was the bishop of Paris for a substantial part of his life, from 1229 to his death in 1249. In about 1223, when he became master of theology at the University of Paris, he began to write his immense *Magisterium divinale ac sapientiale*, which he published in instalments.<sup>172</sup> *De anima* is the third of its seven

168. MS Mazarine, f. 33vb, line 6: 'Secundum philosophos non est ingenium vis aliqua animae, immo diffiniunt ita ingenium quod est actus rationis ex cuius propria vi invenitur medius terminus in syllogismo; non sollertia est vis animae, immo est subtilitas ingenii'. This is a quotation from Avicenna, *De anima*, V,6, p. 152, line 95.

169. MS Mazarine, f. 34ra, line 41: 'Ideo dixit Aristoteles quod intellectus semper verus est, phantasia aliquando vera, aliquando falsa. Vocavit phantasiam rationem inferiorem'. Cf. Aristotle, *Peri psychês*, 428a16–18 and 428b17. Note that Aristotle is quoted with a similar theory in Hugh of Saint-Cher's commentary on the *Sentences*, on which Roland occasionally draws. Cf. Hugh of Saint-Cher, MS Vat. lat. 1098, f. 66rb, line 6. This passage is printed in Ehrle, 'L'Agostinismo', p. 548.

170. There are only few explicit passages about the active intellect; see MS Mazarine, f. 12ra, line 55 (difficult to read): '... aliter intellectus speculativus scit et intellectus activus noster scit quaedam ...'. This may draw on either Aristotle's *Peri psychês* III or Avicenna's *De anima*, I,5, p. 90. In a very curious passage Roland reports Avicenna's theory of the separate active intellect and its mediating role in the process of abstraction (for this Avicennian theory see pp. 200–203 below): 'Unde dixerunt philosophi quod scientia abstractionis fit in homine mediante intelligentia agente et vocant [pro] philosophi intelligentias agentes illos angelos quos nos dicimus deputatos ad custodiam animarum. De hac re satis diximus in secundo Libro' (f. 84vb, line 34). Averroes's commentary on *Peri psychês* is not known to Roland.

171. William of Auvergne, *Opera omnia*, ed. F. Hotot, with *Supplementum*, ed. B. Le Feron (1674, reprint 1963). *De anima* is the second treatise of the *Supplementum*.

172. Until the seminal studies of Kramp, it was not realized that many of William's writings (though not all) belong to the one *Magisterium divinale et sapientiale*. Kramp's work is the basis for most of what is known today about the authenticity, chronology and purpose of William's writings. See Kramp, 'Des Wilhelm von Auvergne "Magisterium Divinale"' (1920), pp. 538–84, (1921) pp. 42–78 and 174–87. For studies of William's *De anima*, see: Werner, *Die Psychologie des Wilhelm von Auvergne* (1873), pp. 3–72; Baumgartner, 'Die Erkenntnislehre des Wilhelm von Auvergne' (1893), pp. 1–102; Gilson, 'Pourquoi Saint Thomas' (1926), pp. 46–80; de Vaux, *Notes et textes* (1934), 17–43; Masnovo, *Da Guglielmo d'Auvergne*, III (1940), pp. 48–164; Gilson, *History of Christian Philosophy* (1955), pp. 256–8; Corti, 'Le sette parti' (1968), pp. 305–6; Gilson, 'Avicenne en occident' (1969), pp. 92–3; Moody, 'William of Auvergne' (1933/1975), pp. 1–109; Marrone, *William of Auvergne and Robert Grosseteste* (1983), chapters II.2 and III.3; Jüssen, 'Wilhelm von Auvergne und die Transformation' (1987), pp. 141–64; Jüssen, 'Aristoteles-Rezeption' (1990), pp. 87–96; Teske, *William of Auvergne: The Immortality* (1991), pp. 1–19;

parts, but was written last, between 1235 and 1240.<sup>173</sup>

Of all the psychological works examined in this survey, William's *De anima* is the most resistant to a straightforward classification. It is a work by a theologian, but refrains from relying upon Scripture or ecclesiastical teaching; it is a very philosophical treatise, which, however, takes an openly polemical stand against philosophical theories.

How then does William define his approach to psychology? In the prologue to *De anima*, he says that the science of the soul ('scientia de anima') is usually said to belong to natural philosophy ('philosophia naturalis'), but that the science of the human soul does not belong to it, because 'what is caused or made in the image of God ..., the natural philosopher does not reach'.<sup>174</sup> And he continues:

Since <that kind of> knowledge of the creator which is acquired by the methods of philosophy pertains solely to the first wise and divine teaching ('primum sapientiale et divinale magisterium'), therefore knowledge of its image and likeness pertains to the same teaching only.<sup>175</sup>

William here not only mentions the title of the whole seven-part work, but also presupposes what he had said in the programmatic prologue to *De trinitate*, the first book of the *Magisterium*: that there are three modes of knowledge in divine teaching, through revelation or prophecy, through virtue, and through philosophy. It is this last way which he chooses.<sup>176</sup> In *De anima*, William sets out to speak about that part of psychology which does not pertain to natural philosophy but to the philosophically acquired 'first wise and divine teaching' ('primum sapientiale et divinale magisterium'). It is quite probable that this phrase is William's way of referring to metaphysics in contrast to natural philosophy.<sup>177</sup> This is more obvious

Teske, 'William of Auvergne on the Individuation' (1994), pp. 77–93; Teske, 'William of Auvergne's Rejection of the Active Intellect' (1994), pp. 211–35; Dales, *The Problem of the Rational Soul* (1995), pp. 31–6. For studies of William's relation towards Avicenna, see the above works by Gilson, de Vaux, Masnovo and Teske, and Teske and Wade, *William of Auvergne: The Trinity* (1989), pp. 1–60; Teske, 'William of Auvergne's Use of Avicenna's Principle' (1993), pp. 1–15; Teske, 'William of Auvergne and the Manichees' (1993), pp. 63–75.

173. Kramp, 'Des Wilhelm von Auvergne "Magisterium divinale"', pp. 559–62 and pp. 70–71. Gauthier ('Notes sur les débuts' (1982), p. 360) and Teske (*William of Auvergne: The Immortality* (1991), p. 4) agree with Kramp's dating. Gauthier has shown that the early dating of 1230, which many scholars of this century adopted, goes back to a careless reading of the earlier secondary literature, e.g. Kramp (Gauthier, *ibid.*).

174. William, *De anima*, Prologue, p. 65a: 'Quod enim causata vel facta sit ad imaginem Dei ... naturalis philosophus non attingit'.

175. William, *De anima*, Prologue, p. 65a: 'Cum igitur cognitio creatoris quae per philosophia vias acquiritur solius sit primi sapientialis et divinalis magisterii, erit ex necessitate cognitio imaginis et similitudinis suae pertinens ad idem magisterium solum'.

176. William, *De trinitate*, ed. Switalski, pp. 15–16.

177. This is not the standard understanding of William's title, which was coined by Kramp (p. 581) and was picked up by Switalski (edition of *De Trinitate*, p. 6, n. 23): 'While "divinale" and "sacrum" refer to the theological content, "sapientiale" refers to the thorough manner of treatment'. Cf. similarly, Teske, translation of *De Trinitate*, p. 4. Teske has recently revised his interpretation ('William of

in the alternative terms given by William: 'scientia sapientialis et divinalis' and 'philosophia prima ac theologica'.<sup>178</sup> Before the advent of Arabic and Greek sources, the metaphysical branch of philosophy was usually referred to as *scientia theologica* or *divinalis*.<sup>179</sup> The term *prima* points to the influence of Avicenna's *Metaphysics* and its Latin title: *Liber de philosophia prima sive scientia divina*.<sup>180</sup> The word *sapientiale* appears in the first sentence of Avicenna's work: 'convenientius est accedere ad cognitionem intentionum sapientialium'.<sup>181</sup> That William should have named his main work after Avicenna's *Metaphysics* accords well with the fact that William was the first scholastic to use this book on a large scale.<sup>182</sup> He also knows parts of Aristotle's *Metaphysics*,<sup>183</sup> but often quotes Avicenna under the name of Aristotle.<sup>184</sup>

This approach to human psychology as part of metaphysics is unique in the early thirteenth century, as far as we know, and helps to explain other unique features of *De anima*. Although William uses and quotes Avicenna's *De anima*, he is not interested in the chapters that many of his contemporaries found impressive, in particular chapter I,5, which is Avicenna's outline of the entire system of faculties. William starts from the other end. His main focus is on Avicenna's theory of the active intellect and of the substantiality and immateriality of the soul.<sup>185</sup> In fact, William's knowledge of Avicenna's *De anima* is rather limited, even in his own

Auvergne on Philosophy' (1998), pp. 475–81); he now argues that the 'Magisterium is *divinale* in the sense that it is directed to the glory and worship of the creator' (p. 480), and that it is *sapientiale* 'in the sense that it aims to move the will to a love and worship of the creator which is also the perfection and beatitude of our souls' (p. 481).

178. Kramp conveniently juxtaposes the references: 'Des Wilhelm von Auvergne "Magisterium divinale"', pp. 573–4.

179. Weisheipl, 'Classification of the Sciences', pp. 58–68; Teske, 'William of Auvergne on Philosophy', pp. 476–7. The Greek-Latin translation of Aristotle's *Metaphysics* became known as *Metaphysica*, whereas the term *Prima philosophia* derives from the Arabic tradition; on this see Vuillemin-Diem, *Præfatio*, pp. 31–2.

180. The Latin title of Avicenna's *Metaphysics* is a combination of the Arabic titles of the whole book (*fi-l-ilāhiyāt* – 'on divine matters') and of the first chapter (*ṭalab maḍī' al-falsafa al-ʿilā*, 'inquiry into the subject of first philosophy'). See Van Riet's introduction to the edition of Avicenna's *Liber de philosophia prima*, pp. 123\*–4\*. As for the origins of the term *ilāhiyāt*, see Endress and Gutas, *Greek and Arabic Lexicon*, s.v. *ilāhiyyun* (pp. 309–13); the term *ilāhiy al-qaul* translates the Greek θεολογικός in Aristotle's well-known distinction between the three speculative philosophies, mathematics, physics, and theology (Met. E 1, 1026a19–20).

181. Avicenna, *Philosophia prima*, I.1, p. 1, lines 5–6. For Avicenna's usage of the term *magisterium* cf. *ibid.*, p. 4, line 56.

182. See Teske, *William of Auvergne: The Trinity*, pp. 53–7, and Teske's articles mentioned in n. 172 above. For Roland of Cremona's use of Avicenna's *Metaphysics*, see the preceding chapter, p. 41, n. 163.

183. I have found only few explicit references ('Aristoteles in libro metaphysicorum'): *De universo*, II.1, pp. 835a, 837a, 843b. Switalski, the editor of the *De trinitate*, gives James of Venice's translation of the first four books as William's source (p. 4, n. 12 and p. 256).

184. This is a well established fact since the studies of de Vaux (*Notes et textes*, pp. 22–38), and has been confirmed by the later editors and translators of William: see Switalski's introduction to *De trinitate*, p. 4, and Teske, *William of Auvergne: The Immortality*, p. 13.

185. See Index locorum: I.1.m; I.3.c–d; I.5.h, u; IV.1.f; V.4.a; V.5.a–c; V.6.1, n, p, v.

psychological work; quotations from the *Metaphysics* are more common.<sup>186</sup> That William owes a great deal to Avicenna's *Metaphysics* and that he often uses the book without acknowledging, has been shown by Roland J. Teske in a number of recent studies.<sup>187</sup>

Secondly, William is almost alone in his claim that parts of Avicenna's psychology are in conflict with Christian faith. If other writers reject the theory of the active intellect, they do this without any indication that they are refuting a dangerous theory.<sup>188</sup> It seems plausible to claim that William's unique criticism of Avicennian and Aristotelian psychology is a consequence of his metaphysical approach: theories such as that the lowest intelligence is the creator of the human souls are not spelt out in Avicenna's *De anima* but in his *Metaphysics*, and it is Avicenna's metaphysical theory of the separate intelligences which is the main target of William's polemics.<sup>189</sup>

Thirdly, it is difficult to explain why William attributes numerous theories to Aristotle which are in fact drawn from Avicenna. This is very uncommon in the psychological literature of the time. Aristotle's and Avicenna's psychological works were translated at about the same time in the twelfth century, and writers like John Blund or Roland of Cremona do not have difficulty in keeping them apart. The situation is different with metaphysics. William is one of the very first to use the metaphysical treatises of both writers, and also the pseudo-Aristotelian *Liber de causis*, which he attributes to Aristotle,<sup>190</sup> even though its Neoplatonic theories are

186. Explicit quotations in William's *De anima* deriving from Avicenna's *De anima*: pp. 73a, 82b–83a, 101a, 112b. From Avicenna's *Metaphysics*: pp. 66b, 90a, 91b, 107b–108a, 118a–b, 170b. There does not seem to be an explicit reference to Avicenna's *De anima* in William's other writings. I have noted numerous references to Avicenna's other works, especially to his *Metaphysics* in *De universo*, but none to Avicenna's *De anima*: *Opera omnia*, v. I, pp. 690, 691 (4 times), 692 (twice), 693 (three times), 694 (twice), 695, 713, 714, 741, 754, 795 (four times), 797, 801, 812, 845, 847, 853, 915.

187. See the references in n. 172 and Teske's explicit statement in 'William of Auvergne's Use of Avicenna's Principle', p. 1: 'Scholars have often noted William's explicit opposition to teachings of Avicenna, but have not as often acknowledged the many points on which Avicenna's thought profoundly influenced William's metaphysics and psychology'. I am sceptical about Jüssen's tendency to emphasize Aristotle's influence rather than Avicenna's and Augustine's. See his 'Wilhelm von Auvergne' (1990), pp. 180 and 183–4 ('stärkere Gewichtung des Aristotelischen').

188. An example which predates William is Anonymous (Gauthier), *De anima et potentiis eius*, p. 51: 'Et in hoc erravit Avicenna quia posuit intellectum agentem separatim ab anima'. A rare exception is (much later) Giles of Rome; see Index locorum, V.6.p, and Hasse, 'Aristotle versus Progress', pp. 872–3.

189. See the list of Avicennian theories rejected by William (often attributed to Aristotle) in de Vaux, *Notes et textes*, p. 37. Teske has convincingly shown that even Avicenna's theory of individuation (*De anima*, V.3, pp. 107–13) is refuted on the grounds of an Avicennian statement from the *Metaphysics* (and not from *De anima*). In turn, William misrepresents completely Avicenna's theory of individuation from *De anima* as holding that the human souls become one after separation from the body; Avicenna says the opposite (Teske, 'William of Auvergne on the Individuation', pp. 77–93).

190. E.g. *De anima*, p. 211b: '... hoc est quod Aristoteles posuit intelligentiam agentem, intendens eam esse formam plenam formis ..., iuxta sermonem philosophi quo dictum est omnis intelligentia plena est formis'. Cf. Pseudo-Aristotle (= Proclus Arabus), *Liber de causis*, ed. Bardenhewer, p. 173, line 18: 'Omnis intelligentia plena est formis'.

much closer to Avicenna's metaphysics. One may say *sine praeiudicio* (since scholarship on this is at its beginning) that William's confusion has its origin in the state of his metaphysical sources. The most remarkable mistake he makes is to attribute to Aristotle the theory of the separate active intellect (which is Avicennian) and to the followers of Aristotle the theory of the active intellect as a part of the soul (which, if by anybody, is held by Aristotle). William rejects both theories and cannot therefore be said to adhere to the doctrine of Avicennized Augustinianism, as will be demonstrated later.<sup>191</sup>

For all of William's uniqueness, the structure of his *De anima* is not innovative, but highly traditional. It consists of seven prominent topics of the theological tradition (which do not always correspond to the chapters of the 1674 edition):<sup>192</sup> the existence of the soul, the essence of the soul, the parts of the soul, the unity of the soul, the origin of the soul, the soul's relation to the body, the immortality of the soul,<sup>193</sup> the likeness of the soul to the creator.<sup>194</sup> Philip the Chancellor, for instance, in his slightly earlier theological *Summa de bono* (about 1232) covers a very similar range of topics, in nearly the same sequence.<sup>195</sup> The same is true for the theological section of Jean de la Rochelle's *Summa de anima*.<sup>196</sup> It seems improbable, therefore, that William's treatise is structured according to the methodological teachings of Aristotle's *Second Analytics*<sup>197</sup> or that it is modelled

191. See pp. 211–14 below.

192. The chapters are introduced with the following sentences: pp. 65b ('dicam imprimis quid est'), 73a ('notificare esse ipsius et essentiam eiusdem atque substantiam'), 88b ('declaranda est ratio et intentio eius quod est potentia et posse'), 104b ('perscrutari de unitate animae humanae'), 125b ('de natura animarum humanarum'), 147a ('investigare de hac dispositione ipsius <scil. immortalitate animae>'), 203a ('de similitudinibus ... animae humanae ad creatorem').

193. Allard has suggested that this chapter forms William's third redaction of his treatise on the immortality of the soul, the first being the one which was attributed to Gundissalinus in earlier scholarship, but now is held to be by William himself (Allard, 'Note sur le "De immortalitate"', pp. 68–72). One may add that in the course of *De anima*, the chapter on immortality seems to be inserted into chapter five (on the *status* of the soul in the body), which begins on p. 125b, but to which pp. 194–203 also belong, after the section on immortality. Cf. p. 125: 'Tertio de modo essendi ipsarum <scil. animarum> in illis <scil. corporibus>' and p. 194b: 'Post haec igitur iuxta praemissum ordinem aggrediar perscrutari et modum essendi animae humanae in corpore'.

194. In chapter 3 William affirms (just as Philip the Chancellor) the identity of the faculties and the soul. See Lottin, 'L'Identité de l'âme', pp. 487–90. For William's position on free will in the same chapter (which is also close to that of Philip), see Lottin, 'Libre arbitre et liberté', pp. 74–5, n. 3. The last chapter deals mainly with the intellect, but also treats the theological topics *synderesis* and conscience; for William's standpoint on these, see Lottin, 'Synderese et conscience', pp. 134–5.

195. Philip the Chancellor, *Summa de bono*, ch. IV, pp. 155–297: quid sit anima; de potentiis animae; utrum potentia sensibilis et rationalis in eadem substantia fundentur; utrum homo sit imago Dei vel ad imaginem; de origine animarum; de immortalitate animae rationalis; de quantitate animae; de unione animae ad corpus; de loco et tempore animarum. The tradition of these questions is much older, as was said above, p. 10 and p. 15, n. 13.

196. See the next chapter. The *Summa de anima* was perhaps written as early as 1235–6 (according to Bougerol, in the introduction to his edition of the *Summa*, p. 12), that is, slightly earlier than William's *De anima*.

197. As Jüssen says ('Wilhelm von Auvergne und die Transformation', pp. 155–6, and 'Aristoteles-Rezeption', p. 91).

after Aristotle's *Peri psychēs*.<sup>198</sup> William takes a standpoint in regard to many theological questions about the soul, and one cannot say therefore that his work is mainly apologetic or polemical.<sup>199</sup>

However, if his questions and conclusions are theological, his method certainly is not, as we have said. The other theologians of the 1230s who adopt Peripatetic psychology, either integrate it into their theological writings, mixing it with proofs on the authority of Scripture or the Church Fathers (Hugh of Saint-Cher, Roland of Cremona), or keep philosophical and theological teachings apart by simply juxtaposing them (Anonymous (Callus), Jean de la Rochelle, the *Summa fratris Alexandri*). William of Auvergne is in a category of his own. He writes philosophically, but is on the whole conservatively theological in his actual teaching on the soul.

## 8. JEAN DE LA ROCHELLE

Jean de la Rochelle is one of the most influential figures in the history of thirteenth-century psychology. He is the author of two works on the soul, the *Tractatus de divisione multiplici potentiarum animae* (about 1233–5)<sup>200</sup> and the *Summa de anima* (about 1235–6),<sup>201</sup> the second of which is quoted extensively in the *Summa fratris Alexandri*<sup>202</sup> and in Vincent of Beauvais's popular encyclopedia *Speculum naturale*.<sup>203</sup> From 1238 at the latest, Jean de la Rochelle was master of theology at the University of Paris, the only Franciscan among the University's masters other than the well-known theologian Alexander of Hales, with whom he closely collaborated. Both died in the year 1245.<sup>204</sup>

198. As Moody says ('William of Auvergne', p. 18).

199. This feature is perhaps overemphasized by Kramp ('Des Wilhelm von Auvergne "Magisterium divinale"', p. 43: 'Dem Inhalt nach gibt sich das "magisterium divinale" als eine gross angelegte Apologetik des christlichen Glaubens').

200. Jean de la Rochelle, *Tractatus de divisione multiplici potentiarum animae*, ed. P. Michaud-Quantin (1964).

201. Jean de la Rochelle, *Summa de anima*, ed. J. G. Bougerol (1995). In the Index locorum I occasionally also give references to the older edition by Domenichelli (1882). That the *Summa* postdates the *Tractatus* was first demonstrated by Lottin, 'A propos de Jean de la Rochelle', pp. 185–92. The date of the *Summa* is Bougerol's approximation; the *terminus ante quem* is the date of book two of the *Summa fratris Alexandri* (which borrows from the *Summa*) written before 1245.

202. Alexander of Hales et al., *Summa theologica seu sic ab origine dicta "Summa fratris Alexandri"*, 4 vols (1924–48).

203. See p. 74 below.

204. Jean de la Rochelle also wrote a number of theological works and sermons, which were first listed by Doucet, *Alexandri Hales O.M. Summa theologica*, t. 4, *Prolegomena* (1948), pp. 211–27. A convenient list is also given by Bougerol, 'Jean de la Rochelle. Les œuvres et les manuscrits' (1994), pp. 205–15. For literature on Jean's psychological works, see (apart from the introductions to the two editions): Salman, 'Jean de la Rochelle' (1948), pp. 133–44; Michaud-Quantin, 'Les Puissances de l'âme' (1949), pp. 489–505; Michaud-Quantin, 'Une Division "augustinienne"' (1957), pp. 235–48 (this work includes a psychological passage from the *Summa de vitiis*); Lottin, 'A propos de Jean de la Rochelle' (1960), pp. 181–223; Viola, 'La Notion de nature' (1966), pp. 455–62; Bowman, 'The Development of the Doctrine' (1973), pp. 254–7; Brady, 'Jean de la Rochelle' (1974), pp. 599–602; Bougerol, 'L'École franciscaine' (1990), pp. 187–214 (with bibliography); Bougerol, 'Les Manuscrits de la "Summa de anima"' (1994), pp. 21–29; de Libera, 'Le Sens commun' (1991),

Jean de la Rochelle's psychological works have been characterized as eclectic and old-fashioned.<sup>205</sup> But seen in the context of the history of psychology they mark two important steps: the explicit differentiation between various psychological traditions (in the *Tractatus*) and the considerable expansion of the Peripatetic section in an otherwise theological treatise on the soul (in the *Summa*). Let us begin with the earlier treatise, the *Tractatus*. From a recapitulation at its end we know that it is divided into three parts, which deal with the soul's substance, its faculties and its virtues.<sup>206</sup> The structural division between substance and faculties comes from the theological tradition, as represented by the anonymous *Dubitationes circa animam* (Vat. lat. 175) and Philip the Chancellor's *Summa de bono*.<sup>207</sup> The idea for the second part, i.e. for speaking about 'divisiones potentiarum animae' may well have come directly from Anonymous (Callus), a theologian repeatedly quoted by Jean.<sup>208</sup> The model for the third part on virtues seems to have been the Pseudo-Augustinian *Liber de spiritu et anima*.<sup>209</sup>

As one might expect, the second part on the faculties of the soul contains much philosophical material. But Jean differs from his predecessors in that he keeps the philosophical, theological and medical traditions apart by organizing the material in five sections, which present the divisions of the faculties as found in Avicenna's *De anima*, Iohannitius's *Isagoge*, Avicenna's *Canon*, John of Damascus's *De fide orthodoxa* and the Pseudo-Augustinian *Liber de spiritu et anima* respectively. Moreover, he gives reliable references to the sources. Jean's work certainly is a compilation, but it also is an important step towards mastering the seemingly boundless tradition of psychological doctrines. He adds critical or approving remarks and occasionally inserts digressions on problematic questions.<sup>210</sup> In one of these digressions, Jean presents a position on the active intellect which includes – among other theories –

pp. 475–96; Dales, *The Problem of the Rational Soul* (1995), pp. 86–9.

205. Van Steenberghen, *Die Philosophie im 13. Jahrhundert*, p. 163; Dales, *The Problem of the Rational Soul*, p. 86.

206. Jean de la Rochelle, *Tractatus*, 3.31, p. 190: 'Nota, lector, quod huius libri tres sunt partes principales: in prima agitur de anima secundum diffinitionem, in secunda secundum divisionem, in tertia secundum eius perfectionem. Prima pars est de anima secundum eius substantiam et esse; secunda pars est de anima secundum eius operationem et potentiam; tertia est de anima secundum bene esse et completionem'.

207. See p. 31 and p. 46, n. 195 above.

208. Cf. Anonymous (Callus), *De potentiis animae et obiectis*, p. 147, line 13: 'Quaestio autem est de divisione potentiae animalis'. For his influence on Jean see Callus, 'The Powers of the Soul', pp. 146–70 (notes), and Michaud-Quantin, introduction to the edition, p. 19.

209. Cf. Jean's opening sentence to this section in *Tractatus*, p. 137: 'Quoniam post divisionem potentiarum animae, quas habet anima secundum se, determinat Augustinus de virtutibus, ideo et nos post divisionem multiplicem potentiarum animae dicemus de virtutibus'. Cf. Ps.-Augustine, *De spiritu et anima*, 20, p. 794.

210. Jean explicitly approves of the quality of Avicenna's definitions (*Tractatus*, p. 74, line 192) and of his distinction between the theoretical and practical intellect (*Tractatus*, p. 81, line 415: 'dicamus cum Avicenna'), but he warns his readers that there are serious doubts about Avicenna's theory of the two faces of the soul (*Tractatus*, p. 103, line 134; Michaud-Quantin, introduction, p. 21).

the doctrine of Avicennized Augustinianism.<sup>211</sup> That Jean further develops the Peripatetic philosophy of the soul can be demonstrated for the doctrine of the four intellects, which he interprets as a theory about the acquisition of syllogistic knowledge. He combines this interpretation, which he inherits from Anonymous (Gauthier) and Anonymous (Callus), with a fresh reading of Avicenna.<sup>212</sup>

Unfortunately, Jean does not say anything explicit about the purpose of his book, and one is left to assume that he aimed at giving a presentation of the soul's faculties which would include everything known about it at the time.<sup>213</sup> In general we may assume that Jean follows the theological tradition, going back to Cassiodorus, of collecting philosophical opinions about the soul which are useful for the Christian believer.<sup>214</sup>

If the *Tractatus*, as a compilation, cannot be said to present Jean's opinion directly, the *Summa de anima* can. The first part of this work, on the substance of the soul, is a fully-fledged theological treatise on the soul, which is influenced primarily by Philip the Chancellor's *Summa de bono*.<sup>215</sup> The second part, on the faculties of the soul, is a reworking of the second part of the *Tractatus*: Jean picks up what he had written on the psychology of Pseudo-Augustine, John of Damascus and Avicenna, but omits the two medical divisions (Iohannitius and Avicenna's *Canon*). It is remarkable (but does not seem to have received attention)<sup>216</sup> that Jean enlarges the already comprehensive Avicennian section of the *Tractatus* quite considerably by adding numerous new quotations, often silently, in particular on the vegetative faculties and on the senses. Almost exactly one third of this part consists of quotations from Avicenna's *De anima*. This is unfortunately not apparent in the critical edition of the *Summa* of 1995, where about half of all the quotations from Avicenna are overlooked.<sup>217</sup> Jean de la Rochelle has first-hand knowledge of

211. This theory is repeated in the *Summa de anima*. See pp. 215–16 below.

212. See below, pp. 195–6.

213. Michaud-Quantin, 'Les Puissances de l'âme', p. 497; see also his introduction to the edition of the *Tractatus*, p. 12.

214. On this tradition see p. 14 above. This interpretation is in accordance with Jean's statements in his sermons about the usefulness of the philosophical sciences for theology (see Brady, 'Jean de la Rochelle', p. 601).

215. Bougerol, introduction to the edition, p. 32. See pp. 28–9 for an overview of the contents of the *Summa*'s first part.

216. Dales, for instance, writes that Avicenna is 'occasionally' mentioned (*The Problem of the Rational Soul*, p. 86).

217. The quotations overlooked are the following: *Summa de anima*, ed. Bougerol, p. 225, lines 42–3 (from Avicenna, *De anima*, ed. Van Riet, II,1, p. 105, lines 25–6); p. 225, lines 45–9 (II,1, p. 105, lines 34–9); pp. 225–6, lines 50–68 (II,1, p. 106, line 42–p. 107, line 61); p. 229, lines 2–5 (cap. 87) (I,5, p. 83, lines 56–8); p. 237, lines 28–32 (II,3, p. 134, lines 27–31); p. 237, line 36–p. 238, line 38 (II,3, p. 135, line 54–p. 136, line 59); p. 238, lines 47–59 (II,3, p. 137, line 87–p. 138, line 2); p. 238, lines 60–70 (II,3, p. 140, lines 28–38); p. 248, lines 12–30 (IV,3, p. 37, line 19–p. 40, line 57); p. 250, line 35–p. 251, line 65 (IV,3, p. 42, line 88–p. 43, line 12; with additions by Jean); p. 254, line 30–line 6 (I,5, p. 82, line 42–p. 83, line 52); p. 263, lines 20–22 (IV,4, p. 62, lines 0–2); p. 263, line 22–p. 264, line 31 (IV,4, p. 64, lines 20–28); p. 266, lines 7–14 (cap. 109) (IV,4, p. 60, line 58–p. 61, line 79; adaptation); p. 266, line 6–p. 267,

*De anima*; he seems to have had different manuscripts at hand, for in the *Tractatus* the quotations are predominantly in the wording of version A,<sup>218</sup> whereas in the *Summa* the newly added passages usually follow version B.<sup>219</sup> He cites passages never referred to before in the West, such as the long discussions of the faculty of estimation and different instinctive reactions in chapter IV,3. The authority of Avicenna certainly eclipses that of Augustine and of John of Damascus, whose sections are much shorter. Jean de la Rochelle's *Summa*, one can conclude, gives a very prominent place in theological literature to a Peripatetic philosophy of the soul.

The total absence of an Aristotelian division of faculties in both books has perplexed modern scholars: why does Jean's section 'according to the philosophers and especially Avicenna' mention Aristotle only in passing?<sup>220</sup> It is highly unlikely that this is an effect of the condemnations of 1210/1215 in Paris, which, after all, would concern Avicenna too. We cannot say much more than that obviously Avicenna was preferred because he offered more. This does not make Jean 'curiously old-fashioned'.<sup>221</sup> In fact, he is very much following a fashion: that Avicenna's psychology in some way or other is preferred to that of Aristotle we have found with John Blund, Anonymous (Vat. lat. 175), Anonymous (Gauthier), Anonymous (Callus), Roland of Cremona and William of Auvergne. It is significant that Jean in his *Summa* also passes over the medical writers in the *Tractatus*, and instead quotes Avicenna's *De anima* more extensively on the vegetative and animal soul. He can do

line 20 (cap. 110) (II,3, p. 132, line 11–p. 133, line 22); p. 268, lines 1–3 (cap. 111) (I,5, p. 90, lines 61–3); p. 269, lines 19–24 (V,2, p. 93, line 60–p. 94, line 77); p. 271, line 48–p. 272, line 65 (II,2, p. 117, line 94–p. 120, line 41); p. 272, line 68–p. 273, line 93 (II,2, p. 114, line 55–p. 116, line 81).

218. Compare the following passages in Jean's *Tractatus* and in Avicenna's *De anima*: *Tractatus*, p. 73, lines 157–9 ('in nervo concavo' and 'corporum coloratorum venientibus') and *De anima*, I,5, p. 83, lines 59–61 (= version B) 'in nervo optico' and 'corporum habentium colorem quae veniunt'; manuscripts PNV [= version A]: 'in nervo concavo' and 'corporum coloratorum venientibus'; *Tractatus*, p. 73, line 163 ('violenta') and *De anima*, I,5, p. 84, line 66 ('coacta'; PNV: 'violenta'); *Tractatus*, p. 74, line 184 ('scilicet cute') and *De anima*, I,5, p. 85, line 87 (om.; PNV: 'scilicet cute'); *Tractatus*, p. 78, line 309 ('ex qua accidit ut eum expavescat et ab eo fugiat') and *De anima*, I,5, p. 86, lines 1–2 ('quae scilicet est quare debeat eum timere et fugere'; PNV: 'ex qua accidit ut eum expavescat et ab eo fugiat'). An exception is: *Tractatus*, p. 76, line 240 ('secundum quod vult') and *De anima*, I,5, p. 89, line 48 ('secundum quod vult'; PNV: 'secundum voluntatem').

219. Compare: *Summa*, p. 241, lines 17–29 ('opus'; 'saepe'; 'removetur'; 'destructa sit illa res') and Avicenna's *De anima*, I,5, pp. 88–9, lines 30–43 ('opus'; 'saepe'; 'removetur'; 'destructa sit res'; manuscripts PNV: 'actio'; 'saepe et attente'; 'moveretur'; 'destruatur res'); *Summa*, p. 226, line 60 ('vegetationis') and *De anima*, II,1, p. 106, line 54 ('vegetationis'; PNV: 'creationis'); *Summa*, p. 224, line 20 ('ad retentionem formae') and *De anima*, II,1, p. 110, line 10 ('ad retentionem formae'; PNV 'ad retinendum eam').

220. Jean de la Rochelle, *Tractatus*, p. 70, line 68: 'secundum philosophos, specialiter secundum Avicennam'. The *Summa de anima* only has: 'de divisione virium secundum philosophos' (p. 220, line 1; 'secundum Avicennam' seems to be the editor's addition). Michaud-Quantin, 'Les Puissances de l'âme', p. 494: 'En premier lieu, l'absence d'une division aristotélicienne nous frappe'. Lottin has conveniently listed the quotations from Aristotle in 'A propos de Jean de la Rochelle', pp. 193–200, and shown that the name of Aristotle is used much less often in the *Summa* than in the *Tractatus*.

221. As Dales says (*The Problem of the Rational Soul*, p. 86): '... <the *Summa*>, a curiously old-fashioned work, only slightly touched by Aristotle's *libri naturales*'.

this because Avicenna's book offers both, highly developed Peripatetic philosophy and medical psychology. Given the restricted appearance of Aristotle in Jean's books, it does not make sense to say that Jean relies as much on Aristotle as on Augustine.<sup>222</sup> A division of faculties according to Aristotle would have looked different from Avicenna's, after all; to quote Aristotle's most straightforward account: 'potentias autem dicimus vegetativum, appetitivum, sensitivum, motivum secundum locum, intellectivum'.<sup>223</sup> It is not until the first commentaries on *Peri psychēs*, which date about 1240,<sup>224</sup> that the authors' attention slowly shifts towards Aristotle's book.

#### 9. THE *SUMMA FRATRIS ALEXANDRI*

It was stated above that Jean de la Rochelle's *Summa de anima* considerably influenced the *Summa fratris Alexandri*.<sup>225</sup> Already in the thirteenth century this *Summa* was thought to be written by Alexander of Hales, although Roger Bacon remarked that it was not Alexander who produced it, but others ('quam ipse non fecit, sed alii').<sup>226</sup> From the magisterial studies of Victorin Doucet we know that the *Summa* is a compilation and partial reworking of a whole range of sources, among which are many treatises by Alexander himself and by Jean de la Rochelle.<sup>227</sup> Alexander was the initiator and gave his name to the project, but it was Jean de la Rochelle who in fact produced the first and third books,<sup>228</sup> certainly with the help of others;<sup>229</sup> he is referred to as 'Inquirens'. The redactor of the second book, who is referred to as 'Considerans', is an unknown scholar who is not Jean or Alexander.<sup>230</sup> When Alexander and Jean de la Rochelle both died in 1245, the

222. Bougerol, introduction to the edition, p. 32: 'Jean de la Rochelle s'appuie autant sur Augustin que sur Aristote'; de Libera, 'Le Sens commun', p. 479, n. 6: 'il s'efforce de concilier les doctrines d'Aristote avec celles d'Augustin'.

223. Aristotle, *Peri psychēs*, Greek-Latin version, 414a31.

224. The earliest example seems to be Petrus Hispanus's *Quaestiones libri de anima*. See Gauthier, 'Les Commentaires de la *Vetus*', pp. 239\*–242\*. The *Expositio librorum II–III De anima* by Pseudo-Petrus Hispanus may be from the same time (ibid., pp. 236\*–238\*).

225. This is the correct medieval title of what is sometimes also called the *Summa theologica* of Alexander of Hales, or the *Summa Halesiana*. See Doucet, *Prolegomena*, pp. 50b–54a.

226. Roger Bacon, *Opera hactenus inedita*, p. 326.

227. Doucet, *Prolegomena* (1948), pp. 272–6 and 361–70. Doucet gives a full bibliography of the earlier literature on the *Summa*. Further literature on its psychology: Minges, 'De scriptis quibusdam' (1913), pp. 597–622; Lottin, 'A propos de Jean de la Rochelle' (1960), pp. 207–223; Bertola, 'La dottrina dello "Spirito"' (1955), pp. 184–91; Bowman, 'The Development of the Doctrine' (1973), pp. 253–5; Brady, 'The "Summa Theologica"' (1977), pp. 437–47 (on the edition of the *Summa*); Rivera de Ventosa, 'La concepción de la filosofía' (1979), pp. 1165–72; Bougerol, 'L'École franciscaine' (1990), pp. 187–214 (with bibliography); Bougerol, introduction to his edition of Jean's *Summa de anima* (1995), pp. 37–9; Dales, *The Problem of the Rational Soul* (1995), pp. 27–31. For literature on the theory of the intellect, see p. 216, nn. 769–71 below.

228. Doucet, *Prolegomena*, p. 365b.

229. Doucet, *Prolegomena*, p. 362b.

230. Doucet, *Prolegomena*, p. 365b and p. 367b: 'hic vero concluditur eandem *Summam* I–III parum



*Summa* was published in an incomplete state. It received later additions, some of them by William of Melitona.<sup>231</sup>

The section on the soul (questions 59 to 74) is thus the work of the unknown scholar Considerans, not of Jean de la Rochelle.<sup>232</sup> The redactor, however, knows Jean's books very well, especially his *Summa de anima*, of which he makes ample use.<sup>233</sup> The whole section is entitled *De anima rationali* and has five parts: about the soul according to its substance, about the faculties of the soul, about free will, *synderesis* and conscience. It is again Doucet who has traced the sources: the tracts on conscience and on free will derive mainly from *quaestiones* by Alexander of Hales, whereas the part on *synderesis* is adopted from Philip the Chancellor's *Summa de bono*.<sup>234</sup> Jean de la Rochelle's *Summa de anima* is the principal source for the first two parts, which is reflected in their titles: 'Secundum substantiam' and 'Secundum potentias'. The unknown author follows Jean closely in the theological part 'Secundum substantiam', but is more independent in the second part 'Secundum potentias', which contains the philosophical teaching on the soul.<sup>235</sup> We learn this much from Doucet. But what exactly did Considerans produce in this second, philosophical part?

The first point to notice is that the author has changed the format of the treatise. He has abandoned Jean's descriptive style and employs the format of *quaestiones* which is used in the other parts of the *Summa fratris Alexandri*. This in fact leads him to address a fair number of philosophical questions, in particular in respect to points of conflict between the different divisions, which are not explicit in Jean's *Summa de anima*.<sup>236</sup>

It can be shown that Jean's influence is most apparent in the phrases that connect the different chapters of the *Summa fratris Alexandri*. Here we find many parallels in wording with the *Summa de anima*.<sup>237</sup> Let us recall that the second part of Jean's

compilatam fuisse a Ioanne de Rupella (*Inquirens*) et partim ab alio quodam ignoto (*Considerans*), sed minime ab ipso Alexandro, qui immo ne partem quidem censoris seu directoris realiter forsan egit'. Alexander's name was attached to the *Summa* since it was 'e scriptis Alexandri principaliter compilata ab eoque concepta atque promota'.

231. Doucet, *Prolegomena*, p. 360a-b. Dales incorrectly maintains that the whole *Summa* was put together after Alexander's death (*The Problem of the Rational Soul*, p. 27).

232. As Bougerol says (introduction to the edition of the *Summa de anima*, p. 13).

233. Lotin was the first to show convincingly that the *Summa fratris Alexandri* depends on Jean de la Rochelle and not vice versa. See his 'Apropos de Jean de la Rochelle', pp. 211-23. He improved upon previous research by Minges, who had maintained the opposite ('Die psychologische Summe', pp. 365-78). According to Doucet, Jean's *Tractatus de multiplici divisione* is quoted three times in the *Summa fratris Alexandri* (*Prolegomena*, p. 212b); Bougerol maintains that the *Tractatus* is never used (in his introduction to the *Summa de anima*, p. 39).

234. Doucet, *Prolegomena*, pp. 274b-276a.

235. Doucet, *Prolegomena*, pp. 272b-274b.

236. Cf. Doucet, *Prolegomena*, p. 274a: '... tum varietate quaesitorum, tum originalitate auctor *Summae Halesianae* suum prototypum superavit, etsi forsan non claritate'.

237. Compare the following phrases, first in Jean, second in the *Summa fratris Alexandri*: adiuvante Jesu Christo (p. 181) // cum adiutorio Jesu Christi (p. 424); an anima sit suae potentiae (p. 181) // an anima sit sua potentia (p. 424); per comparationem earum ad se (p. 197) // de comparatione harum

*Summa de anima* comprises three sections, based on Pseudo-Augustine, John of Damascus and Avicenna. The unknown scholar abridged the first section and omitted the second, so that his theory of the faculties became even more Avicennian in organization (except that the vegetative faculties are excluded). This can be seen by comparing the chapter headings in Jean's and the redactor's work:<sup>238</sup> whereas in the *Summa de anima* there are chapters on John of Damascus's faculties, such as *mens* and *opinio*, the text of the *Summa fratris Alexandri* is structured according to Avicenna's distinction between external and internal senses. For the section on the rational soul, Considerans adopts a new strategy: he now juxtaposes the three divisions of his source and tries to elucidate the different criteria behind the divisions. Two of these divisions of the intellect are attributed explicitly to Augustine and John of Damascus, the third is said to be by 'philosophus'. The editors of the *Summa fratris Alexandri* give references to Aristotle and add a chapter heading 'De divisione Aristotelis'. But although some of the references may indeed mean Aristotle, it will be shown later that the redactor follows his source Jean de la Rochelle (on the active intellect) and hence is referring to Avicenna when he says 'philosophus'.<sup>239</sup> Calling Avicenna simply 'philosophus' is in fact a recurrent feature of the work of Considerans.<sup>240</sup> Aristotle is kept out of the main picture, even though he is mentioned more often than in Jean's *Summa de anima*.

This unknown scholar does not seem to introduce much new material from Avicenna's *De anima* into his treatise, but, interestingly enough, he draws on another Avicennian source: the *Canon*, book one. The quotations concern the theory of the role of the liver and the heart in generation,<sup>241</sup> the dispute between

virium inter se (p. 428); subdividitur primo per cognitivam et motivam (p. 228) // primo de cognitiva deinde de motiva (p. 430); numerus autem sensuum (p. 229) // numerus virium sensibilibus apprehendentium extrinsecus (p. 432); de virtute apprehensiva interiori sensibili (p. 239) // de virtute sensibili interiori ad cognitionem sensibilem pertinente (p. 434); per quinque differentias (p. 240) // quinque differentiae (p. 434); de viribus sensitivis apprehensivis ... de motivis (p. 252) // de cognitivis viribus ... de motivis (p. 439); de viribus rationalibus ... quae primo dividuntur per apprehensivas et motivas (p. 268) // de parte rationali cognitiva et motiva (p. 446).

238. *Summa de anima*, pp. 297-8, and *Summa fratris Alexandri*, II, pp. 796-7. The headings are not reliable as a source in all cases, since some of them are the editor's additions. Teachings of John of Damascus and Augustine are integrated into the part on the motive faculty.

239. See pp. 216-18 below.

240. Compare the following list which contains all references to Avicenna that do not simply refer to him by name: 'Avicenna in Metaphysica sua' (*Summa fratris Alexandri*, I, p. 117), 'quidam philosophus' (I,142), 'dicit philosophus' (II,3), 'Avicenna in sua philosophia' (II,18), 'Avicenna in sua prima philosophia' (II,37), 'quidam philosophus' (II,400), 'Avicenna in tractatu de anima' (II,436), 'idem philosophus' (II,436), 'dicit philosophus' (II,437), 'philosophusponit' (II,458 and 459), 'dicit philosophus' (II,468), 'quod dicunt physici' (II,529), 'Avicenna in principio de anima' (II,547), 'Avicenna de caelo et mundo' (II,581), 'Avicenna libro I *scil.* Canonis' (II,651), 'vult philosophus' (II,689), 'habetur a philosopho' (II,701), 'legitur in libro de naturis animalium' (II,200).

241. *Summa fratris Alexandri*, p. 428a: 'dicit philosophus (!): Sicut apud medicos hepar primae generationis est principium ... - ... sicut dicit Avicenna'. Cf. *Canon*, Lib. 1, Fen 1, Doc. 6, Cap. 4 (f. 24rb): 'quemadmodum ex humorum spissitudine ... - ... cor generationis secundae principium existit'.

philosophers and physicians about the primary organ,<sup>242</sup> the different names of the imaginative/cogitative faculty,<sup>243</sup> and the definition of common sense.<sup>244</sup> One might suspect that Considerans derives his knowledge of the *Canon* from Jean de la Rochelle's *Tractatus de multiplici divisione potentiarum*, but in fact some of the *Canon* passages do not appear in Jean; Considerans seems to draw directly on the *Canon*. One result is that he introduces the heart-versus-brain debate, which does not figure in Jean's *Summa de anima*.<sup>245</sup> Particularly impressive is the combined citation of two passages from Avicenna's *De anima* and *Canon* on the very same subject, the names of the imaginative/cogitative faculty (p. 435a); this piece of Avicennian exegesis foreshadows the more mature attempts of Albertus Magnus to understand the textual tradition of Peripatetic psychology.

The influence of Avicenna on the solutions our scholar arrives at is most apparent in the section on the internal senses and in the partial adoption of the doctrine of Avicennized Augustinianism.<sup>246</sup> He has inherited the technique of juxtaposing different psychological systems from Jean, but unfortunately bases his account on Jean's *Summa* and not on the *Tractatus*, which gives explicit references to the sources; the effect is that Considerans is less conscious of the various traditions he is building upon. On the other hand, he goes a step further than Jean by attempting to show how and by what criteria the three divisions are justified. The unknown author of the *Summa*'s psychological section emerges, therefore, as a rather independent scholar, one who draws on new sources such as the *Canon*, and whose main interest is in philosophy. For of the five parts of his psychology, it is the philosophical part on which he leaves his mark.

242. *Summa fratris Alexandri*, p. 429: 'Ad quod videtur dicendum per hoc quod dicit Avicenna, ostendens differentiam naturalis philosophi et medici. Dicit enim quod medicus iudicat secundum id quod apparet et ex propositionibus sufficientibus procedit, naturalis vero philosophus, qui considerat primam causam, non tantum propinquam, dicit omnium operationum principium esse cor, sicut visum fuit Aristoteli'. Cf. *Canon*, Lib. 1, Fen 1, Doc. 6, Cap. 1 (f. 23rb): 'Omnibus autem philosophis maiori[s] id est Aristoteli videtur quod omnium istarum operationum principium existit cor ... et <medici> inveniunt tractatus suos extractos ex propositionibus sufficientibus et non necessariis in quibus non assequuntur nisi quod ex rebus apparet'.

243. *Summa fratris Alexandri*, p. 435a: 'haec vis duo sortitur vocabula ... - ... si ... reduxerit eam ad id quod ei prodest, dicitur cogitativa'. Cf. *Canon*, Lib. 1, Fen 1, Doc. 6, Cap. 5 (ff. 24vb-25ra): 'Et secunda quidem est virtus quam medici vocant cogitativam, sed certificatores ... - ... et reduxerit eam ad illud quod prodest, vocatur virtus cogitativa'.

244. *Summa fratris Alexandri*, pp. 437b-438a: 'et hoc videtur per hoc quod dicit philosophus (!) quod sensus communis est qui omnia sensu percepta recipit et propter eorum formas patitur, quae in ipso copulantur'. Cf. *Canon*, Lib. 1, Fen 1, Doc. 6, Cap. 5 (f. 24vb): 'Sensus enim communis est illa que omnia sensu percepta recipit et propter eorum formas patitur que in ipsa copulantur'.

245. The corresponding passage of the *Summa de anima* is the opening section of the division according to Augustine (pp. 189-90), which starts with the medical distinction between the natural, vital and animal spirit. The first sentence of Jean's chapter appears at the end of a question on the criteria for dividing faculties (p. 428b: 'Ut autem manifestius fiat, ad differentias virium descendemus. Habet autem anima ...').

246. See pp. 216-18 below.

# 10. PETRUS HISPANUS PORTUGALENSIS

With Petrus Hispanus's first psychological work, the *Quaestiones libri de anima* from the early 1240s,<sup>247</sup> we come to the beginning of the end of the kind of psychological writing we are investigating. For the *Quaestiones* are - with some probability - the first of a long series of Western Latin commentaries on Aristotle's *Peri psychês*. A new form of discourse about the soul is developing, in which there is not much space left for the type of psychology developed by Avicenna in his *De anima*. On the other hand, Petrus's main psychological work, the *Scientia libri de anima*, dating between 1250 and 1260, is perhaps the most Avicennian work written in the West. We shall come back to it later.<sup>248</sup> The so-called *Expositio libri de anima* has been shown not to be by Petrus.<sup>249</sup>

Recent research has made it unlikely that our author Petrus Hispanus from Portugal, the later Pope John XXI, is identical with Petrus Hispanus the Dominican, author of the famous logical textbook *Summulae logicales*.<sup>250</sup> Petrus Hispanus Portugalensis was born in Portugal, spent several years at the university of Paris, became teacher of medicine at the university of Siena from 1246 to 1250, was back in his native land from 1250 to 1264, where he held various ecclesiastical posts, became court physician of the pope in 1272, was elected pope in 1276, and died one year later through an accident.<sup>251</sup> While we do not know where Petrus was in the early 1240s when he wrote the *Quaestiones*,<sup>252</sup> the *Scientia libri de anima* from 1250-60 was very probably written in Portugal.

The *Quaestiones* are extant in two manuscripts, and are attributed to Petrus

247. Petrus Hispanus, *Commentum in librum de anima*, in M. A. Alonso, ed., *Pedro Hispano Obras filosóficas*, II, (1944) (here referred to as *Quaestiones libri de anima*). Alonso's editions are mere transcriptions of the manuscripts; they are useful to work with, but have to be treated with much caution.

248. Petrus Hispanus, *Scientia libri de anima*, ed. M. A. Alonso (1941). There exists a second edition of the work by Alonso (1961), which I have not been able to consult.

249. Pseudo-Petrus Hispanus, *Expositio libri de anima*, in M. A. Alonso, ed., *Pedro Hispano Obras filosóficas*, III (1952). See Pontes, 'A propos d'un centenaire' (1977), p. 229, n. 26; Gauthier, 'Les Commentaires de la *Vetus*' (1984), pp. 236\*-8\*. Further literature on Petrus's psychology: Grabmann, 'Ein ungedrucktes Lehrbuch' (1928), pp. 166-79; Grabmann, 'Mittelalterliche lateinische Aristoteles-übersetzungen' (1928), pp. 98-113; Grabmann, 'Handschriftliche Forschungen' (1936), pp. 1-137; Grabmann, 'Die Lehre vom Intellectus Possibilis' (1937-38), pp. 167-208; Ferreira, *Presença do Augustinismoavicennizante* (1959); Ferreira, 'L'Homme dans la doctrine' (1960), pp. 445-61; Schipperges, 'Der Stufenbau der Natur' (1960), pp. 14-29; Schipperges, 'Zur Psychologie und Psychiatrie' (1961), pp. 137-57; Schipperges, 'Grundzüge einer scholastischen Anthropologie' (1967), pp. 1-51; Pontes, *Pedro Hispano Portugalese* (1964); Pontes, *A obra filosófica* (1972); Pontes, 'Nouveaux problèmes textuels' (1979), pp. 1115-19; Gauthier, 'Notes sur Siger de Brabant. II.' (1984), pp. 11-12; McVaugh, 'Medical Knowledge' (1994), pp. 3-17; Dales, *The Problem of the Rational Soul* (1995), pp. 65-74.

250. D'Ors, 'Petrus Hispanus O.P., Auctor Summularum' (1997), pp. 21-71.

251. The testimonies can be found in de Rijks biography of the other Petrus (or rather the combined Petrus) in his introduction to the edition of the *Summulae*, pp. xxiv-xxv, xxx, xxviii-xl.

252. Earlier research suggested that they were written in Toulouse (Gauthier, 'Les Commentaires', p. 240\*), but this assumption rests on the identification of the two Petri Hispani.



Hispanus in one of them.<sup>253</sup> Since they do not bear a title we shall here call them *Quaestiones libri de anima*, a phrase which is used in an *explicit* in one of the two manuscripts.<sup>254</sup> For each passage of the Aristotelian text Petrus first gives a brief division, and then a summary of it, the *sententia* or *summa*, and afterwards raises and discusses questions. The *Quaestiones* seem to be the outcome of Petrus's teaching activity as a master of arts.<sup>255</sup>

Aristotle, quite naturally, has a much more prominent place in the *Quaestiones libri de anima* than in earlier psychological treatises; he is now the writer regularly commented upon and referred to. One may encounter sentences where Petrus almost identifies Aristotle's opinion with truth: 'We say according to the truth and according to Aristotle that it is not true that the soul has the nature of fire'.<sup>256</sup>

The *Quaestiones* also witness to the growing authority of Averroes: he is referred to some thirty times and is used often in the formulation of Petrus's *solutiones*.<sup>257</sup> The number of quotations in itself is quite unparalleled in the early 1240s (one may compare the psychological sections of the *Summa fratris Alexandri* and of Vicent of Beauvais's *Speculum naturale*) and is only matched by Albertus's *De homine*. That the *Quaestiones* are different from the psychological writings discussed so far, is apparent also from the way Avicenna's *De anima* is used: Petrus has a preference for chapters I,1, V,2 and V,7 – and not for the outline of the faculties of chapter I,5 which most earlier writers favoured, and the structure of which they imitated in their own writings on the soul.<sup>258</sup>

This being the case, one could conclude that Petrus's *Quaestiones* represent a new form of psychological writing in the West, which is less indebted to Avicenna than the writings we have studied up to now. But there are indications that Petrus's approach is not significantly different from that of his predecessors. First, Avicenna is referred to much more often than Averroes.<sup>259</sup> Second, there is an accumulation of quotations from Avicenna's *De anima* towards the end of Petrus's treatise, especially in the *solutiones*.<sup>260</sup> This phenomenon can be explained by the fact that Petrus's *Quaestiones*

are incomplete. Both manuscripts stop abruptly at the same point of Aristotle's *Peri psychês*, namely book II,11, 415b27–28.<sup>261</sup> Either Petrus never finished the treatise, or the second part of it got lost. I should like to argue that the limited influence of Avicenna is mainly due to the fact that the topics of book I of Aristotle's *Peri psychês* play only a marginal role in Avicenna's *De anima*. Petrus seems to proceed in a way similar to that of Albertus in his *De homine*: both start to use Avicenna's *De anima* extensively when it comes to the discussion of the different faculties. If the lost (or only planned) part of the *Quaestiones* looked like the last two hundred pages of what has survived, it would probably rely very much on Avicennian psychology. The extant text stops some folios after Petrus has introduced the vegetative faculty, which gives him the first opportunity to use Avicennian faculty-psychology – and he does not miss it:

But what the vegetative soul is, is apparent from the definition by Avicenna: the vegetative soul is that which is the first perfection of the natural and instrumental body which is reproduced, growing and nourished.<sup>262</sup>

It may well be, therefore, that we would meet with the Avicennian definitions of other faculties in the lost part of the *Quaestiones*, as previous masters of arts did before Petrus: John Blund and Anonymous (Gauthier). Hence, although Petrus is commenting on Aristotle, he seems to be introducing Avicenna by the back door.

Let us turn to Petrus's philosophical *magnum opus*, his *Scientia libri de anima*, written between 1250 and 1260, probably in Portugal.<sup>263</sup> The prologue is explicit about the purpose of the book and its relation to Petrus's earlier writings:

Hence the inquisitive intention, which is worth pursuing, arose to the throne of our mind that we should provide a comprehensive and perfect account ('compendiosam ac perfectam traditionem') of the nature of the soul and its differences, so that after investigative discourses proceeding under the examination of the disputation<-method> had been published by us in other books and had been sent out in advance, in this work the sentences of truth about all questions are brought

253. Petrus Hispanus, *Quaestiones*, p. 487: 'Explicit primus de anima magistri Petri Hispani'.

254. Following Pontes, 'Un nouveau manuscrit', pp. 174–5, n. 26. Cf. Petrus Hispanus, *Quaestiones*, p. 775: 'Expliciunt quaestiones primi libri de anima secundum magistrum Petrum Hispanum'. Gauthier prefers the descriptive title *Sententia cum quaestionibus libri de anima* ('Les Commentaires de la *Vetus*', p. 239\*).

255. Gauthier, 'Les Commentaires', p. 240\*.

256. Petrus Hispanus, *Quaestiones*, p. 348: 'Dicamus autem secundum veritatem et secundum Aristotelem quod non est verum quod anima habeat naturam ignis'.

257. The numbers of quotations depend upon which text would be included in a critical edition, for there are several repetitions in the Kraków manuscript. The *solutiones* are on pages 65, 146, 166, 309, 510, 520, 549, 621. The quotations from Averroes are briefly discussed by Gauthier, 'Les Commentaires', p. 241\*.

258. See the Index locorum for these chapters.

259. There are about 56 references to Avicenna, compared to 30 references to Averroes.

260. This is apparent from the following list of pages with quotations from Avicenna's *De anima*

(underlining indicates that they are found in Petrus's *solutiones*): pp. 71, 259, 261, 277, 381, 442, 505, 532, 534, 545, 552, 554, 576, 578 (twice), 579, 584, 592, 622, 650, 652, 654, 677 (twice), 678, 680 (three times), 685, 700, 701, 705 (twice), 724, 740, 751. The phenomenon is less obvious in the list of quotations from other Avicennian works than *De anima*: pp. 79, 130, 138, 149, 160, 173, 190, 196, 206, 307, 367, 368, 399, 444, 456, 499, 500, 502, 508, 534.

261. Gauthier, 'Les Commentaires de la *Vetus*', p. 239\*. MS Marciana is a bit longer.

262. Petrus Hispanus, *Quaestiones*, p. 740: 'Quid autem sit anima vegetabilis patet per definitionem Avicennae: anima vegetabilis est quae est prima corporis perfectio naturalis instrumentalis quod generatur et augmentatur et nutritur'. The quotation comes from Avicenna, *De anima*, I,5, p. 79, line 5 to p. 80, line 7. The Avicennian text has: 'ex hoc quod generatur ...', 'insofar as something is reproduced ...'.

263. Gauthier, 'Les Commentaires de la *Vetus*', pp. 241\*–2\*. It was Grabmann who discovered the work in the 1920s. Cf. the colophon of the only complete manuscript extant (MS Madrid B.N. 3314, ed. Alonso, p. 564): 'Ego igitur Petrus Hispanus Portugalensis liberalium artium doctor, philosophicae sublimitatis gubernator, medicinalis facultatis decor ac proficue rector in scientia de anima decrevi hoc opus praecipuum componendum, pro cuius complemento divinae bonitatis largitas gratiarum actionibus exaltatur. Completus est liber de anima a Petro Hispano Portugaliensi editus'.

to a conclusion in firm and short summaries ('certis summis ac brevibus').<sup>264</sup>

The contrast here is between a work which examines and discusses the topics – he refers to the *Quaestiones* – and a work which dispenses with the arguments *pro* and *contra* and gives only the conclusions. The *Scientia libri de anima* indeed differs very much in its approach from the *Quaestiones*. It is written in a descriptive and categorical style and rarely engages in discussing a problem. Except on the last pages, no writer is mentioned in the book, not Aristotle, not Avicenna. The phrase 'compendiosa ac perfecta traditio' indicates that Petrus is intending to write his final book on the soul.

The prologue does not convey any sense of history or of a tradition in which Petrus would locate himself; for this, one has to turn to his discussion of predecessors' opinions at the end of the book:

The endeavour of the ancient writers in their writings about the soul, even though the ultimate end and the real depth of the truth was not touched completely, reached a certain part of the truth. For some of them described the soul through the effects of its condition, through its dispositions, actions and its faculties, sticking to the path of posterior attributes. Others tried to explain the soul through metaphorical allegories and thus hid the clarity of its light under the coverings of similitudes. It is not proper, therefore, to disdain their theories; instead we can embrace them with a kind heart. We shall therefore present their opinions in this last chapter.<sup>265</sup>

There follows a discussion of the opinions of the Presocratic philosophers, drawn from *Peri psychēs*, book one. The first 'ideo' of this passage ('it is not proper, therefore') refers back to the first sentence: we should not disdain them because they had already hit upon some part of the truth – not the whole, however, for reasons of method; they explained the soul either according to its external attributes or in a metaphorical way. Petrus implies that he himself uses an improved method, which enables him to 'bring the truth of all sentences to a conclusion'. We meet here with a sense of progress reaching from the Presocratics through Aristotle and Avicenna (who is used amply, as we shall see) to Petrus Hispanus himself. Curiously enough,

264. Petrus Hispanus, *Scientia libri de anima*, prologue, p. 47: 'Ad nostrae igitur thronum mentis curiosa necnon executione digna ascendit intentio, ut de natura animae differentiarumque eius compendiosam ac perfectam ordinaremus traditionem, ut, postquam sermones inquisitivi sub disputationis examine procedentes in aliis operibus a nobis editis sint praemissi, in hoc ergo negotio omnium inquisitionum veritatis sententiae certis summis ac brevibus concludantur'.

265. Petrus Hispanus, *Scientia libri de anima*, 13, p. 547: 'In antiquorum sermonibus circa animam, licet non ad plenum veritatis apex ac profunditas attingatur, tamen ad aliquam eius partem eorum pervenit industria, cum quidam eorum posteriorum proprietatum semite adhaerentes ipsam per conditionis effectus, dispositiones, opera et virtutes proprias descripserunt, quidam methaphorarum integumentis eam explicare volentes eius claritatem luminis sub similitudinum involucris absconderunt. Et ideo non est idoneum eorum sententias aspernari, sed possumus eas benigno animo complecti. Et ideo in hoc ultimo capitulo eorum opiniones narrentur'.

this attitude resembles that of the late Avicenna (whose methodological standpoint Petrus cannot have known); I shall come back to this in the conclusion to the book.<sup>266</sup>

To what genre does the *Scientia libri de anima* belong? It does not have a counterpart in thirteenth-century psychology, since, while being a work by a master of arts, it does not betray the characteristics of either commentaries or *quaestiones*. The title which is given to the work in the 'Incipit'<sup>267</sup> indicates that Petrus is writing the science of the soul in the tradition of Aristotle's *Peri psychēs*. If we recall what he said in the prologue, we can deduce that the *Scientia libri de anima* presents the conclusions that a master of arts arrives at when he takes Aristotle's *Peri psychēs* as a starting point for his own discussion.

What is the content of these conclusions? It has been maintained that Petrus took his material from many different sources and hence partly from Aristotle,<sup>268</sup> and that his theory of the intellect is indebted to Augustine and Avicenna.<sup>269</sup> The last point will be examined below in the chapter on the intellect.<sup>270</sup> As for Aristotle, his presence is felt not only in the already mentioned last chapter on the Presocratics (which, however, covers only fifteen of the over 500 pages), but also in the title of the *Scientia libri de anima*, and on a number of occasions when Petrus adopts his doctrine.<sup>271</sup> However, Petrus's main inspiration comes from somewhere else: his work is most heavily indebted to Avicenna's *De anima*.

Petrus uses the book on a massive scale, but tacitly – that is, he presents it as his own teaching – and usually with many alterations;<sup>272</sup> he may adopt an Avicennian argument, but change the wording completely, or employ Avicennian vocabulary without drawing on a particular passage.<sup>273</sup> Avicenna's philosophy is integrated into the *Scientia* to such an extent that there is hardly a single chapter in Avicenna's book which is not quoted or somehow adopted by Petrus.<sup>274</sup> A list of the few Avicennian

266. See pp. 232–3 below.

267. Petrus Hispanus, *Scientia libri de anima*, p. 45: 'Incipit scientia libri de anima a Petro Hispano Portugalensi edita'.

268. Gauthier, 'Les Commentaires de la *Vetus*', pp. 241\*–2\*.

269. Grabmann, 'Die Lehre vom intellectus possibilis', p. 180; Gilson, 'History of Christian Philosophy', pp. 319–23; Ferreira, *Presença do Augustinismo avicenizante*, p. 50.

270. See pp. 219–20 below.

271. For example: the theory of the common sensibles (pp. 226, 305), the infallibility of the senses in regard to their proper object (p. 233), 'tabula rasa' (p. 434), the description of the active intellect (p. 443), only human beings have the ability to remember, not animals (p. 485), 'phantasia' is sometimes right, sometimes wrong (p. 493), the heart is the principal organ (p. 535).

272. This makes it difficult to determine which of the two versions of the manuscript tradition, A or B, was used by Petrus. In one of the few literal quotations, the definition of vision, we find him using version A: cf. *Scientia libri de anima*, 6.13, p. 277 ('in nervo concavo'; 'corporum coloratorum') and Avicenna, *De anima*, ed. Van Riet, p. 83, lines 59–61 (= version B) 'in nervo optico'; 'corporum habentium colorem'; manuscripts PNV [= version A]: 'in nervo concavo'; 'corporum coloratorum'.

273. For an example of an Avicennian doctrine rewritten in Petrus's own words see his adaptation of Avicenna's *De anima*, IV,4, ed. Van Riet, pp. 62–3 (on the influence of the soul on the body) on p. 476.

274. I was able to trace over 110 quotations, but there are certainly more. The quotations come from the following chapters of Avicenna's *De anima* (the number of quotations is given in brackets after the

theories which Petrus is *not* interested in, amounts to a characterization of his psychology: he is not interested in Avicenna's more theoretical discussions of the notions of substance, form and perfection, or the Flying Man (I,1–3); he quotes almost every page of Avicenna's account of the faculty of touch (II,3), but makes fewer use of the chapters on the other senses and very few of the third book on vision; he is interested in the internal senses, but leaves out the theories of dreams, sleep and waking, prophecy and divination (IV,2 and IV,4), which belong to the *Parva naturalia* tradition; and he adopts theories on the intellect, but not the discussions of the incorporeality, individuation and immortality of the soul (V,2–4). It is obvious that Petrus refrains from engaging in discussion of the more metaphysical parts of psychology<sup>275</sup> and that his focus is on the psychology of faculties, and especially the physiology of the senses. This accords well with the fact that Petrus is also a medical writer and that apart from Avicenna his sources are predominantly medical.<sup>276</sup>

What Petrus wrote in Portugal about the soul was not in vogue with many of the contemporary masters of arts and theologians in Paris and Oxford, for instance Thomas Aquinas. Here we find the focus shifting towards more metaphysical questions, such as the individuation of the soul and the unicity of the intellect.

# 11. ALBERTUS MAGNUS

Albertus Magnus's extraordinary preeminence among the writers examined is perhaps best introduced by pointing out that his *De homine* (and partly also his *De anima*), considered in itself and not historically, is still one of the most valuable pieces of secondary literature on the Peripatetic psychological tradition. It is worth while to consult this work whenever one is looking for the differences between Aristotle and his followers, especially the Arabic philosophers, who seldom signal explicitly when they deviate from Aristotle. Avicenna, for instance, hardly ever does this. The *De homine* thus is a helpful tool for working one's way through the only apparently monolithic body of Peripatetic doctrines, in particular on the vegetative and animal faculties.

To turn to the historical Albertus Magnus: he is the author of several psychological works, of which we shall first examine his early *De homine*.<sup>277</sup> It dates from

chapter number): I,1 (1); I,4 (3); I,5 (37); II,1 (3); II,2 (2); II,3 (13); II,4 (9); II,5 (2); III,3 (1); III,4 (1); IV,1 (12); IV,2 (1); IV,3 (7); IV,4 (3); V,1 (2); V,2 (1); V,3 (1); V,5 (3); V,6 (8); V,8 (2).

275. There are exceptions to this rule, for instance the highly metaphysical chapter *De vita substantiae spiritualis* (*Scientia libri de anima*, pp. 405–13).

276. Some of the medical sources of Petrus have been named by Schipperges ('Grundzüge einer scholastischen Anthropologie', pp. 1–51, summarized on p. 47). I have not found any traces of the psychological section of Avicenna's *Canon* in Petrus's book.

277. Albertus Magnus, *De homine* ('Summa de creaturis, secunda pars'), in Albertus, *Opera omnia*, ed. S. C. A. Borgnet, vol. 35 (1896). A useful and comprehensive description of Albertus's psychology is Schneider, 'Die Psychologie Alberts des Grossen' (1903 and 1906), pp. 1–559; drawbacks of the book

about 1242–3, a time when he was bachelor of the *Sentences* at the University of Paris.<sup>278</sup> The *De homine* very probably is the fruit of *quaestiones disputatae* – that is, questions raised by the teacher or the pupil over reading the Bible or Peter Lombard's *Sentences* – and Albertus in fact often refers to the book as his *Quaestiones de anima*.<sup>279</sup> The questions of *De homine* are raised in relation to reading the latter part (on human beings) of the second book of the *Sentences*. The first part (on angels and the first days of creation) is covered by Albertus's book *De IV coaequaevis*, written immediately before the *De homine*.<sup>280</sup>

It is obvious that the *De homine* is the work of a theologian and not of a master of arts such as Petrus Hispanus. The overall structure of the book manifests its adherence to the genre of theological treatises on the soul. We meet with the following familiar topics, in sequence: the existence of the soul (qu. 1,2), the definition of the soul (qu. 2–4), the origin of the soul (qu. 5), the division of the soul (qu. 6), the unity of the soul (qu. 7), the differences or parts of the soul (qu. 8–68), *sensualitas*, reason, free will, *synderesis*, conscience, the image of God (qu. 69–73), the body of Adam (qu. 74–7), the joining of body and soul (qu. 78), the status of men in paradise and this world (qu. 79–81).<sup>281</sup>

are the late dating of the *De homine* (see e.g. p. 249) and the fact that Schneider's presentation first follows Albertus's *De homine* and later (on the rational soul) his *De anima*. Further literature on Albertus's psychology: Reilly, *The Psychology* (1934); Gilson, 'L'Âme raisonnable' (1943), pp. 5–72; Gilson, *History of Christian Philosophy* (1955), pp. 283–9; Lottin, 'Ouvrages théologiques' (1960), pp. 273–84; Michaud-Quantin, 'Albert le Grand et les puissances' (1955), pp. 59–86; Michaud-Quantin, *La Psychologie de l'activité* (1966); Gätje, 'Der "Liber de sensu et sensato"' (1964), pp. 107–16; Steneck, *The Problem of the Internal Senses* (1970); Steneck, 'Albert the Great on the Classification' (1974), pp. 193–211; Steneck, 'Albert on the Psychology' (1980), pp. 263–90; Dewan, 'St. Albert, the Sensibles' (1980), pp. 291–320; Weisheipl, 'The Life and Works' (1980), pp. 13–51; Weisheipl, 'Albertus Magnus and Universal Hylomorphism' (1980), pp. 239–60; Craemer-Ruegenberg, 'Die Seele als Form' (1980), pp. 59–88; Craemer-Ruegenberg, 'Albertus Seelen- und Intellektlehre' (1981), pp. 104–15; Mahoney, 'Sense, intellect' (1982), pp. 602–22; Gauthier, 'Les Commentaires' (1984), pp. 256\*–9\*; Krieger, 'Albertus Magnus' (1990), pp. 247–9; de Libera, *Albert le Grand et la philosophie* (1990); de Libera, 'Le Sens commun' (1991), pp. 475–96; Sturlese, *Die deutsche Philosophie* (1993), pp. 362–77; Dales, *The Problem* (1995), pp. 89–98; Anzulewicz, 'Grundlagen' (1996), pp. 124–60 (with recent bibliography); Anzulewicz, 'Der Anthropologieentwurf' (1998), pp. 756–66. On Albertus and Avicenna in particular, see: Haneberg, 'Zur Erkenntnislehre' (1866), pp. 189–267; Vernier, 'La Définition' (1992), pp. 255–79.

278. Lottin, 'Ouvrages théologiques de saint Albert le Grand', pp. 281–84; Gauthier, 'Les Commentaires de la *Vetus*', pp. 256\*–7\*. Weisheipl seems to prefer a later dating, after 1245, the year when Albertus became master of theology ('The Life and Works', pp. 21–2). This later dating, however, collides with the fact that the *De homine* has been shown by Lottin to antedate the redaction of the commentary on the *Sentences*, which for most parts dates before 1246 (Lottin, *ibid.*, pp. 273–84). The relative chronology: *De IV coaequaevis*, *De homine*, *De bono*, *Scriptum super I Sententiarum*, has been validated by Geyer in his prolegomena to Albertus Magnus, *De bono* (1951), pp. xi–xiii.

279. Gauthier, 'Les Commentaires de la *Vetus*', p. 256\*.

280. Both works together are referred to as the *Summa de creaturis*. Together with the treatises *De sacramentis*, *De incarnatione*, *De resurrectione* and *De bono* they form Albertus's first *Summa*, which does not bear a title. See Geyer's prolegomena to Albertus's *De bono*, p. ix. For questions of chronology, see again Lottin, 'Ouvrages théologiques', pp. 273–84.

281. See the following pages of the Borgnet edition – here and in the following the wording of Borgnet's edition is silently corrected with the help of a preprint of the critical edition, which I was very

In contrast, however, to other writers in this tradition, such as Philip the Chancellor and William of Auvergne, Albertus has reduced the role of the theological topics to a mere framework for the disproportionately extended philosophical section on the vegetative, animal and rational parts of the soul (questions 8–68). Moreover, he inserts philosophical teachings already in the first eight questions, for instance by contrasting the definitions of the *sancti* (Augustine, Remigius, Bernard of Clairvaux and John of Damascus)<sup>282</sup> with the definitions of the philosophers. Another example is the chapter about the origin of the soul, which takes as its model the corresponding part of Gundissalinus's *De anima*, which contains much philosophical material.<sup>283</sup> Of course, Albertus's approach is not without parallels: Roland of Cremona, Jean de la Rochelle and the *Summa fratris Alexandri* resemble Albertus in that they also transform their chapters on the division of the soul into philosophical treatises. But Albertus goes much further by marginalizing theological psychology.

How then does he conceive of the history of philosophy? As has been said, Albertus differentiates between the *philosophi* and the *sancti*, for instance in this passage:

... this is not true nor is it said in accordance with philosophy, because philosophy says the opposite, Aristotle as well as Avicenna, and the *sancti* say the opposite, Augustine as well as Bernard of Clairvaux.<sup>284</sup>

Aristotle and Avicenna are clearly the most eminent philosophers for Albertus; this is reflected not only in sentences like this, but also in the number of explicit quotations of their works on the soul: Aristotle's *Peri psychēs* is quoted about 280 times, Avicenna's *De anima* about 230 times, whereas there are only about sixty references to Averroes.<sup>285</sup> The fifty references to Algazel's *Metaphysica*, a reworking of Avicenna's *Dānešnāme*, add to the influence of Avicennian psychology. Algazel

kindly given by Henryk Anzulewicz: 6 ('secundo quaeritur an sit anima'), 9 ('quaeratur de diffinitione eius'), 62 ('utrum anima sit una vel multae in omnibus animatis ...'), 85 ('de divisione animae per has differentias vegetabile, sensibile et rationale'), 89 ('utrum sint una substantia in homine vel non ...'), 102 ('de singulis harum differentiarum vegetabile, sensibile et rationale'), 565 ('... a sanctis tractantur et sunt sex, scilicet sensualitas et ratio cum portione superiori et inferiori et liberum arbitrium et synderesis et conscientia et imago dei quae est in anima'), 621 ('de corpore hominis quantum pertinet ad theologum'), 635 ('de coniunctione animae et corporis'), 638 ('secundum statum animalis vitae habitaculum est duplex, scilicet paradisus et mundus ...').

282. I.e. Pseudo-Augustine *De spiritu et anima*, Nemesius of Emesa (= Remigius?) and Pseudo-Bernard of Clairvaux, *Epistula ad fratres de Monte Dei*; see Anzulewicz, 'Anthropologie des Albertus Magnus', p. 49.

283. Albertus, *De homine*, qu. 5, pp. 62–84; Gundissalinus, *De anima*, chs 3–7, pp. 43–60. Albertus refers to Gundissalinus as 'Toletanus' (misread in the editions by Jammy and Borgnet as 'Collectanus', see Callus, 'Gundissalinus's *De anima* and the Problem of Substantial Form', p. 339). For the occurrences of the name in Albertus, see p. 13, n. 3 above.

284. Albertus, *De homine*, 7.1, p. 97: '... non est verum nec secundum philosophiam dictum est de hoc, quia philosophia contradicit et Aristoteles et Avicenna, et sancti contradicunt et Augustinus et Bernardus'. See Chenu, 'Les "Philosophes"', pp. 35–40.

285. To these should be added Albertus's quotations from 'Alpharabius in suo libro *De sensu et sensato*' which in fact come from Averroes's *Epitome of the Parva naturalia*; see Gätje, 'Der Liber de sensu et sensato von al-Fārābī', pp. 107–16.

and Dominicus Gundissalinus are referred to as followers of Avicenna:

Algazel says the same in his *Metaphysica*, because the positions (*dicta*) of Algazel are nothing else than a summary of Avicenna's positions.<sup>286</sup>

In this opinion Avicenna is explicit in his *Sextus de naturalibus*, and <also> the two who follow his traces, namely Algazel and Toletanus.<sup>287</sup>

If Aristotle and Avicenna are Albertus's main philosophical authorities, is Avicenna preferred to Aristotle, as was the case in most of the other psychological treatises examined? Only in the sense that Albertus follows Avicenna rather than Aristotle in the structure of his psychology, as will be shown later. But otherwise, Albertus differs from most of the earlier writers on the soul – if we exclude Petrus Hispanus, whose commentary on *Peri psychēs* was written at about the same time – in that he refers to Aristotle's text with the words *textus* or *littera*<sup>288</sup> and to the Greek and Arabic Peripatetic philosophers not only as *philosophi naturales* but also as *commentatores*.<sup>289</sup> This is remarkable since Albertus was not writing a commentary, but seems to give greater weight to the authority of Aristotle deliberately, for reasons of doctrine, and not because the genre of a commentary demands it. It is in this mode that Albertus discusses points of disagreement between Aristotle and Avicenna. Earlier psychological writers (or even contemporary ones like the author of the *Summa fratris Alexandri*) tend to treat both philosophers as representing one body of philosophical teaching. One may, therefore, observe a turn towards Aristotle in Albertus's *De homine*.

However, it would be very wrong to say that Albertus's purpose is to purge Aristotle of 'false interpretations, in particular those of the Arabic commentators'.<sup>290</sup> Rather, his aim is not to explain Aristotle, but to establish a comprehensive account of philosophical teachings on the soul. This is best seen from the least Aristotelian and most Peripatetic part of the *De homine*, the doctrine of the internal senses.

286. Albertus, *De homine*, 55.3, p. 462: '... idem omnino dicit Algazel in sua metaphysica quia dicta Algazel non sunt nisi abbreviatio dictorum Avicennae'. See also *De homine*, 39.1, p. 336: 'sequens Avicennam'.

287. Albertus, *De homine*, 55.3, p. 463: 'In hac etiam sententia expresse est Avicenna in .vi. de naturalibus et duo sequentes vestigia eius, scilicet Algazel et Toletanus'.

288. Albertus, *De homine*, 4.2, p. 40 ('ex prava intelligentia litterae philosophi'); 4.6, p. 56 ('ex prava intelligentia litterae'); 5.2, p. 72 ('prave intellexit litteram Aristotelis'); 21.1, p. 181 ('expresse in textu habetur'); 40.1, p. 346 ('ut expresse dicit philosophus in littera'); 55.3, p. 463 ('hanc tamen litteram omnino aliter exponunt ...'); 57.2, p. 491 ('glossabimus singula dicta Aristotelis').

289. Albertus, *De homine*, 5.3, p. 80 ('philosophi naturales'); 14.2, p. 135 ('auctores scientiae naturalis'); 20, p. 171 ('auctores naturalium'); 34.3, p. 303 ('quidam commentatores Arabum'); 43.4, p. 385 ('a commentatoribus adduntur ...'); 55.3, p. 463 ('tres commentatores, scilicet Alexander, Themistius et Averroes').

290. Kübel, 'Albertus Magnus' (1980), p. 297: 'Albertus' Absicht und Verdienst sind es, daß er das neue Gedankengut seinen Zeitgenossen bekannt machte, indem er es in seinem ursprgl. Gehalt und befreit von fälschender Interpretation, insbes. der arab. Kommentatoren, wiederherstellte'. This is wrong also for Albertus's *De anima*, as we shall see.

Albertus repeatedly refers to the teaching of the *philosophi*, and bases his theory upon their authority.<sup>291</sup> His attitude towards the Peripatetic tradition is also obvious from the section on the three vegetative faculties: here he approves explicitly of Avicenna's definitions and each time gives the following reason:

We say that the quoted definition is good and natural ('physica', *that is, appropriate for natural philosophy*). For a natural faculty is defined by the action it has on its own matter and in relation to its function and through its subject in which it is. All these points are covered in the quoted definition.<sup>292</sup>

One can see here that Albertus places his writing in the realm of natural philosophy and that he has certain criteria for the quality of such philosophy.

In this project of a philosophical theory of the soul, Avicenna has a very special role. He is not referred to as a commentator,<sup>293</sup> but serves as a philosopher in his own right: his *De anima*, is quoted extremely often, more often than in any other psychological work of the thirteenth century; the structure and content of his theory of the soul greatly influenced Albertus. It is instructive to see how Albertus deals with those problematic cases when Aristotle and Avicenna contradict each other: either he tries to reconcile the two by showing that both are correct but in different regards,<sup>294</sup> or (if they are in blatant disagreement) he gives another interpretation of Avicenna's text, in order to rescue ('salvare') him.<sup>295</sup> Avicenna is the only philosopher (apart from Aristotle) to be treated with such respect. Averroes, for instance, is criticized harshly for his ignorance of the Aristotelian text.<sup>296</sup> That Albertus should not use Averroes very extensively is a consequence of

his approach in *De homine*: a commentator who follows Aristotle closely and thus adds less than others to the Peripatetic tradition is of little value for him. In fact, the influence even of Algazel is stronger than that of Averroes: whereas the latter's opinion is very rarely reflected in Albertus's *solutiones*,<sup>297</sup> Algazel's Avicennian definitions often appear prominently at the openings of chapters on a particular faculty.<sup>298</sup>

To assess the relative influence of Aristotle and Avicenna on Albertus's psychology, one has to turn to its content. In the first eight questions, which belong to the theological tradition, Aristotle's psychology is much more prominent than Avicenna's: it is Aristotle's (and Plato's) definition of the soul which receives extensive discussion. However, in the following section on the vegetative soul Avicenna becomes the leading authority: Albertus treats the relevant passages from Avicenna's *De anima* as if they were the *littera* forming the starting point of the discussion.<sup>299</sup> On the external senses, both philosophers are used extensively; if they contradict each other, Albertus seeks a compromise.<sup>300</sup> Avicenna's influence, quite naturally, is paramount in the doctrine of the internal senses; here Albertus interprets Aristotle's concept of *phantasia* as comprehending a number of Avicennian internal senses.<sup>301</sup> The following section on sleep, waking and dreams is the most Aristotelian part of the book; Avicenna is rarely used in *solutiones*.<sup>302</sup> This part is much influenced by Averroes, whose epitome of the *Parva naturalia*, which Albertus wrongly attributes to 'Alpharabius', is often quoted.<sup>303</sup> Still, that these topics, which belong to the *Parva naturalia* tradition, are dealt with at all (and after the internal

297. Averroes's position is explicitly embraced only in question 55.3 on the active intellect, p. 466b.

298. This of course adds to the indirect influence of Avicenna. See Albertus's chapters on: hearing (p. 228), smelling (p. 254), touch (p. 281), common sense (p. 310), the imaginative faculty (p. 323), 'phantasia' (p. 330), 'actus phantasiae' (p. 333), estimation (p. 336), memory (p. 340), sleep (p. 363), active intellect (p. 461).

299. His method is to quote the Avicennian definition first and then to give several objections against it. In the *solutio* he explains why he accepts the definition, which he finds appropriate for natural philosophy (see the quotation above) (*De homine*, questions 9.1, 13.2, 17.1, pp. 108–109, 128–9, 143). Albertus even compares different passages in Avicenna's *De anima* which seem to contradict each other (13.2, p. 128) and gives an explanation. This happens again in the chapter on the cause of sleep (43.4, p. 390). In a similarly philosophical manner, Albertus discusses Avicenna's theory of common sense (*De homine*, 35.2, p. 310).

300. See n. 294 above, which refers to Albertus's attempts of establishing a concordance between Avicenna and Aristotle. Albertus is the first writer in the West to make use of the vast material on optics presented in Avicenna's *De anima*; see pp. 117–19, 125–7 below.

301. Albertus, *De homine*, 38.4, p. 334: 'Dicendum quod si phantasia large accipiatur, tunc parva erit differentia inter phantasiam et imaginationem et aestimationem quantum ad actum et obiectum et organum. Et hoc modo videtur sumere Aristoteles qui dicit phantasiam esse potentiam secundum quam phantasma nobis fit ...'. Scholars have disagreed about Albertus's theory of the internal senses; see the chapter Estimation and 'Intentions' below. Cf. Steneck, 'Albert the Great on the Classification', pp. 193–211; Steneck, 'Albert on the Psychology of Sense Perception', pp. 263–90.

302. The structure of the section follows closely the arrangement of topics in Aristotle's treatises *De somno et vigilia*, *De insomniis* and *De divinatione* (cf. Aristotle, *De somno*, 453b12–24, and Albertus, *De homine*, Index tractatum, pp. 669–70).

303. See Gätje, 'Der Liber de sensu et sensato von al-Fārābī', as n. 285 above.

291. Albertus, *De homine*, 37, p. 323 (the five internal senses 'secundum quosdam philosophos'); 37.1, p. 326 ('haec solutio est secundum philosophos'); 37.3, p. 328 ('dicendum cum auctoritatibus'); 38.5, p. 334 ('ut dicunt auctores'); 40.1, p. 344 ('de hac materia locuti sunt philosophi et quidam sancti'); 40.1, p. 345 ('sequendo philosophos et sanctos Gregorium et Damascenum'); 40.3, p. 349 ('dicitur communiter ab omnibus philosophis'). Once he says in a *solutio*: 'dicendum cum Avicenna' (39.2, p. 338).

292. Albertus, *De homine*, 9.1, p. 109: 'Dicimus quod praehabita definitio bona est et physica. Diffinitur enim potentia physica per actum quem habet super propriam materiam et in comparatione ad finem et per suum subiectum in quo est. Et haec omnia tanguntur in praedicta definitione'.

293. See the passage in n. 289 above, which gives Alexander, Themistius and Averroes as commentators. Whereas references to Averroes say 'in commento de anima' or 'super librum de anima', Avicenna's *De anima* is called *Liber sextus de naturalibus* (about forty times).

294. See, for instance, the discussion of the location of the sense of taste (*De homine*, 32.3.5, pp. 278–9), the question of which is the primary sense, touch or vision (*De homine*, 19.2, pp. 166–8), the definition of *phantasia* in a strict and a wider sense (*De homine*, 38.1, pp. 330–32), the question of whether there is a memory for intelligible forms (*De homine*, 57.5, p. 498). See pp. 92–3, 148–50, 190 below.

295. Albertus, *De homine*, 4.3, p. 44 ('Ad aliud dicendum quod si volumus salvare Avicennam tunc faciemus vim in verbo eius ...'); 17.3, p. 156 ('si volumus sustinere Avicennam dicamus ...'); 22, p. 225 ('ad aliud dicendum quod licet Avicenna dicat quod quaedam animalia ..., tamen hoc non placet mihi ...').

296. Albertus, *De homine*, 4.1, p. 35 ('unde de hoc decepti sunt plurimi quorum primus est commentator Averroes'); 4.1, p. 37 ('non enim bene exponit commentator'); 4.2, p. 40 ('ex ignorantia tamen huius commentator coactus est dicere quod ...'); 21.3.1, p. 190 ('dicendum quod ipse erravit deceptus per fallaciam divisionis').

senses), is once again due to Avicenna's influence. The section on the intellect is also very Aristotelian, which is mainly due to the fact that Albertus rejects a cornerstone of Avicenna's theory, the claim that the active intellect is separate.<sup>304</sup> The final part, on motion, follows Aristotle on the topic of local movement, but Avicenna on the practical intellect, the irascible and the desiring faculty.<sup>305</sup>

It is not difficult to see that the structure of Albertus's psychology is less Aristotelian than Avicennian. If Albertus had followed Aristotle's *Peri psychēs* rather than Avicenna's *De anima*, he would have left out the internal senses and the theories of sleep, waking and dreams, and he would not have laid out a system of faculties which physically exist in the different parts of the body.<sup>306</sup>

The *De homine*, therefore, can be regarded as both the culmination of the kind of psychological writing examined and its ending: on the one hand Albertus's unparalleled knowledge of the Peripatetic tradition leads him to a final transformation of the theologians' discussion of the soul's faculties into a philosophical psychology of Avicennian colour. But on the other hand, he is aware of the points of disagreement between Aristotle and Avicenna, and time and again underlines the importance of understanding Aristotle correctly. At this point in the history of psychology, the two principal possibilities for Albertus and his readers seem to be: either to develop Peripatetic psychology into a new, post-Avicennian direction or to return to the founder of this tradition and take a deeper understanding of Aristotle's *Peri psychēs* as the starting point for writing the philosophy of the soul.

#### *Albertus's Other Writings, in particular his De anima*

Albertus himself chose the latter path: his second main psychological work was a commentary on Aristotle's *Peri psychēs*, written between 1254 and 1257.<sup>307</sup> In the meantime, he had formulated the project of writing books for his fellow friars which would present a complete natural philosophy and lead to a valid understanding of Aristotle. At the beginning of his *De anima* Albertus refers to this programme, which he had set out in the well-known prologue to his commentary on the *Physics*.<sup>308</sup>

304. Albertus, *De homine*, 55.3, pp. 466.

305. On local movement: *De homine*, qu. 62; on the practical intellect and the irascible and desiring faculties: *De homine*, questions 63, 66 and 67.

306. Cf. Park on the different notions of faculty in Aristotle on the one hand and Avicenna and Albertus on the other hand ('Albert's Influence', pp. 505–6).

307. Albertus, *De anima*, ed. C. Stroick (1968). Cf. Gauthier, 'Les Commentaires de la *Vetus*', pp. 257\*–259\*. The editor overlooked a number of important borrowings from Avicenna's *De anima*, for instance the fact – known already to Schneider ('Die Psychologie', p. 157) – that the entire chapter 3.1.4 (p. 169, line 34 to p. 170, line 48) is taken from *De anima*, IV,3, pp. 46–54.

308. Albertus, *Physica*, 1.1.1, p. 1: '... ut talem librum de phisicis eis componeremus in quo et scientiam naturalem perfectam haberent et ex quo libros Aristotelis competenter intelligere possent'. Cf. Albertus, *De anima*, 1.1.1, p. 1: 'nunc tandem stilum ad tractandum animatorum naturas convertimus,

In his *De anima*, Albertus does not quote the lemma of Aristotle's text, but integrates it into his own commentary. He inserts numerous digressions which for the most part settle questions about the different standpoints and interpretations of the Peripatetic philosophers. Many modern scholars label this type of commentary a 'paraphrase', and maintain that Albertus's model is Avicenna's *De anima*.<sup>309</sup> This can hardly be true. It has been demonstrated in the previous chapters that the structure of Avicenna's book influenced many psychological works, in particular Petrus Hispanus's *Scientia libri de anima* and Albertus's *De homine*. These are not paraphrases, but independent treatises on the soul, as is Avicenna's *De anima* itself. Avicenna's commentaries on Aristotle are lost, and none of the extant books by him can count as a paraphrase of an Aristotelian work.<sup>310</sup> On the contrary, Albertus's *De anima* deviates from this Avicennian tradition. The book obviously is a compromise between the type of commentary written by masters of arts such as Pseudo-Petrus Hispanus and Adam of Buckfield, who follow Averroes closely, and Albertus's earlier rather independent approach in *De homine*.

This is apparent from the role Avicenna plays in *De anima*. On the one hand, Avicenna's presence is felt in many parts of the commentary, most prominently in the digressions. In contrast to *De homine*, Avicenna is often quoted silently, and many theories connected with his name in *De homine* now appear under Albertus's own name or as theories of unnamed philosophers.<sup>311</sup> The effect is that almost the whole system of Avicenna's faculty psychology is worked into *De anima*.

The other side of the coin is that instead of about 230 explicit quotations from Avicenna's *De anima* in *De homine*, we now find about forty. Also, Albertus turns against those theories of Avicenna that he finds to conflict with Aristotle, whereas in *De homine* he had still embraced them or constructed a compromise bridging the differences between the two philosophers. Examples are Avicenna's opinions on the medium of smelling, the medium of taste and the organ of touch,<sup>312</sup> and the doctrine of the four intellects.<sup>313</sup> Note that Albertus had never accepted the theory

ordinem quem in principio nostrarum naturarum nobis praescripsimus per omnia insequendo'. Albertus discusses the proper place of psychology in *Physica*, 1.1.4, p. 7.

309. E.g. Callus, 'Introduction of Aristotelian Learning', pp. 38–9; Van Steenberghen, *Die Philosophie im 13. Jahrhundert*, p. 271; and Schulthess/Imbach, *Die Philosophie im lateinischen Mittelalter*, p. 370.

310. See pp. 1–2 above.

311. See the Index locorum on the following passages of Avicenna's *De anima*: I.3.g (theory of faculties); I.5.aa.B1–3 (estimation); II.2.d–g (abstraction); III.1.a / III.3.a, e / III.8.e (optics); IV.2.k (dreams); IV.3.j (perception); V.6.g, j, s / V.7.b (intellect).

312. See Hasse, 'Aristotle versus Progress', pp. 875–8. On the medium of smelling see: *De homine*, 30, pp. 269–71; *De anima*, 2.3.25, p. 135, line 72. On the medium of taste: *De homine*, 32.4, pp. 279–80; *De anima*, 2.3.27, p. 138, line 47. On the organ of touch see pp. 103–5 below. On all three problems see Schneider, 'Die Psychologie', pp. 121, 123–24, 128–30.

313. Albertus on the one hand reduces the Avicennian doctrine to its Aristotelian roots (Albertus, *De anima*, 2.3.2, p. 98, line 48 ff.), on the other hand transforms it into a theory of the soul's ascension to God (ibid., 3.3.11, p. 221, line 89, to p. 222, line 84). See below, pp. 196–200.



of the separate active intellect; what he did accept were Avicennian theories based on a physiology different from that of Aristotle. It is here perhaps that Avicenna's psychology seemed most attractive to Albertus, and it is here that he later turns against him. Finally, the structure of Albertus's commentary is that of Aristotle's *Peri psychês*; that means, topics from the tradition of the *Parva naturalia* are excluded and the internal senses, for instance, appear only in *digressiones*.<sup>314</sup>

Therefore, in spite of its marked Avicennian traits, which set it apart from the commentaries of Pseudo-Petrus Hispanus, Adam of Buckfield and Thomas Aquinas, but make it akin to Petrus Hispanus's *Quaestiones libri de anima*, Albertus's *De anima* represents a new kind of writing on psychology which turns away from Avicenna back to the *pater philosophorum*.<sup>315</sup>

This should not hide the fact that Avicenna's psychology pervades almost all of Albertus's works. I have counted about 460 explicit references to Avicenna's *De anima*, i.e. about one third of all entries in the Index locorum.<sup>316</sup> Knowledge of Avicenna's psychology in the later Middle Ages was largely due to the omnipresence of Avicenna in Albertus's works, even when his *De anima* found very few readers.<sup>317</sup> Late medieval writers could also get their knowledge of Avicenna

314. Albertus, *De anima*, 2.4.7 and 3.1.1–4. In the years following the composition of *De anima*, Albertus writes commentaries on the different parts of Aristotle's *Parva naturalia*. He refers the readers of his *De anima* to these books (e.g. *De anima*, 3.4.1, p. 229, lines 68–74).

315. Albertus, *De anima*, 2.3.34, p. 147, line 40: 'Nos autem et veritatem salvare cupientes et reverentiam exhibere patri philosophorum Aristoteli dicamus carnem esse medium tactus'. Directed against Avicenna; see p. 104 below.

316. See the following very preliminary list of explicit quotations from Avicenna's *De anima*:

1240	4	<i>De incarnatione</i> (1), <i>De resurrectione</i> (1), <i>De sacramentis</i> (2)
1242	6	<i>De IV coaequaevis</i>
1242–3	230	<i>De homine</i> (227), <i>De bono</i> (3)
1244	5	<i>Super I Sententiarum</i>
1245	3	<i>Super III Sententiarum</i>
1246	6	<i>Super II Sententiarum</i>
1246–9	2	<i>Quaestio de sensibus corporis gloriosi</i>
1248?	12	<i>Super IV Sententiarum</i> (7), <i>Super Dionysium De caelesti hierarchia</i> (5)
1249	2	<i>Quaestio de luxuria</i> , <i>Super Dionysium De ecclesiastica hierarchia</i>
1250	9	<i>Super Dionysium De divinis nominibus</i>
1250–?	1	<i>Super Isaiam</i>
1251	43	<i>Super Ethica</i>
1252?	1	<i>Super Iobannem</i>
1254–7	40	<i>De anima</i>
1258?	24	<i>De sensu et sensato</i> (5), <i>De intellectu et intelligibili</i> (1), <i>De motibus animalium</i> (3), <i>De spiritu et respiratione</i> (4), <i>De somno et vigilia</i> (7), <i>De memoria et reminiscencia</i> (4)
1260	10	<i>De natura et origine animae</i> (3), <i>Quaestiones super de animalibus</i> (7)
?–1264	1	<i>De praedicamentis</i>
1262–?	1	<i>Super Lucam</i>
1263	12	<i>Ethica</i> (9), <i>Politica</i> (3)
1264–?	1	<i>Topica</i>
1267	8	<i>De causis</i>
1270	1	<i>De XV problematibus</i>
1272	38	<i>Summa theologiae</i>

317. See Park, 'Albert's Influence on Late Medieval Psychology', pp. 510–35; Park, 'Picos *De imaginatione* in der Geschichte der Philosophie', pp. 16–43; Park, 'The Organic Soul', pp. 464–84;

from Vincent of Beauvais's *Speculum naturale*, whose psychological section draws heavily on Albertus's *De homine*. Albertus Magnus's extraordinary understanding of Avicenna's philosophy will emerge repeatedly in the course of this study. As a Western connoisseur of Avicenna, he has been surpassed by few, even up to our time.

## 12. THOMAS AQUINAS

Thomas Aquinas, the Dominican theologian active in Paris and Italy, was a pupil of Albertus Magnus, but his attitude towards the Peripatetic psychological tradition was markedly different from that of his teacher. He did not choose to develop further an Avicennian system of faculties, as many theologians had done before him; instead, his writings on natural philosophy, notably the *Sententia libri de anima* (about 1268),<sup>318</sup> have Aristotle as a starting-point, and his own psychology took a new direction.

By the time of 1268 (six years before Thomas's death), the practice of writing commentaries on Aristotle's *Peri psychês* was already about thirty years old in the Latin West, and one could thus say that Thomas was simply following a fashion.<sup>319</sup> But commentaries are of very different kinds, and which type a writer chooses reveals much about his standpoint. In contrast to Petrus Hispanus's *Quaestiones libri de anima* and Albertus's *De anima*, Thomas's *Sententia* does not inform his readers about the Peripatetic tradition on the soul. His most important secondary sources, Themistius (who is employed extensively for the commentary on the first book), Averroes, and Albertus Magnus, are all used silently: Themistius and Albertus are never mentioned, Averroes only once.<sup>320</sup> Also, the number of digressions, which are called *quaestiones* and *dubitationes* in this case, is rather limited, about twenty.<sup>321</sup> These digressions would be the place to introduce Avicennian material, but Thomas rarely does this: the internal senses, for instance, appear only embedded in a *quaestio* about accidental perception.<sup>322</sup> Not one of the solutions of these digressions adopts a standpoint from Avicenna. In fact, positions of his are refuted twice in passing,<sup>323</sup> and one can duly say that Thomas's commentary witnesses to the decline of Avicenna's influence on philosophical psychology.<sup>324</sup>

Mahoney, 'Albert the Great and the Studio Patavino', pp. 537–63.

318. Thomas Aquinas, *Sententia libri de anima*, ed. R. A. Gauthier (*Opera omnia iussu Leonis XIII P. M. edita*, tomus XLV, 1) (1984).

319. See Gauthier's history of Latin commentaries on *Peri psychês* up to Thomas Aquinas ('Les Commentaires de la *Vetus*', pp. 235\*–73\*).

320. Cf. the *Index nominum et operum ab ipso Thoma nominatorum* in Gauthier's edition (pp. 285–6) and the corresponding index to names which appear in the *apparatus fontium* (pp. 286–309).

321. Thomas, *Sententia libri de anima*, pp. 88, 89, 92, 113, 113, 115, 119, 120, 126, 129, 130, 135, 149, 149–50, 152, 164, 168, 199, 205, 219, 220.

322. See Thomas, *Sententia libri de anima*, II.8, pp. 120–22.

323. Thomas, *Sententia libri de anima*, III.2, p. 209, line 32, and III.7, p. 236, line 90.

324. Cf. Callus, 'Les Sources de Saint Thomas', p. 165: '... il est également vrai qu'on ne trouve aucune trace d'influence véritable et profonde d'Avicenne dans les commentaires de S. Thomas sur Aristote'.



This is not to say that Thomas's psychology, as it appears in his other works, does not owe much to Avicenna's *De anima*.<sup>325</sup> That this is the case has been pointed out repeatedly<sup>326</sup> and is confirmed by the Index locorum, which contains the passages from Avicenna that Thomas has used. His indebtedness is most evident in the case of the internal senses – he takes Avicenna's theory of estimation as the starting point for his own concept of a *ratio particularis* –, but pertains also to the theory of individuation.<sup>327</sup> More often than any other writer of the thirteenth century, Thomas defines his own standpoint in contrast to Avicenna's, that is, by criticizing his psychology: such is the case for instance with the theories of prophecy, abstraction, intellectual memory, and the active intellect.<sup>328</sup> Thomas disagrees with Avicenna's claim that prophecy depends to a high degree upon the right disposition of the prophet; that the bodily (or animal) faculties, having assisted in the acquisition of universals, are not needed any more, but rather distract the soul; that strictly speaking there is no intellectual memory; that the active intellect is separate.

In view of Thomas's critical attitude towards Avicenna, it may appear obvious why Thomas writes a psychology which follows Aristotle rather than Avicenna. The reasons given by modern scholars can be summarized as follows: Thomas's theory of intellection is based on the Aristotelian principle that all natural knowledge in this life is grasped through particulars (or phantasms). He realizes that Avicenna's theory of the separate active intellect as the illuminating source of knowledge is similar to that of Plato and that it is, just like Augustine's, incompatible with his own doctrine. Hence he turns to Aristotle.<sup>329</sup>

This is only partly correct. It is true that Thomas thinks that Avicenna's and

Plato's theories of intellection are related (we shall come back to this) but the fact that Thomas turns his back on Avicenna's psychological system as a whole has more profound reasons than that: in general, Thomas does not favour a psychology of faculties grounded on physiology. This is apparent from the way Thomas uses Avicenna's *De anima*. He hardly ever mentions Avicenna's localization of the internal senses in the different ventricles of the brain,<sup>330</sup> and he does not pick up Albertus's presentation of the differences between Avicenna and Aristotle on the media and organs of the external senses. He discusses the faculties of touch and taste without mentioning the sensory nerves.<sup>331</sup> His lack of interest in the physiological aspects of psychology is demonstrated by the fact that he quotes Avicenna's theory of the intellect (book five) much more often than the theories of the external and internal senses.<sup>332</sup> It is also reflected in his method of quoting Avicenna on the senses: whereas previously examined writers mostly integrate the quotations into the corresponding part of their treatise on the soul, Thomas often puts them out of context and rephrases them in his own wording.<sup>333</sup> There are, in fact, few literal quotations.

It is unlikely that Thomas's partial rejection of Avicenna's intellect theory accounts for his general attitude towards Avicennian psychology: he could have written a treatise on the soul just like Considerans, the unknown author of the *Summa fratris Alexandri*, who follows Avicenna on the senses and on the structure of his psychology, without taking over the theory of the intellect. But Thomas does not do this. In the first part of his *Summa theologiae* he inserts a psychological section at the same place as previous theologians (questions 75–89). The latter usually have first a theological part on the essence of the soul (dropped in Roland of Cremona, but extant in Jean de la Rochelle, Considerans and Albertus), then a philosophical part on the faculties of the soul, and finally a theological part on *sensualitas*, conscience, free will etc. Thomas follows this general pattern, but adds numerous questions about human intellection

330. Exceptions are Thomas, *Scriptum super sententiis*, I.3.4.1.ad 2, p. 113, and *Prima pars Summae theologiae*, 78.4.c. See Jordan, 'Medicine and Natural Philosophy in Aquinas', pp. 233–46, who refers to Thomas's 'parsimony in the matter of medical sources' (p. 246), in particular on cerebral organization, human reproduction and the theory of radical moisture.

331. See p. 105 below.

332. See the following table which shows the distribution of Thomas's explicit quotations over the different chapters of Avicenna's *De anima* (I,2–3, II,4–5, III,4–8, V,4 are not quoted).

I,1 – 2 quotations	III,1 – 3	IV,4 – 6	V,7 – 5
I,4 – 3	III,2 – 3	V,1 – 6	V,8 – 1
I,5 – 6	III,3 – 3	V,2 – 3	
II,2 – 1	IV,1 – 2	V,3 – 9	
II,2 – 1	IV,2 – 1	V,5 – 8	
II,3 – 3	IV,3 – 1	V,6 – 13	

It is instructive to compare this table with the corresponding one for Petrus Hispanus (n. 274).

333. As an example, cf. Thomas's usage of Avicenna, *De anima*, I,4, p. 72, lines 19–20, in three passages of *De veritate* (15.1, p. 480, line 378; 15.2, p. 488, line 435; 15.2, p. 489, line 459). He changes the wording of Avicenna's thesis according to the context of his own argumentation.

325. Vansteenkiste has conveniently collected and printed all references to Avicenna in Thomas (without tracing their source): 'Avicenna-citaten bij S. Thomas', pp. 457–507.

326. Instead of giving references to secondary literature on Thomas's psychology, I shall refer to Mahoney's reliable account in the *Cambridge History of Later Medieval Philosophy* ('Sense, intellect, and imagination in Albert, Thomas, and Siger' (1982), pp. 605–11), which contains much bibliographical information. Nor shall I mention the many articles and books devoted to Thomas's attitude towards Avicenna's metaphysical doctrines; for these see the bibliographies by Gómez Nogales ('Santo Tomás y los Arabes' (1975), pp. 205–48), Daiber ('Lateinische Übersetzungen arabischer Texte' (1989), p. 229, n. 142), Janssens (*An Annotated Bibliography* (1991), pp. 244–50) and the useful introductory essay by Anawati ('Saint Thomas d'Aquin et la Métaphysique d'Avicenne' (1974), pp. 449–65). As for Avicenna's influence on Thomas's psychology, see: Gilson, 'Pourquoi saint Thomas' (1926–7), pp. 111–27; Pegis, *St. Thomas and the Problem of the Soul* (1934), pp. 188–202; Blumberg, 'The Problem of Immortality' (1965), pp. 165–85; Ushida, *Étude comparative* (1968); Gardet, 'Saint Thomas et ses prédécesseurs Arabes' (1974), pp. 419–48; Rousseau, 'Avicenna and Aquinas' (1978), pp. 524–36; Anawati, 'Psychologie avicennienne' (1981), pp. 13–32; Lee, 'St. Thomas and Avicenna' (1981), pp. 41–61.

327. On estimation see Thomas, *Prima pars Summae theologiae*, 81.3.c, and pp. 151–2 below. On individuation: Thomas, *Scriptum super sententiis*, I.8.5.2.ad 6, pp. 231–2; *ibid.*, II.17.2.1.c, pp. 424 and 427; *De ente et essentia*, 5, p. 379, line 68. See also Index locorum, I.5.aa.B.2–3 (estimation), and V.3.f, i (individuation).

328. See pp. 171–4, 190, 204 below.

329. See Pegis, *St. Thomas and the Problem of the Soul*, pp. 190–92, 199–200; Lee, 'St. Thomas and Avicenna', pp. 51–2; Mahoney, 'Sense, Intellect, and Imagination', pp. 610–11.

at the end (questions 84–9), and – which is more significant – considerably abridges the discussion of the vegetative and animal faculties, by treating them in one question (no. 78): ‘First we have to consider those <faculties> which are the preambles to the intellect’ (‘praeambula ad intellectum’).<sup>334</sup> The Avicennian system of faculties does not serve as the paradigm for Thomas’s approach to psychology, the focus of which is on epistemological and metaphysical questions.<sup>335</sup>

That Thomas has a very particular view of Avicenna’s psychology is also reflected in his repeated claim that Avicenna’s theory of intellection is akin to that of Plato<sup>336</sup> – a rare claim in the thirteenth century.<sup>337</sup> In contrast to Gundissalinus, Anonymous (Gauthier), Jean de la Rochelle, Petrus Hispanus, Albertus Magnus and Vincent of Beauvais, he does not quote Avicenna’s well-developed theory of abstraction, as it appears in chapter II,2 of *De anima*.<sup>338</sup> Nor does he adopt Avicenna’s doctrine of the four intellects, which a number of previous writers correctly understood as a theory about the acquisition of syllogistic knowledge.<sup>339</sup> Consequently, Thomas presents Avicenna’s theory as if intellection happened only through the illumination of the active intellect – which is a misrepresentation. Thomas knows the passages in *De anima*, V,5, where Avicenna explains the function

of the active intellect in the process of abstraction, and curiously enough, he once, in his commentary on the *Sentences*, comes close to understanding Avicenna’s doctrine:

If the possible intellect turns towards the active intelligence, which he (*i.e.* Avicenna) posits as being separate, <the possible, human intellect> accepts the intelligible species through the influence of the active intelligence, the task of which is to abstract the forms from the phantasms (‘formas a phantasmatis abstractare’) and to put them in the possible intellect.<sup>340</sup>

Thomas has realized that Avicenna somehow links a theory of abstraction with a theory of illumination.<sup>341</sup> However, his other references to Avicenna’s theory of intellection mention only the emanationist aspect of Avicenna’s theory, which reminds him of Plato.<sup>342</sup>

Thomas, therefore, is not a reliable guide to Avicenna’s psychology, since his exposition of it is restricted to certain parts of the doctrine. One should therefore be careful not to accept his judgement too easily that Avicenna’s theory is Platonic or Neoplatonic. If Thomas’s reading of Avicenna is careless in some cases, it is also very perceptive in others (as we will see below) when he turns his full attention to a critical assessment of a theory, such as the denial of intellectual memory or the naturalistic explanation of prophecy.

### 13. THE LATER THIRTEENTH CENTURY

In the preceding chapters, the criteria employed for an Avicennian type of psychological writing was whether Avicenna was preferred to other philosophers, and in particular to Aristotle, in matters of the treatise’s structure and the content of the author’s solutions. This was indeed the case for most of the treatises of the first half of the thirteenth century, whether they were written by masters of arts (such as Anonymous (Gauthier), John Blund and Petrus Hispanus), or by theologians (such as Gundissalinus, Roland of Cremona, Jean de la Rochelle, the *Summa fratris Alexandri* and Albertus Magnus).

After Albertus’s *De homine* (about 1243) and Petrus’s *Scientia libri de anima* (1250–60) the situation changes: hardly a single writer fulfils the stated criteria. There are, however, a few exceptions. During Albertus’s lifetime, one of his readers or pupils, perhaps the Dominican Albert von Orlamünde, wrote a compilation of Albertus’s natural philosophy which would become one of the textbooks of German

334. Thomas, *Prima pars Summae theologiae*, 78.1: ‘Primo namque considerandum est de his quae sunt praeambula ad intellectum; secundo, de potentiis intellectivis (qu. 79); tertio, de potentiis appetitivis (qu. 80)’.

335. In his earlier *Summa contra gentiles*, Thomas also treats psychological matters, but not the animal and vegetative faculties (cf. book II, questions 56–90).

336. See Thomas, *Summa contra gentiles*, 2.74, p. 469: ‘... sed si diligenter consideretur haec positio <scil. Avicennae> quantum ad originem, parum aut nihil differt a positione Platonis. Posuit autem Plato formas intelligibiles esse quasdam substantias separatas a quibus scientia fluebat in animas nostras. Hic autem <scil. Avicenna> ponit ab una substantia separata, quae est intellectus agens secundum ipsum, scientiam in animas nostras fluere ...’. Thomas, *Prima pars Summae theologiae*, 84.4.c: ‘... et sic in hoc Avicenna cum Platone concordat quod species ... effluunt ... quas tamen Plato dicit per se subsistere, Avicenna vero ponit eas in intelligentia agente’. Further passages that link Avicenna and Plato: *De potentia*, 5.1.ad 5; *Quodlibet*, 9.11.c; *Prima pars Summae theologiae*, 110.1.ad 3; *ibid.*, 115.1.c.

337. Cf. the following passages in William of Auvergne, Albertus Magnus, Anonymous (Van Steenberghen), Gonsalvus de Vallebona, and Averroes: William, *De anima*, 7.4, pp. 207b–208a: ‘Si vero intellectus iste agens vel est pars animae humanae vel ipsa tota, ex utroque eorum necesse est sequi animam humanam naturaliter intelligentem esse sive scientem per ipsum omnia sibi naturaliter intelligibilia et scibilia, et tunc incidit Aristoteles et sequaces eius in sententiam Platonis ...’; *ibid.*, 7.6, p. 211b: ‘Et quoniam ab universalibus non est possibile hoc fieri juxta quod videtur Plato sensisse, necesse est ut hae impressiones fiant ab aliquo quod sit particulare seu singulare, et hoc est quod Aristoteles posuit intelligentiam agentem, intendens eam esse formam plenam formis ...’; Albertus, *De homine*, 17.3, p. 152a–b: ‘Et istae rationes omnes sunt ad hoc quod necesse sit ponere datorem formarum ut posuerunt Plato, Avicenna, Theodorus et sequaces eorum’; Anonymous (Van Steenberghen), *Quaestiones*, 2.19, p. 229; Gonsalvus, *Quaestiones*, 8, p. 258: ‘<quod intellectus agens> est quaedam substantia separata, est Platonis opinio et Augustini et Avicennae’ (quoted p. 204, n. 702 below). Averroes attacks Avicenna’s theory of the giver of substantial forms as being akin to Plato’s theory of ideas (*Commentarium in libros Metaphysicorum*, in *Aristotelis opera*, VIII, ff. 180vb–181vb: ‘... et omnes homines <scil. Avicenna et Alfarabius> declinant magis ad opinionem Platonis ...’).

338. See Index locorum, II.2.a–g.

339. See p. 198 below.

340. Thomas, *Scriptum super sententiis*, IV.50.1.2.c: ‘Sed intellectus possibilis cum convertit se ad intelligentiam agentem quam ponit separatam accipit species intelligibiles ex influentia eius, cuius est formas a phantasmatis abstractare et ponere eas in intellectu possibili’. This draws on Avicenna, *De anima*, V,5, p. 128, lines 51–63, and V,6, p. 149.

341. See pp. 183–6 below.

342. For the relevant passages in Thomas see Index locorum, V.5.a–c and V.6.f–n. See pp. 200–203 below, for the reception of this Avicennian theory among other writers.

town schools, the *Philosophia pauperum*, also called *Summa naturalium*.<sup>343</sup> It is not surprising that we find here a psychological section (in the fifth book) of distinct Avicennian colour; it is entitled 'De potentiis animae' and presents the whole system of vegetative, animal and intellectual faculties as found in Avicenna's *De anima*.<sup>344</sup>

Of similar significance for the history of Avicenna's influence is the fact that Vincent of Beauvais, the most influential encyclopedist of the Middle Ages, included a long section on the soul, indebted to Avicenna, in his *Speculum naturale*, written probably between 1244 and 1246.<sup>345</sup> Its psychology depends heavily upon Albertus's *De homine* and Jean de la Rochelle's *Summa de anima*. Further authorities quoted in the compilation are Aristotle, Algazel, Averroes, Hali ibn Abbas, John of Damascus, William of Conches and others. Consequently, many heterogeneous elements are placed side by side, but Avicenna's psychology is among the most prominent. This is mainly due to the fact that many Avicennian passages from Albertus and Jean are adopted, but is also an effect of the additions from Avicenna's *De anima* which Vincent introduces from his own reading. In the Index locorum I have indicated which quotations from Avicenna derive from the two scholastic writers, and which witness to Vincent's direct acquaintance with Avicenna's *De anima*. Most of Avicenna's definitions for the faculties appear, plus much additional information, which may be one reason why the psychology of handbooks around 1500 in structure and content still owes very much to Avicenna.<sup>346</sup>

But apart from the encyclopedic tradition, there is hardly any treatise (at least among those published) in the latter half of the thirteenth century which takes Avicenna's *De anima* as its model.<sup>347</sup> An exception is John Pecham's *Tractatus de anima*.<sup>348</sup> This work, written between 1270 and 1279, contains a section on the soul's

343. See Grabmann, 'Die Philosophia pauperum und ihr Verfasser Albert von Orlamünde' (1918), pp. 29–46; Geyer, 'Die Albert dem Großen zugeschriebene Summa naturalium (Philosophia Pauperum)' (1938), pp. 1–47, 1\*–82\*. For its influence on later medieval psychology, see Park, 'Albert's Influence on Late Medieval Psychology' (1980), pp. 510 and 520–22.

344. Albert von Orlamünde, *Philosophia pauperum*, pp. 38\*–62\* and 63\*–82\* (two recensions).

345. Vincent of Beauvais, *Speculum naturale* (1624), books 24 to 27. For the rather complex history of its origin and for the dating see Paulmier-Foucart and Lusignan, 'Vincent of Beauvais et l'histoire du *Speculum maius*' (1990), pp. 97–124, esp. p. 100. I am grateful to Monique Paulmier-Foucart for having provided me with a list of references to Avicenna in Vincent's writings. For further information and literature on Vincent, see: Lieser, *Vincent von Beauvais als Kompilator und Philosoph* (1928); Hinnebusch, *The History of the Dominican Order* (1973), v.II, pp. 421–8.

346. Park, 'The Organic Soul' (1988), pp. 465–73; Park presents as an example Gregor Reisch's textbook *Margarita philosophica* written in the 1490s.

347. An interesting case is Anonymous (MS Siena Com. L.III.21, ff. 134ra–177va), *Quaestiones super librum de anima*, written about 1250. This treatise has a long prologue, published by Gardinali ('Da Avicenna ad Averroë'), which is thoroughly Avicennian in structure and content (less on intellect than on the other faculties). But the work itself is a commentary in form of *quaestiones* on books one and two of Aristotle's *Peri psychês*. On this treatise, see Gauthier, 'Les Commentaires de la *Vetus*', pp. 251\*–6\*.

348. John Pecham, *Tractatus de anima*, ed. G. Melani (1948). Pecham has also written *Quaestiones on the soul* (ed. Spettmann), which focus on the intellect and on epistemology. For further information and

powers which presents the full range of Avicennian faculties.<sup>349</sup> Pecham tries to establish a concordance between Aristotle and Avicenna, for instance by saying that both philosophers attribute three faculties to the vegetative soul (which is correct only for Avicenna)<sup>350</sup> and that Aristotle calls Avicenna's 'intellectus accomodatus' the active intellect (which is not correct either, since for Avicenna the acquired intellect is a status of the human intellect, whereas the active intellect is separate).<sup>351</sup> One can see that this is not a convincing strategy: Pecham is not writing a commentary on Aristotle, but neither does he develop Albertus's diligent account of Peripatetic philosophy into a post-Avicennian direction. In contrast to what happened in the Arabic East, where Avicenna's philosophy eclipsed that of Aristotle and dominated Islamic philosophical thought for many centuries,<sup>352</sup> it did not determine the direction of Western philosophical writing after 1250. Can this be explained?

For a complicated historical process like this there probably exists a number of interconnected reasons. Two of them seem to be particularly important. First, – and this is the standard explanation<sup>353</sup> – there is the growing influence of Averroes. Without his commentaries as the model, and also the source, for the many commentaries on Aristotle in the thirteenth century, the scholastic writers might not have been convinced by the necessity of a radical return to Aristotle. Even a thoroughgoing Peripatetic philosopher like Albertus distances himself from Avicenna in his *De anima*, as we have seen, and decides to comment upon Aristotle.

But this can only be an external reason. For Averroes's commentary on *Peri psychês* was not very influential at first, indeed was perhaps even unpopular: one may recall Albertus's harsh words for Averroes in *De homine*, and the fact that Averroes was known to Latin writers from 1225 onwards, but used rather sparingly.<sup>354</sup> Moreover, in the 1240s and 1250s, when some writers like Pseudo-Petrus Hispanus and Adam of Buckfield take Averroes as a model for their own commentaries, others like Considerans, Albertus and Petrus Hispanus write psychological treatises

literature see Sharp, *Franciscan Philosophy at Oxford* (1930), pp. 185–203; Gilson, *History of Christian Philosophy* (1955), pp. 359–61; Dales, *The Problem of the Rational Soul* (1995), pp. 126–32. See also p. 206 below.

349. Pecham, *Tractatus de anima*, Pars II, pp. 28–46.

350. Pecham, *Tractatus de anima*, p. 31: '... dico quod vegetativa habet secundum Aristotelem et Avicennam tres vires: nutri<ti>vam, augmentativam et generativam'.

351. Pecham, *Tractatus de anima*, p. 39: 'Quarto ponitur <ab Avicenna> intellectus qui dicitur accomodatus quem Aristoteles vocat intellectum agentem'.

352. See Peters, *Aristotle and the Arabs*, pp. 105–120, and the more reliable accounts in Endress, 'Die wissenschaftliche Literatur', pp. 35–7 and 58–61, and Gutas, 'Aspects of Literary Form', pp. 56–64. For examples of Avicenna's influence on 13th-century Arabic psychology see Hasse, 'Mosul and Frederick II Hohenstaufen', in press.

353. See Callus, 'Introduction of Aristotelian Learning', pp. 38–9; Van Steenberghen, *Die Philosophie im 13. Jahrhundert*, p. 180; Gauthier, 'Le Traité *De anima et de potentiis eius*', p. 25.

354. See p. 35 and 64–5 above. In some areas of doctrine, for instance on the leading faculty in animals, Averroes's influence is hardly felt until the 1270s; see pp. 152–3 below.

of an Avicennian kind. If both traditions could coexist, why did the latter stop?

Here we come to the second and more important reason: a shift in intellectual interest. Most of the psychological treatises written after 1250 – the treatises *De unitate intellectus* by Albertus and Thomas, and the psychological works by John Pecham, Siger of Brabant, Anonymous (Van Steenberghen), Anonymous (Bazán), Giles of Rome and Matthew of Aquasparta – in one way or another take part in a lively dispute over doctrines of the intellect: the unicity of the possible intellect, universal hylomorphism, plurality of forms, the theory of intellection etc.<sup>355</sup> Apart from the last-mentioned field, these are not topics central to Avicenna's psychology. Of course, his book was used in the disputes, but the Latin tradition had by now developed its own questions and answers, and the Arabic authorities were not the centre of attention any more. This is partly true even for Averroes, whose writings had helped to trigger the disputes.<sup>356</sup> It is indicative that very few psychological theses of Avicenna were included in the condemnation of 1277. The most prominent Avicennian thesis concerns the separate active intellect,<sup>357</sup> but, as Thomas explains, this theory is based on good reasons and less open to criticism than the (Averroistic) thesis of the unicity of the possible intellect.<sup>358</sup>

The other side of the coin is a decline in interest in physiology and in faculty psychology in general. This has been and will be further demonstrated for different doctrines and writers in the course of this study.<sup>359</sup> The only part of Avicenna's *De anima* which continued to receive full attention is book five, on the intellect. The following table, arranged chronologically, gives the percentage of *De anima* quotations in each writer which derive from book five. From Thomas onwards, the percentage of quotations about the intellect is noticeably higher:

Gundissalinus:	38 percent
John Blund:	16
Anonym. (Gauthier):	13
Anonym. (Callus):	10
Michael Scot:	0

355. On these well-researched doctrinal disputes, see Gilson, *History of Christian Philosophy*, pp. 385–427; Van Steenberghen, *Die Philosophie im 13. Jahrhundert*, pp. 335–481; Dales, *The Problem of the Rational Soul*, pp. 99–191.

356. If one follows the thesis of Van Steenberghen and others that the heterodox movement in Paris in the 1260s, which is labelled 'Latin Averroism' by modern scholars, has only a few roots in Averroes's doctrine itself (*Die Philosophie im 13. Jahrhundert*, pp. 341–50).

357. Hissette, *Enquête sur les 219 articles condamnés à Paris*, p. 193: 'Quod intellectus agens est quaedam substantia separata superior ad intellectum possibilem ...'. On the errors listed by Giles of Rome, see p. 174 below.

358. Thomas Aquinas, *De unitate intellectus*, 4, p. 307, line 5: 'Considerandum restat de hoc quod dicunt intellectum possibilem esse unum in omnibus. Forte enim de agente hoc dicere aliquam rationem haberet, et multi philosophi hoc posuerunt ... Sed quicquid sit de intellectu agente, dicere intellectum possibilem esse unum omnium hominum multipliciter impossibile apparet'.

359. See pp. 67–8 and 71–2 above and pp. 103–6 and 153 below.

William of Auvergne:	47
Jean de la Rochelle:	10
Alexander of Hales:	20
Hugh of Saint-Cher:	0
Roland of Cremona:	14
Grosseteste:	15
Roger Bacon:	13
Petrus Hispanus:	22
Albertus:	27
Vincent:	19
Anonym. (Venneb.):	12
Thomas:	45
Pecham:	45
Anonym. (Steenb.):	90
Matthew of Aquasp.:	80
Bernardus of Trilia:	85

It is in this context that Avicenna's metaphysical theories receive more attention. One can discern this, for instance, from the many quotations of Avicenna's *Philosophia prima* in Thomas Aquinas<sup>360</sup> and from the Avicennian theses that Giles of Rome includes in his *Errores philosophorum*.<sup>361</sup>

It may not be a coincidence that in the second half of the thirteenth century medical teaching becomes institutionalized at different universities and that medical writing makes a noticeable advance with figures like Taddeo Alderotti in Bologna and Arnald of Villanova in Montpellier.<sup>362</sup> This development is accompanied by a topical discussion about the disagreement between philosophers and physicians on a number of issues.<sup>363</sup> There are indications that the physiological part of Avicenna's psychology is sometimes thought to belong to medical teaching: we have seen that a number of theologians (but not all) do not regard the vegetative and even the animal soul a proper object of theological study;<sup>364</sup> moreover, a number of treatises

360. See Vansteenkiste's list in 'Avicenna-citaten bij S. Thomas', pp. 457–507.

361. Giles of Rome, *Errores philosophorum*, cap. 6–7, pp. 24–39. One of the first scholastic writers to betray a deeper interest in Avicenna's metaphysics is William of Auvergne; see pp. 43–5 above.

362. There are no statutes extant for the Parisian medical faculty before 1270; at the same time, the first formal degrees in medicine were granted at Bologna. From the years 1200 to 1250 very few medical writings have survived. See Jacquart, 'La Réception du Canon d'Avicenne', pp. 69–77; Siraisi, *Avicenna in Renaissance Italy*, pp. 43–53; McVaugh, 'Medical Knowledge at the Time of Frederick II', pp. 3–17.

363. Cf. for instance Jean de la Rochelle, *Tractatus*, 2.2.35, p. 111; Alexander of Hales *et al.*, *Summa theologiae*, II.4.1.2.2.1, p. 438b; Petrus Hispanus, *Quaestiones de animalibus* (in Schipperges, 'Grundzüge einer scholastischen Anthropologie', pp. 15–16, 23–24, 38–9); Anonymous (Bazán), *Quaestiones de anima*, 2.40, p. 465 (see p. 106 below). For the general background, see Siraisi, *Medieval and Early Renaissance Medicine*, pp. 80–82. The most elaborate treatment of the topic is the *Conciliator controversiarum quae inter philosophos et medicos versantur*, by the physician Pietro d'Abano (c. 1300).

364. See p. 38, n. 147 above.

on the classification of sciences assign the study of the human soul to medicine, precisely because it is linked with physiology.<sup>365</sup> It remains to be studied whether medical authors in fact take over this part of Avicenna's philosophy or whether they prefer the simpler psychology of Avicenna's *Canon*.<sup>366</sup> What is certain is that hardly anybody remains interested in Avicenna's *De anima* as a whole, as Jean de la Rochelle, Albertus Magnus and Petrus Hispanus had been.

The influence of Avicenna's *De anima* stretches well beyond the thirteenth century. Much Avicennian material finds its way into the works of Averroist and Albertist philosophers (for instance John of Malines) of the fifteenth and sixteenth century.<sup>367</sup> In the present state of scholarship, first hand knowledge of Avicenna's *De anima* in the Renaissance has been demonstrated only for very few writers such as Marsilio Ficino<sup>368</sup> and Antonio Cattani da Imola,<sup>369</sup> but is doubtless also true of Niccolò Tignosi and Agostino Nifo. Most of the Avicennian material current at the time appears to be mediated by the writings of Albertus, Averroes and the above-mentioned compendia. More research is needed on the history of Avicenna's influence on Renaissance thought, for instance on the theories of imagination, prophecy and wonders, and of the intellect.<sup>370</sup>

The influence of Avicenna's doctrines therefore lasted much longer than that of his overall approach to psychology. In some cases the doctrines also came first.

365. See Gauthier, 'Notes sur Siger de Brabant. II', pp. 8–15, and the following passages collected by Gauthier: (1) p. 9, dating from 1230–40: Anonymous (MS Barcelona Ripoll 109), f. 135va: 'de complexionem vero illius corporis in quo est anima rationalis agit proprie medicina'. (2) p. 12, from 1245–50: Anonymous (MS Rome Naz. V. E. 828), f. 20ra: '... aut anima rationali, et de tali in Medicina Aristotelis <determinatur> qua utuntur Graeci, et haec nobis deest'. (3) p. 14, before 1250: Anonymous (MS Paris BN lat. 16635), ff. 52vb–53ra: '... aut rationali, et hoc traditur in scientia quae dicitur medicina, quae considerat corpus humanum'. (4) p. 11: Roger Bacon, *Opera hactenus inedita*, II, p. 8: 'Scientia septima (= Medicina) est de anima rationali, scilicet de homine ...'. Cf. the text *Philosophica disciplina* (c. 1245) in Lafleur, *Quatre introductions*, p. 265: '... aut intellectivam, sic est Medicina proprie ...'.

366. See Hasse, 'Pietro d'Abano's *Conciliator* and the Theory of the Soul in Paris', and the passages from medical writers around 1300 (William of Saliceto, Lanfranc of Milano, Henry of Mondeville, Mondino de' Liuzzi and others) collected in Sudhoff, 'Die Lehre von den Hirnventrikeln', pp. 174–7 and 184–9: some draw on Avicenna's *Canon*, some on his *De anima*. On Hugh of Siena and his usage of both sources, see Quadri, 'La dottrina psicologica di Avicenna', pp. 243–77.

367. Park, 'Albert's Influence on Late Medieval Psychology', pp. 510–35; Mahoney, 'Albert the Great and the Studio Patavino', pp. 537–63.

368. Garin, 'Phantasia e imaginatio fra Marsilio Ficino e Pietro Pomponazzi' (1985), pp. 351–61, esp. p. 355.

369. Garin, 'Testi minori sull'anima nella cultura del 400 in Toscana' (1951), pp. 1–36, esp. pp. 23 and 35.

370. Park's dissertation on imagination unfortunately remains unpublished ('The Imagination in Renaissance Psychology', 1974). Parts of it are integrated in her later study on Gianfrancesco Pico: 'Pico's *De imaginatione* in der Geschichte der Philosophie' (1984), pp. 16–43. See also: d'Alverny, 'Survivance et renaissance d'Avicenne à Venise et Padoue' (1966), pp. 75–102; d'Alverny, 'Avicennisme en Italie' (1971), pp. 117–39; Schilling, *Bibliographie der psychologischen Literatur des 16. Jahrhunderts* (1967); Cranz, 'The Renaissance Reading of *De anima*' (1976), pp. 359–76; Zambelli, 'L'immaginazione e il suo potere' (1985), pp. 188–206; Kessler and Park, 'The Concept of Psychology' (1988), pp. 455–63; Mahoney, 'Seele' (1995), pp. 22–6; Hasse, 'King Avicenna' (1997), pp. 230–43.

Some early writers such as Michael Scot and the anonymous author of *Dubitaciones circa animam* do not take over the structure of Avicenna's *De anima* but are interested in specific theories such as the Flying Man or the faculty of estimation. Avicenna's success was above all a success of his doctrines. The following chapters focus on the exact extent of the doctrinal influence of *De anima* and on the quality of its discussion in the West.

The six theories chosen for analysis reveal various features of the reception of Avicenna's book. The Flying Man is an example of a theory of considerable philosophical interest whose reception depends very much upon the understanding of nuances in the meaning of key terms. Avicenna's theory of touch, with its example of the shellfish and the prominent role assigned to the nerves, offers scientific knowledge apparently more advanced than Aristotle's. This advantage turns out to be an important factor for the Western appreciation of Avicenna. The third chapter on optics is again concerned with Avicenna's scientific viewpoint, the Western understanding of which was significantly influenced by the deficiencies of the Latin translation. Such deficiencies are more difficult to demonstrate for other parts of the book, which shows that Gundissalinus and Avendauth produced a very good piece of work. Then follows the very successful doctrine of the faculty of estimation, which is a fully developed theory about instinct. Since it appears in almost every psychological writer of the thirteenth century, it is an excellent indicator of the various scholastic strategies for adopting a Peripatetic doctrine foreign to Aristotle. Avicenna's theory of prophecy is of interest because its naturalistic approach presents a challenge to basic Christian ideas. Finally, the reception of Avicenna's intellect theory results in a fusion of Arabic and Latin philosophical traditions, which have common sources in Greek thought but had developed independently of each other in different cultures for many centuries.

## II. DOCTRINES

### 1. THE FLYING MAN

The Flying Man is a thought-experiment which appears repeatedly in Avicenna's writings. The most comprehensive version is the following (*De anima*, I,1):<sup>1</sup>

We say that the person among us <who is intelligent enough> should imagine <the following>: he is created all at once and in a perfect state, but his eyes are prevented from seeing things outside, and <he is> created flying in the air or the void in such a way that the substance of the air does not collide with him so as to allow him to perceive; his limbs are separate and do not meet or touch each other. He then reflects whether he affirms the existence of his essence (*or his self, see below*). He does not have doubts about his affirmation that his essence is existent; but still, he does not affirm any outer <organs>, such as his limbs, nor anything inside, such as his inner organs, neither the heart, nor the brain, nor any of the things <existing> outside; rather, he affirms his essence, without affirming for it length, breadth or depth. If it were possible for him in this state to imagine a hand or another limb, he would not imagine it as a part of his essence or as a condition for his essence. You know that what is affirmed is different from what is not affirmed and what is conceded<sup>2</sup> is different from what is not conceded.<sup>3</sup> Therefore, the essence which he affirms to be existent is specific for him in the sense that it is he himself<sup>4</sup> without his body and his limbs; these he does not affirm.

Avicenna's story of the Flying Man has attracted the attention of several scholars, in particular because it has a certain resemblance to Descartes's 'cogito ergo sum'. It seems impossible, however, to prove a historical connection between Avicenna and Descartes, that is, to prove that Avicenna was the latter's direct or indirect source.<sup>5</sup> The present investigation will not be concerned with Descartes, but with the influence of the passage in the Latin West in the twelfth and thirteenth century.

1. Avicenna, *De anima*, I,1, ed. Rahman, p. 16, lines 2–14.

2. 'conceded': *al-muqarrabi-bi* (Marmura, 'Avicenna's "Flying Man"', p. 387). Cf. *al-muqarrabu* (Furlani, 'Avicenna e il "Cogito, ergo sum" di Cartesio', p. 55); *al-muqarrabatu* (ed. Rahman, p. 16, line 12).

3. 'not conceded': leg. *lam yuqarra bi-bi*. Cf. *lam yuqarrab* (Furlani, 'Avicenna', p. 55); *lam yuqarrab-bu* (ed. Rahman, p. 16, line 13).

4. *'alā anna-bā buwa bi-'āini-bi* (*Maṣriqiyūn* MSS Ah, Nu, Ay add: *biya*) *ḡairu ḡismi-bi*: The feminine personal pronoun refers to *ḡāt*, the masculine personal pronoun refers to the Flying Man. The version of the *Maṣriqiyūn* translates: 'in the sense that he himself is it without his body'.

5. On Descartes and Avicenna see: Furlani, 'Avicenna e il "Cogito ergo sum" di Cartesio' (1927); Galindo-Aguilar, 'L'Homme volant d'Avicenne et le "Cogito" de Descartes' (1958); Arnaldez, 'Un précédent avicennien du "Cogito" cartésien?' (1972); Druart, 'The Soul and Body Problem: Avicenna and Descartes' (1988); McThighe, 'Further Remarks on Avicenna and Descartes' (1988).

There are quotations from this *De anima* passage in at least seven writers: Gundissalinus, Anonymous (Vat. lat. 175), William of Auvergne, Jean de la Rochelle, Petrus Hispanus, Matthew of Aquasparta and Vital du Four.<sup>6</sup>

It is part of the attractiveness of the Flying Man that its meaning and purpose are rather difficult to understand. The problems arising from Avicenna's story are apparent already in the first of the Latin adaptations: what we have rendered as '<the Flying Man's> affirmation that his essence is existent' has become 'affirmare se esse' – 'he affirms that he is existent' in Gundissalinus's own *De anima*.<sup>7</sup> A second difficulty concerns the thesis in support of which Avicenna relates the allegory. Gundissalinus introduces the story as follows: 'That the soul is not a body, the philosophers prove ("probat") in the following way by saying: let us suppose ...'.<sup>8</sup> But is Avicenna's story about the incorporeality of the soul? There seem to be alternatives:

- (2) the independence of the soul from the body
- (3) the existence of the soul
- (4) the self-awareness of the soul
- (5) the substantiality of the soul.

It will be shown that Avicenna's primary objective is to point to the independence thesis and that the other theses are only implied. A final problem concerns the logical status of the story. In Gundissalinus, it is given in order to prove ('probare') a thesis, but we shall see that in Avicenna's original version the logical status is not a proof, but a pointer for people intelligent enough to grasp it.

Let us start by juxtaposing all sentences which contain information about what the Flying Man affirms:<sup>9</sup>

#### (1) *De anima*, I,1:<sup>10</sup>

'he then reflects whether he affirms the existence of his self/essence (*wuḡūda ḡātibi*)'.

'he does not have doubts about his affirmation that his self/essence is existent'

'but rather he affirms his self/essence'

6. See Index locorum, I.1.m for the references. There is also a Hebrew quotation by Gerson ben Solomon, which is printed in Furlani, 'Avicenna e il "Cogito, ergo sum" di Cartesio', p. 62. Gilson was the first to give a list of Latin writers quoting the Flying Man ('Les Sources gréco-arabes', pp. 41–2, notes).

7. Gundissalinus, *De anima*, 2, p. 37, line 23: '... nec tamen dubitabit affirmare se esse'.

8. Gundissalinus, *De anima*, 2, p. 37, lines 17–18: 'Quod autem anima non sit corpus philosophi sic probant dicentes: ponamus ...'.

9. Apart from the five occurrences of the Flying Man that I discuss here, there is also an allusion to it in *al-Mubāḥaṭāt* (ed. 'A. Badawī, p. 208, line 1), which Black translates in her 'Estimation (*Wahm*) in Avicenna', p. 256, n. 97. It is translated and discussed by Michot in 'La Réponse d'Avicenne', pp. 146–53.

10. *De anima*, I,1, ed. Rahman, p. 16, lines 6, 7, 9 and 13.

'the self/essence (*ad-dāt*) which he affirms to be existent is specific for him in the sense that it is he himself without his body'

(2) *De anima*, V,7:<sup>11</sup>

'he would know the existence of his that-ness/individual being (*wuḡūda annīyatibi*) as one thing'

(3) *Maṣriqiyūn*:<sup>12</sup>

'there is no doubt that in this condition he affirms his self/essence to be existent'

'rather he affirms his self/essence'

'the self/essence which he affirms to be existent is specific for him in the sense that he himself is <identical with> it without his body'<sup>13</sup>

(4) *Isārāt*:<sup>14</sup> In this version, it is not some one of us (*wāḥidun min-nā*) or a man who is suspended in the air but 'your self/essence' (*dātuka*). Therefore, in a strict sense, there is no Flying Man in the *Isārāt* but only a 'flying *dāt*'. What does it affirm?

'it would be unaware of everything except the ascertainment of his that-ness/individual being (*tubūti annīyatihā*)'

(5) *ar-Risāla al-Adḥawīya fī l-ma'ād*, IV:<sup>15</sup> This fifth passage is different from the others in that it does not use the image of a man elevated in the air. Avicenna maintains that no one could dispense with his heart as one could do with other organs. But one could do so in imagination (*fī t-tawahhum*):

'because the man would know that his that-ness/individual being, about which we are talking, is existent, and it would be possible that he then does not know that he has a heart'

It is obvious from this list that much depends upon the meaning of the words *dāt* and *annīya*. In the case of *dāt*, the crucial question is whether to translate it as 'self' or 'essence'; both meanings are possible.<sup>16</sup> *Annīya* is even harder to understand. The term has been discussed by many scholars over the last two centuries.<sup>17</sup> There is

11. *De anima*, V,7, ed. Rahman, p. 255, line 9.

12. *Maṣriqiyūn*, MS Ahmet, f. 660r, lines 1,2,3 (MSS Nu and Ay have the same text for these sentences).

13. See n. 4 above.

14. *Isārāt*, ed. Dunyā, v. 2, p. 345, lines 1–2 (= French translation by Goichon, *Directives*, p. 304).

15. *ar-Risāla al-Adḥawīya fī l-ma'ād*, IV, ed. Lucchetta, p. 143, line 6.

16. Rahman, 'Dhāt', p. 220. Goichon, *Lexiques*, pp. 134–5.

17. Among them de Sacy, Dieterici, Munk, de Slane, Horten, Massignon, de Boer, Badawī, Kraus, Abū Rīdā, Goichon, Alonso, Cruz Hernandez, Frank, van den Bergh, whose opinions are well documented by d'Alverny, 'Anniyya-anitas', pp. 59–68.

dispute on whether *annīya* means 'being' or 'essence' or 'that-ness' or 'I-ness' and whether it has any connotations like 'individual' or 'essential'. It seems to be clear from the discussion so far that the term first appears in translations from the Greek (mostly rendering τὸ ὄν or τὸ εἶναι),<sup>18</sup> that it was used in rather different ways by different writers and that there is no common meaning for all occurrences found in mystical literature, theology and philosophy.

Thus, a juxtaposition with other passages in Avicenna does not immediately solve the question of what the passage in *De anima*, I,1 means. But we may find some basis for an interpretation of Avicenna's passages if we turn our attention to the context of *De anima*.

First, when Avicenna picks up the story of the Flying Man a second time in *De anima* (number (2) above), he explicitly refers back to the first passage and repeats it in an abbreviated form. But this time he says that the Flying Man would affirm the existence of *annīya*, whereas in the first passage he had used the word *dāt*. Hence it seems that the two terms should have a similar meaning in *De anima*. This makes it unlikely that *dāt* in the first passage means 'self', for *annīya* certainly does not mean 'self'. The common denominator of the two words is something unspecific like 'core being'.

Second, in the course of *De anima*, I,1 (at the end of which the story of the Flying Man is given) Avicenna announces that he has not yet begun to discuss the *dāt*, but only the name (*ism*) of the soul: 'We need to arrive from this accident, which <the thing which is called soul> has, at knowing validly the *dāt* of it, in order to know its quiddity (*māhiyya*)'.<sup>19</sup> In other words, as long as we speak about the soul in terms of its relation to the body, we call it perfection (*kamāl*),<sup>20</sup> Avicenna says, but then we are speaking only about accidents and not about the substance (*ḡauhar*).<sup>21</sup> Obviously the term *dāt* in *De anima*, I,1 – which is the context in which the Flying Man is embedded – does not mean 'self' but 'essence' as opposed to 'accident'. Avicenna in fact uses the explicit expression 'the essence of the soul', *dāt an-nafs*.<sup>22</sup>

Third, it is evident from the list above that what the Flying Man affirms is not only his essence, but the existence (or 'ascertainment') of his essence. This agrees

18. Frank, 'The Origin', pp. 185–92.

19. *De anima*, I,1, ed. Rahman, p. 5, lines 1–2.

20. *De anima*, I,1, ed. Rahman, p. 10, lines 15–18. Avicenna's term *kamāl* ultimately derives from Aristotle's definition of the soul. It is, however, not the term used in the earliest translation of *Peri psychēs*: The Greek ἐντελέχεια (*Peri psychēs*, II.1, 412a27 and 412b5) is rendered with the transliteration *intilāṣiyan*, or the translation *tamām* ('completeness, perfection') in the translation which is extant (ed. Badawī, p. 30). The Latin version of the second and lost translation into Arabic has 'endelechia' and 'perfectio' (Averroes, *Commentarium magnum De anima*, ed. Crawford, p. 552). The paraphrase edited by Arnzen also has 'tamām' (see Arnzen, *Aristoteles' De anima*, p. 492).

21. *De anima*, I,1, ed. Rahman, p. 4, line 12, p. 10, line 17.

22. *De anima*, I,1, ed. Rahman, p. 11, lines 3–4 and line 4.



nicely with what Avicenna says when he introduces the Flying Man in *De anima*, I,1: 'We need to point in this place to the affirmation of the existence of the soul'.<sup>23</sup>

These three arguments do not preclude the possibility that the Flying Man is affirming the existence of his self, but make it very unlikely. Avicenna is therefore not being ambiguous here, as is sometimes suggested.<sup>24</sup> We shall come back to this.

Let us now turn to the question of what Avicenna wants to demonstrate with this story, whether it is the soul's incorporeality or its independent existence from the body, or simply its existence, its self-awareness, or its substantiality. These are the relevant sentences:

(1) *De anima*, I,1:<sup>25</sup>

We should occupy ourselves with apprehending the quiddity (*māhiyya*) of this thing which is – in the mentioned respect – the soul. We need to point in this place to an affirmation of the existence of our soul by way of alerting and reminding, a hint which finds its target in someone who has the power to notice the truth by himself ...

The one who is alerted has a means to be alerted to the existence of the soul as something other than the body – or rather: other than body.

(2) *De anima*, V,7:<sup>26</sup>

I would be myself even if they <i.e. the limbs> were not there. ... These organs are in fact only something like clothes for us ...

(3) *Mašriqīyūn*:<sup>27</sup>

In order to know the essence of the soul and to get to know validly its quiddity, we have to make another investigation. Before we begin with it we need to point to an affirmation of the existence of our soul by way of alerting.

The one who is alerted has a means to be alerted to the existence of the soul as something other than the body.

23. *De anima*, I,1, ed. Rahman, p. 15, lines 19–20.

24. Cf. Druart, 'The Soul and Body Problem', p. 34: '<Avicenna> uses rather ambiguous terminology and one cannot always be sure it is a perception of the self as such or of one's essence or both, since the Arabic term used (*ḍbat*) can mean both'.

25. *De anima*, I,1, ed. Rahman, p. 15, line 18, and p. 16, line 14.

26. *De anima*, V,7, ed. Rahman, p. 255, lines 6 and 10.

27. *Mašriqīyūn*, MS Ahmet 2125, f. 659v, line 16, and f. 660r, line 4; I follow MSS Nu and Ay (which otherwise have the same text) in 'we begin' and 'we need to point'; MS Ahmet has the third person singular.

(4) *Isārāt*:<sup>28</sup>

... would you <ever> be oblivious of your self (*ḍāt*) and not affirm your soul (*naḥs*)?  
In my opinion it is not possible that this happens to an intelligent person.

(5) *ar-Risāla al-Adḥawīya fī l-ma'ād* IV:<sup>29</sup>

Thus it is determined and ascertained that the body in its entirety is not something which enters the concept "human being".

In *De anima*, I,1 and the *Mašriqīyūn* the crucial sentence is: 'to be alerted to the existence of the soul as something other than the body'. Here the focus is clearly on what we have called the independence thesis. Obviously, the incorporeality and the existence of the soul are implied, but Avicenna does not say so explicitly. He gives a hint at the incorporeality thesis by adding a 'rather' in the following sentence in *De anima*: 'the existence of the soul as something other than the body – or rather: other than body'. In *De anima*, V,7 and also in *Risāla Adḥawīya* the emphasis is on ruling out the body or the limbs as being part of the core entity of the human being – which is closer to the incorporeality thesis.<sup>30</sup> In the *Isārāt* the Flying Man is an illustration of a statement about constant self-knowledge. However, the role of the body is discussed as well, in the following two *tanbīhāt*, where Avicenna argues that it is not the senses which are able to have this self-knowledge.

In none of the five versions is the topic the substantiality of the soul.<sup>31</sup> That the soul is a substance is shown in chapter I,3 of *De anima*. In the version of the *Mašriqīyūn* the opening of chapter I,3 of *De anima* (on which the *Mašriqīyūn* draw) reveals very clearly the argumentative connection with chapter I,1 (because chapter I,2 is glossed over with a reference to *De anima*):<sup>32</sup>

We say that it is known from what has been said that the soul is not a body <but its perfection>,<sup>33</sup> and we shall make clear in what follows that for a certain soul,<sup>34</sup> namely the human soul, being separated (*al-infirād*) <from the body after death>

28. *Isārāt*, ed. Dunyā, v. 2, p. 344, line 2.

29. *ar-Risāla al-Adḥawīya fī l-ma'ād* IV, ed. Lucchetta, p. 145, line 3.

30. In the *Risāla Adḥawīya* the incorporeality thesis is obvious in the sentence after the one cited, where it is said that the body is nothing more than a place and residence for the soul (ed. Lucchetta, p. 145, line 4).

31. As Rahman maintained in regard to the first (*De anima*, I,1); see Rahman, *Avicenna's Psychology*, pp. 9–11.

32. *Mašriqīyūn*, MS Ahmet, f. 660r, line 7.

33. *laisa(t) bi-ḡismin* (also *De anima*, I,3, ed. Rahman, p. 27, line 15): Van Riet supposes (*De anima*, I,3, ed. Van Riet, p. 58, note) that this sentence refers back not to the Flying Man, but to an earlier passage in *De anima*, I,1, where Avicenna introduces the soul as a form or perfection. The correspondence in wording with *De anima*, I,1, ed. Rahman, p. 5, line 20 (*laisa(t) bi-ḡismin*) indicates that Van Riet is correct.

34. 'a certain soul': *naḥsun* (MS Ah and *De anima*); *naḥsa-nā* (MSS Nu and Ay).

together with the existence of its essence can be proved, and there will be no doubt that the soul is a substance.

Then follows a twofold argument for the substantiality of the soul, which will not be discussed here. It is likely that this passage in I,3 is the fulfilment of the intention stated by Avicenna in chapter I,1: that he is going to speak about the quiddity of the soul. His discussion therefore has three steps, in which the Flying Man serves as a bridge to the discussion of the substantiality of the soul:

First: The definition of the soul in relation to the body (as a perfection of the body).

Second: A pointer to the soul's independent existence from the body (the Flying Man).

Third: A discussion of what the soul is essentially (it is a substance).

Having established that the emphasis is on the independence thesis, we can now solve the previous question of what it is that the Flying Man affirms. The inference drawn is not: the Flying Man affirms his own existence, therefore the soul exists independently from the body. But: the Flying Man affirms the existence of his essence but not of his body, therefore the soul – being this essence – exists independently from the body. The clue is that the Flying Man detects a core entity, which we identify as the soul. See how Avicenna shifts from the story of the Flying Man to the more general conclusion. The word *ḍāt* (essence) is replaced by *naḥs* (soul):

Therefore, the essence which he affirms to be existent is specific for him in the sense that it is he himself without his body and his limbs; these he does not affirm.

The one who is alerted has a means to be alerted to the existence of the soul as something other than the body – or rather: other than body.

To conclude: the Flying Man does not have 'immediate access' to himself,<sup>35</sup> nor is he 'conscious of his existence'<sup>36</sup> or 'fully aware of his personal existence',<sup>37</sup> nor does he 'affirm his existence',<sup>38</sup> but he affirms the existence of his core entity, his essence, while not affirming the existence of his body.

Let us finally settle the third question: the logical status of the story. In *De anima*, I,5 and the *Maṣriḡyūn*<sup>39</sup> the story is explicitly characterized as a *tanbih*, a reminder, pointer, hint, something that alerts and which is of value only for people with

35. Druart, 'The Soul and Body Problem', p. 34.

36. Davidson, *Alfarabi, Avicenna, and Averroes*, p. 83, n. 38.

37. Pines, 'Philosophy', p. 808.

38. Rahman, *Avicenna's Psychology*, p. 10: 'but he would still affirm his own existence'. Marmura, 'Avicenna's "Flying Man" in Context', p. 387: '... the one who in the example affirms his existence ...'.

39. In MSS Nu and Ay of the *Maṣriḡyūn* the heading for the chapter classifies the Flying Man with the other term for pointer, *isāra*: 'ḍikr an-naḥs wa-l-isāra ilā ṭibāṭi-hā' (MS Nu, f. 404r; MS Ay, f. 81r).

enough intelligence to understand it. Avicenna's late book *al-Isārāt wa-t-tanbihāt* consists entirely of such pointers:

This method depends on providing hints and guidelines, rather than ready-made arguments, to the student who is then expected to elaborate the entire theory on his own. This is what the two words of the title, pointers and reminders, refer to.<sup>40</sup>

Since the characterization of the story of the Flying Man as a *tanbih* is repeated at the end of the passage, I do not see any reason to accuse Avicenna of using a hypothetical example for categorical ends.<sup>41</sup> In the case of the other three versions (numbers 3 to 5) which use the Flying Man as an illustration for an argument, nothing is said explicitly about its logical status.

To recapitulate: what the Flying Man affirms is the existence of his essence. What Avicenna intends to demonstrate is not always the same: In its strongest version, the story serves to point to the soul's independent existence from the body. The logical status of the Flying Man is to be a pointer for intelligent people in some texts and a simple illustration to an argument in others.

### *The Latin Reception*

The Latin translators and their readers do not display any lack of understanding of the story of a man elevated in the air and without any sense perception. It will be instructive, however, to see how they deal with the three problematic areas discussed above. Let us proceed in sequence and start with a list of the Latin versions of the passages dealing with what the Flying Man affirms (*De anima*, I,1):<sup>42</sup>

(1) 'deinde videat si affirmat esse suae essentiae'

(2) 'non enim dubitabit affirmare se esse'

(3) 'affirmabit se esse'

(4) 'essentia quam affirmat esse est propria illi, eo quod illa est ipsemet et est praeter corpus eius'<sup>43</sup>

A comparison with the Arabic original (see the English translations above) reveals that the first and fourth of these Latin sentences are good translations: the Flying Man affirms the existence ('esse') of his essence ('suae essentiae'). However,

40. Gutas, *Avicenna*, p. 141.

41. Marmura, 'Avicenna's "Flying Man" in Context', p. 388.

42. The passage in *De anima*, V,7 (ed. Van Riet, p. 162) does not seem to be quoted by any writer and is therefore of limited interest in this investigation: 'sciret se esse et quia unum aliquid est'. The Arabic means: 'he would know the existence of his that-ness/individual being' – or as I tried to argue above: 'he would know the existence of his essence'. Again, the translators chose to translate 'his essence' with *se*. The *Risāla Adhawiya* was translated only in the sixteenth century by Andrea Alpago (among other treatises): *De Mabud, id est de dispositione seu loco ad quem revertitur homo, vel anima post mortem ...* (Venice, 1546, repr. 1969), f. 64v.

43. *De anima*, I,1, ed. Van Riet, pp. 36–7.

Gundissalinus and Avendauth are not consistent in their translation. The second and third sentences are most naturally interpreted as meaning that the Flying Man 'affirms that he is existent', instead of, correctly, 'affirms that his essence is existent' (and 'affirms his essence'). The phrase 'his essence' is translated with 'se'. The cause lies not with the limitations of the Latin language, since one can certainly express the correct meaning in Latin: 'affirmabit suam essentiam esse'. Avendauth and Gundissalinus thus juxtapose a traditional interpretation ('affirms his existence') and the interpretation I have argued for in this chapter.

There are reasons to believe, however, that the phrase 'se esse' (in *De anima*, I,1), which every reader must have understood as meaning 'that he exists',<sup>44</sup> was intended to mean something else. This is indicated by the way Gundissalinus adapts the passage in his own *De anima*, where he says: 'nec tamen dubitabit affirmare se esse, cuius tamen non affirmat longitudinem...'.<sup>45</sup> The crucial word here is the 'cuius'. It shows that Gundissalinus thought of the 'se' as being a substantive and not a reflexive pronoun. The sentence therefore translates: 'but he will not doubt to affirm that his self (?) is existent, the length of which he does not affirm'. This, then, is close to one of the traditional interpretations of the Flying Man (as a discovery of the self), which I have tried to argue against.<sup>46</sup>

No one in the West, however, read Gundissalinus's translation this way. The relevant sentences in Jean de la Rochelle, Matthew of Aquasparta and Vital du Four quote the translation verbatim and take over its ambiguity.<sup>47</sup> William of Auvergne, on the other hand, who mentions the Flying Man twice in his *De anima*, comes closer to the correct interpretation. He writes that the Flying Man 'acknowledges in respect to himself his being ('esse suum')'.<sup>48</sup> The word 'esse' here refers to some kind of entity, as becomes clear in a later passage where it is identified with the person's essence: 'He will find that his entire being or his entire essence ('totum esse suum sive tota essentia sua') is the soul of himself'.<sup>49</sup> William seems to have grasped the crucial idea that the Flying Man has to detect or to affirm a core entity in himself. The other writer in the West to have understood this idea is Anonymous

(Vat. lat. 175): 'it is certain that <a person> in this situation would say that he is something ('se aliquid esse')'.<sup>50</sup> The author proceeds to explain that this person would not say that he is his members, and that therefore that which he asserts must be something different from the body. Like William, this writer comes to an interpretation closer to the original sense by changing the wording of the translation. Petrus Hispanus also changes the wording, but distances himself even further from Avicenna. His Flying Man answers the question 'whether he exists' ('utrum sit') by saying 'that he exists' ('quod est'). In a second passage, Petrus lets the Flying Man say: 'ego sum', which is close to Descartes, but distant from Avicenna.<sup>51</sup>

Turning to the second and third questions answered above, we find that the scholastics quote Avicenna's Flying Man for argumentative goals that were only implied by Avicenna (existence of the soul, incorporeality), but not in order to show that the soul exists independently from the body, and finally that it was impossible for the Latin readers to discern that the logical status of the Flying Man was different from a proof.

Avendauth's and Gundissalinus's translation renders intelligently the key passages concerning the independence thesis: 'expergefactus habet viam evigilandi ad sciendum quod esse animae aliud est quam esse corporis', translating the Arabic: 'The one who is alerted has a means to be alerted to the existence of the soul as something other than the body'.<sup>52</sup> In spite of this, the Latin writers use the Flying Man for slightly different purposes. Gundissalinus's and William of Auvergne's emphasis is on the incorporeality of the soul. 'That the soul is not a body, the philosophers prove by saying ...'.<sup>53</sup> William explicitly speaks of 'showing the spirituality of the human soul' ('declaratio spiritualitatis animae humanae').<sup>54</sup> Gundissalinus puts the Flying Man next to Avicenna's arguments for the incorporeality of the soul from *De anima*, V,2.<sup>55</sup> Jean de la Rochelle, Matthew of Aquasparta and Vital du Four stress the fact that the soul has self-awareness. While

44. Also modern readers: cf. Verbeke, 'Avicenna im Westen', p. 6 (paraphrasing *De anima*, I,1 in its Latin translation): 'Avicenna behauptet, dieser Mensch wisse, daß er da ist, ...'.

45. Gundissalinus, *De anima*, 2, p. 37, line 23. He takes over 'essentia quam affirmat esse est propria illi eo quod illa est ipsemet et est praeter corpus eius' from the translation.

46. See pp. 83-4 above.

47. Jean de la Rochelle, *Summa de anima*, ed. Bougerol, p. 51: 'non dubitaret affirmare se esse' and 'essentia autem quam affirmat est propria illi, eo quod illa est ipsemet'. Matthew of Aquasparta, *Quaestiones disputatae selectae*, 1, p. 324: 'non dubitaret affirmare se esse'. Vital du Four, *Quaestiones disputatae*, 4.1, p. 242: 'non dubitaret, sed affirmaret se esse'.

48. William of Auvergne, *De anima*, 2.13, p. 83: 'concedet autem de se esse suum'. A final evaluation of William's standpoint has to await the critical edition of the text.

49. William of Auvergne, *De anima*, 3.11, p. 101: 'invenit quod totum esse suum sive tota essentia sua anima ipsius est'.

50. Anonymous (Vat. lat. 175), *Dubitationes circa animam*, f. 219ra: 'Amplius, ponatur quod homo creetur perfectus scientia in aere in tali dispositione quod nihil possit percipere per aliquem sensum, constat quod in illo statu diceret se aliquid esse, si autem possibile esset illum imaginari manum vel cerebrum vel huiusmodi alia corporalia, constat quod non diceret se esse illa <m> aut illa <m> esse partem sui, ergo cum illud quod asseritur sit aliud ab eo quod non asseritur, in ipso est aliquid praeter naturam corpoream, et haec est ratio Avicennae'.

51. Petrus Hispanus, *Quaestiones libri de anima*, 2.4.10, p. 623: 'si sic interrogatur ... utrum sit, respondebit ... quod est'; ibid., 2.6.1, p. 650: 'si aliquis quaereret ab eo ... utrum ipse esset, ... diceret quod ego sum'. Again, one has to wait for the critical edition of the text.

52. Avicenna, *De anima*, I,5, ed. Van Riet, p. 37, ed. Rahman, p. 16, line 14.

53. Gundissalinus, *De anima*, 2, p. 37: 'quod autem anima non sit corpus, philosophi sic probant dicentes ...'. Cf. William, *De anima*, 2.13, p. 82: 'revertitur ad ostendendum quod anima non sit corpus'.

54. William, *De anima*, 2.13, p. 82.

55. Gundissalinus, *De anima*, 2, pp. 37-8.

the latter two authors do not draw any explicit conclusions,<sup>56</sup> Jean connects the story with the thesis that the soul is existent: 'it needs to be shown that <the soul> exists, so that no doubt ever arises as to whether it exists'.<sup>57</sup> Anonymous (Vat. lat. 175) also wants to prove the existence of the soul. Hence, Jean de la Rochelle and Anonymous (Vat. lat. 175) come closest to Avicenna's original intention.<sup>58</sup>

The writer who chooses argumentative goals most different from those of Avicenna is Petrus Hispanus. His purpose is to show that the intellectual soul differs from the vegetative and animal soul in substance.<sup>59</sup> According to Avicenna, the vegetative and animal faculties in the human soul are in fact faculties which flow from the one human (rational) soul into the organs.<sup>60</sup> That these faculties are not identical with the human soul could indeed be inferred, it seems, from the story of the Flying Man, but Avicenna does not do this.

To turn again to the final problem, the logical status of the Flying Man, as a pointer for intelligent people, proved to be impossible to understand for Latin readers. The main reason seems to have been that Avicenna's book *al-Isārāt wa-t-tanbihāt*, in which he employs the 'indicative method'<sup>61</sup> throughout, was not translated into Latin, so that it became difficult to spot that there was a methodological position involved. The only person in the medieval West to quote *al-Isārāt wa-t-tanbihāt* was Ramón Martí (d. 1285) in his *Pugio fidei*; he obviously had access to the Arabic text. His translation of the title is, in fact, quite accurate (*Liber Alixarat, id est Invitationum vel nutuum*),<sup>62</sup> whereas Avendauth and Gundissalinus in *De anima* choose the metaphorical verbs *evigilare* and *expergefacerere*, obviously unaware of the fact that they were translating technical terms, even though Avicenna gives an explanation of them.<sup>63</sup>

56. Matthew of Aquasparta, *Quaestiones disputatae selectae*, 1, p. 324: 'anima semetipsam intelligeret, si nullum usum vel actum sensus alicuius haberet'; Vital du Four, *Quaestiones disputatae*, 4.1, p. 242: 'ex quo patet: quod anima in corpore apprehendit se esse, nulla specie recepta indiget'.

57. Jean de la Rochelle, *Summa de anima*, 1.1, p. 50: 'ostendendum est ipsam <scil. animam> esse ut numquam contingat de ea dubitare an sit'.

58. He uses the Flying Man as an argument for answering the question *an sit anima*.

59. Petrus Hispanus, *Quaestiones libri de anima*, 2.6.1, p. 650: '... utrum anima vegetabilis et sensibilis et intellectiva in homine sint una substantia vel differant secundum substantias. Et ostenditur quod differant secundum substantias, quia sicut vult Avicenna: si quis homo ...'. The passage in 2.4.10, p. 622, is not as explicit, but also emphasizes the need to acknowledge the existence of the intellectual soul (*anima intellectiva*).

60. *De anima*, I,3, ed. Rahman, p. 31, line 11; ed. Van Riet, p. 64, line 13.

61. Gutas, *Avicenna*, pp. 307–11.

62. Raymond Martí, *Pugio Fidei*, I Pars, cap. 3, p. 197: 'in libro Alixarat, id est Invitationum et Exercitationum (d'Alverny suggests: 'Excitationum')'; *ibid.*, I Pars, cap. 4, p. 206: 'in libro Alixarat, id est Invitationum vel Nutuum'; d'Alverny, 'Notes sur les traductions médiévales d'Avicenne', p. 348; Cortabarría, 'Avicenne dans le "Pugio Fidei" de Raymond Martin', pp. 10–13.

63. *De anima*, I,1, ed. Van Riet, pp. 36–7: 'et debemus innuere in hoc loco aliquid quo affirmetur esse animae quam habemus ad similitudinem evigilandi (*tanbih*) et reminiscendi, ut hoc multum prosit ei in quo est virtus inspiciendi veritatem per seipsum'. And: 'ideo expergefactus habet viam evigilandi ad sciendum quod ...'. The words *innuere* and *reminiscendi* in the first sentence, which translate *asāra* and

In the adaptations of the Latin writers, Avicenna's pointer becomes a *ratio* (Petrus Hispanus, Jean de la Rochelle), a *probatio* (Matthew of Aquasparta) or a *declaratio* (William of Auvergne).<sup>64</sup> In these versions, therefore, Avicenna has proved (*probare*)<sup>65</sup> or shown (*ostendere*)<sup>66</sup> whatever the writers attribute to him – the soul's incorporeality or existence or difference from the vegetative and animal soul – whereas in fact he had only hinted at it.

In the final analysis, we should like to know whether the Flying Man had any impact on the doctrine of the scholastics. Does any of them take over Avicenna's three-step scheme, the soul as perfection, as existing independently from the body, as a substance? No. The influence on Matthew of Aquasparta and Vital du Four is rather small: the Flying Man appears only in support of the minor premise of one of a group of arguments. The case is a little different with the other writers, Gundissalinus, William, Jean and Petrus, who have in common that they agree with the conclusions drawn from the story of the Flying Man. In William of Auvergne's *De anima* the Flying Man is listed among many other arguments in favour of the incorporeality of the soul.<sup>67</sup> Petrus Hispanus uses Avicenna's story to answer two questions concerning Aristotle's *Peri psychēs*,<sup>68</sup> the first of which is settled directly by the force of this quotation alone, whereas in the other case the Flying Man is only one of nine arguments.

The significance of the Flying Man for Western psychology lies in the fact that three early writers quote the thought-experiment at prominent places in the opening questions of their books: Gundissalinus, Anonymous (Vat. lat. 175) and Jean de la Rochelle. Gundissalinus employs the Flying Man as the first in a series of arguments to support 'Plato's' definition of the soul (drawn from Costa ben Luca) as 'an incorporeal substance which moves the body'<sup>69</sup> – a definition with which he agrees.<sup>70</sup> Anonymous (Vat. lat. 175) quotes it in the very first question, 'an sit anima'; the same does Jean de la Rochelle in his *Summa de anima* in support of his own conviction that the soul exists; to prove this, he adds yet another argument of Avicenna, coming from the beginning of *De anima*, I,1, and a quotation from

*taḍkīr* respectively, are good translations.

64. Petrus Hispanus, *Quaestiones libri de anima*, 2.4.10, p. 622; Jean de la Rochelle, *Summa de anima*, 1.1, p. 51; Matthew of Aquasparta, *Quaestiones disputatae selectae*, 1, p. 324; William of Auvergne, *De anima*, 2.13, p. 82.

65. Gundissalinus, *De anima*, 2, p. 37: 'philosophi probant'. Matthew of Aquasparta, *Quaestiones disputatae selectae*, 1, p. 324: 'probatio minoris apparet per Avicennam'.

66. Petrus Hispanus, *Quaestiones libri de anima*, 2.6.1, p. 650: 'et ostenditur quod differant secundum substantias'.

67. William, *De anima*, 2.13, pp. 82–3, and 3.11, p. 101.

68. Aristotle, *Peri psychēs*, 413a11–19 and 413b13.

69. Gundissalinus, *De anima*, 2, p. 37, line 8: 'Plato animam sic definit dicens: anima est substantia incorporea corpus movens'.

70. *Ibid.*, p. 40, line 11: 'Vera est igitur definitio animae secundum Platonem quod anima est substantia incorporea corpus movens'.

Pseudo-Augustine's *De spiritu et anima*, which is also in Anonymous (Vat. lat. 175).<sup>71</sup> The thought-experiment of the Flying Man was thus one the earliest Peripatetic theories to become known in the West; it was obviously understood to be a very forceful argument in proving the existence of the soul and its incorporeality. But even these three writers, who use the Flying Man so prominently, do not employ the three-step scheme embodying Avicenna's pointer for intelligent people.

This result should make us suspicious about the influence of Avicenna's concept of the soul in general. It has recently been maintained that Avicenna influenced the Latin West with his criticism of the substantiality of the soul<sup>72</sup> – i.e. he helped to disseminate the Aristotelian definition of the soul (as an actuality of the body) and to eclipse the Platonizing definitions of the soul (as an immaterial substance) which were widespread before the translation of Aristotle's works on natural philosophy. It would be more correct to say that Avicenna does not criticize the notion of the substantiality of the soul, but holds that in relation to the body the soul is the perfection (*kamāl*) of the body, whereas considered essentially and in itself, it is immaterial and a substance.<sup>73</sup> As to the influence of this theory, it is indicative that the index of Latin quotations from the first four chapters is comparatively short (see the Index locorum for chapters I,1–4), except for the phrase 'ex qua defluunt hae vires' (I,3.g), which is a favourite of Albertus Magnus. In fact, Avicenna's discussion of the soul as a perfection and a substance remained relatively uninfluential in the West. The real impact of Avicenna's psychology has to be sought for in other areas, which are worth a more extended treatment and will be discussed in the following chapters.

## 2. SHELLFISH AND NERVES

### *Shellfish*

There are two items in Avicenna's theory of touch which are particularly significant for the success and later decline of *De anima* in the West: the shellfish and the nerves. The first because the theory was successful, the second because it was controversial. The first item (we shall come to the nerves later) is best introduced by Albertus, who is the only writer among those examined – apart from Vincent of Beauvais who quotes Albertus<sup>74</sup> – to point to the disagreement between Aristotle and Avicenna on the topic of local movement of animals:

71. Pseudo-Augustine, *Liber de spiritu et anima*, p. 801, line 33: 'Nihil enim tam novit mens ...' On the relation between Jean and Anonymous (Vat. lat. 175) see p. 33 above.

72. Mojsisch/Jeck/Pluta, 'Seele. II. Mittelalter' (1995), p. 14: 'Kaum weniger wichtig <als der De anima-Kommentar des Averroes> war der Entwurf Avicennas von der Seele mit seiner Kritik an ihrer Substantialisierung'.

73. Avicenna, *De anima*, I,1, ed. Rahman, p. 10, lines 15–18, and *De anima*, I,3, p. 27, lines 15–17 and p. 29, lines 6–8.

74. Vincent of Beauvais, *Speculum naturale*, 27.77, p. 1972.

Furthermore there is the question of the disagreement which seems to exist between Aristotle and Avicenna. Avicenna says that all animals move in the way of local movement. But Aristotle says that many animals are immobile in regard to place.<sup>75</sup>

In such cases, Albertus's usual procedure in *De homine* is to explain that the disagreement is not a real one, but that Aristotle and Avicenna are talking about two distinct things. The same happens here:

To this shall be said that Avicenna thinks of the motion of contraction and dilation, which every animal has. But Aristotle thinks of the motion which is from one place to another and which is properly called progressive motion ('qui proprie dicitur processivus'), and this motion not all animals have, as is said in the book on animals.<sup>76</sup>

Albertus's analysis is correct: Avicenna indeed modified Aristotle's theory that the sense shared by all animals is that of touch, and that even animals that do not have movement are able to perceive by the sense of touch.<sup>77</sup> In Avicenna's view, it is impossible that an animal should possess the sense of touch but no voluntary movement. For even animals that do not have the ability to move from one place to another are able to perform the movement of contraction and dilation. It is because we see it contracting and dilating that we discover that a creature is able to perceive an object of touch.

Albertus is also correct in emphasizing that Aristotle speaks about local movement and that Avicenna does not. However, the disagreement between the two still remains, because Aristotle seems to maintain that local movement is the only kind of movement which the soul imparts to the living creature.<sup>78</sup> In contrast, Avicenna says that there is a kind of voluntary movement (and he insists on the 'voluntary' whenever he speaks about the topic)<sup>79</sup> different from local movement

75. Albertus, *De homine*, 62.1, p. 534a: 'Uterius etiam quaeritur de contrarietate quae videtur esse inter Aristotelem et Avicennam. Dicit enim Avicenna quod omne animal movetur locali motu. Aristoteles autem dicit quod multa sunt immobilia secundum locum'.

76. Albertus, *De homine*, 62.1, p. 535b: 'Ad ultimum dicendum quod Avicenna intelligit de motu constrictionis et dilatationis, quem habet omne animal. Aristoteles autem intelligit de motu qui est de loco ad locum, qui proprie dicitur processivus, et illum non habet omne animal, sicut habetur in libro de animalibus'.

77. See Bonitz, *Index Aristotelicus*, p. 127, s.v. ἀφ᾽ ἑ. Aristotle, *Peri psychēs*, II,2, 413b1: 'Because of this principle all animals have life, but they are animals primarily because of <the faculty of> sensation. For even those which do not move or change their place but have sensation, we call animals and not merely living. The primary <kind of> sensation, which is shared by all, is touch'.

78. Aristotle, *Peri psychēs*, I,5, 410b19: 'For not everything which has sensation has movement as well, because there seem to be some animals which are stationary in regard to place. Yet the soul seems to move the animal only in this kind of movement'.

79. See Avicenna, *Compendium on the Soul*, ed. Landauer, p. 351, line 3; *Maṣrīqiyūn*, MS Ahmet, f. 667r, line 6: 'For everything which has <the faculty of> touch has voluntary movement in itself either in regard to the whole or to <some> parts'. For *De anima*, see the passage quoted below.

which can be found in all animals: the movement of contraction and dilation which is needed for the sense of touch.

Let us then see how Avicenna introduces the example of shellfish in this context. The text in *De anima* goes as follows:<sup>80</sup>

It appears possible to say<sup>81</sup> that movement is a cognate of touch in animals and that as there is a primary kind in the case of sense-perception,<sup>82</sup> likewise it seems that there is a primary kind among the faculties of movement.

It is commonly believed <however> that there are some animals that have the sense of touch but not the faculty of movement, such as certain shellfish (*aṣḍāf*).

But we claim that voluntary movements are of two kinds: movement from one place to another and movement of contraction and dilation of the animal's parts<sup>83</sup> even if the whole <animal> does not move from its place. For it is absurd that there should be an animal which has the sense of touch but not the faculty of movement in it at all, since how would it be known<sup>84</sup> that it had the sense of touch if not because one can see in it a kind of fleeing from something touched and some striving for something touched. Regarding what some people thought<sup>85</sup> about shellfish and sponges and other beings, we find in the case of shellfish that in their shell there is some movement of contraction and dilation and of curving and extending in their interior<sup>86</sup> even though the shellfish do not leave their location. Through this we know that they perceive the touched thing. Thus it is apparent that everything which has touch also has some voluntary movement in itself, either of the whole or of its parts.

The shellfish are then brought in as an objection ('it is commonly believed ...') by the exponents of the traditional Aristotelian doctrine, i.e. those maintaining that it is touch which is the only faculty shared by all animals and not touch and movement as Avicenna says.<sup>87</sup> In his early *Compendium on the Soul*, Avicenna tells his readers that he saw with his own eyes that the shellfish contract and dilate in the interior of their shell. He goes on:

80. *De anima*, II,3, ed. Rahman, p. 68, line 6.

81. *li-qā'ilin an yaqūla in ...*: 'It may appear to someone to say that ...'. The text of the *Maṣrīqiyūn* does not have this phrase, which introduces Avicenna's own theory.

82. The text of the *Maṣrīqiyūn* adds: 'there is a primary kind which all animals have to have'.

83. *aḍā'*: parts of the body, limbs.

84. *yu'lamu* (it is known) or *na'lamu* (we know) or *ta'lamu* (you know) or *ya'lamu* (it knows). The last alternative is the least probable; the problem is not how the shellfish knows that it has the ability to touch.

85. *tamaṭṭala*: to imagine, fantasize.

86. *fi aḡwāfi-bā*: hollow, cavity, interior, belly.

87. Aristotle himself does not use the shellfish as an example. See Bonitz, *Index Aristotelicus*, p. 395b, s.v. κογχύλιον. Cf. Philoponos, *In De anima*, p. 236, line 22: 'For many <living beings> which share touch do not share any other <sense>, like sponges, oysters, the so-called "snails with a spiral shell" and shellfish generally'.

I tested it more than once by turning the shell on its back so that <the shellfish> was removed from the place where it pulls food from the earth; it then did not stop twitching until it returned to the position which enabled it to pull food from the muddy earth.<sup>88</sup>

One might argue against Avicenna that this is a kind of local movement: The shellfish rocks in the interior of the shell until it reaches its former position. However, the main point for Avicenna is that it does not leave its location, the shell stays where it is. He rather seems to subsume the movement of the shellfish under 'striving for the object of touch' which he mentions in the passage in his *De anima*. This passage is not open to the objection that the movement of the shellfish is a kind of local movement: here he seems to think of what happens when you touch the shellfish. They obviously move, but they do not move from their place.

Avicenna thus has a different, non-Aristotelian criterion for the demarcation of plants from animals: in animals we can find not only a primary kind of sense perception but also a primary kind of movement, in plants we cannot find either of these.

Albertus Magnus is not the only scholastic writer who was intrigued by the topic: Jean de la Rochelle, Vincent of Beauvais, Roland of Cremona, Petrus Hispanus, Albert von Orlamünde (Pseudo-Albertus Magnus), Anonymous (Vennebusch) also made use of the passage in Avicenna's *De anima*.<sup>89</sup> None of these writers except Albertus Magnus and Vincent of Beauvais (as we have seen) remarked upon the disagreement between Aristotle and Avicenna.

Jean de la Rochelle and Petrus Hispanus are more interested in the new kind of voluntary movement introduced by Avicenna than in the shellfish and the demarcation of plants from animals. They both cite Avicenna as an authority on the movement of contraction and dilation, and Petrus even devotes a whole chapter to it: 'De motu proprii corporis secundum dilatationem ac constrictionem'.<sup>90</sup> The chapter opens with a rephrasing of the passage in Avicenna's *De anima* and goes on to explain the two physiological processes as reactions to delightful or abominable (or dangerous) objects. Petrus partly deviates from Avicenna by classifying this kind of motion repeatedly not only as a voluntary movement ('voluntarius') as Avicenna did, but also as a local movement ('motus localis').<sup>91</sup> Other writers drop the qualification 'voluntary' completely, as Jean de la Rochelle, who picks up the phrase

88. The passage is introduced as follows (Avicenna, *Compendium on the Soul*, p. 351, line 7): 'Someone may object to this that the shellfish (*aṣḍāf*) <are animals> that have sense perception, but do not move voluntarily. But this objection can be solved easily by experiment. For even though the shellfish do not move voluntarily from their place in any kind of locomotion, they contract and dilate in the interior of their shell, as we have seen with our own eyes. I tested it more than once ...'.

89. See Index locorum, II.3.d-e for the references.

90. Petrus Hispanus, *Scientia libri de anima*, 8.7, pp. 349-50.

91. Petrus Hispanus, *Scientia libri de anima*, 6.10, pp. 239-40: 'motus partium localis' and 'motus localis est duplex ... uterque autem voluntarius est'; *ibid.*, 5.3, p. 190: 'aliquis motus localis'.

'voluntary movement' in his *Tractatus* ('motus voluntarius duplex est ...'), but changes it into 'animal movement' ('motus animalis duplex est') in his later *Summa de anima*.<sup>92</sup> Vincent of Beauvais draws on Jean's *Summa* and consequently writes 'animal' instead of 'voluntary'.<sup>93</sup>

Albertus also prefers the term 'animal movement' and remains silent about the question of whether the movement is spontaneous or not. In fact, in his *De motibus animalium* he cleverly connects the Avicennian *duplex motus* theory with another phenomenon. The systolic and diastolic movement of the heart (or of that organ which takes the place of the heart), he says, is present in every animal, whereas local movement is not. The influence of Avicenna's example of the shellfish, which are not mentioned, is still to be felt in Albertus's remark that animals contract when they are pricked with a needle: 'si enim pungantur acu, constringuntur'. This movement, he says, can be found even in embryos before one can discern any other kind of sense or movement in them.<sup>94</sup> Obviously Albertus takes Avicenna only as a starting point for his own theory, which differs from that of his Arabic predecessor. Avicenna would not accept the movement of the heart as an example since it is not a voluntary movement. He would also argue that the movement found in embryos before any sense perception is not a voluntary movement and that the first voluntary movement is connected with the sense of touch.

These alterations of Avicenna's doctrine are significant. It is more than a matter of vocabulary whether one says 'motus voluntarius' or 'motus animalis'. Involuntary movement can be found in plants: some turn their leaves towards the sun, some open and shut their blooms. The shellfish, on the contrary, are able to touch something by force of their voluntary movement of dilation. If, then, the Latin tradition glosses over the voluntary aspect of Avicenna's theory, it misses the gist of his argument.

There are several reasons why Avicenna's theory was so successful in spite of this misunderstanding: first, because the theory is in disagreement with Aristotle, which made Albertus interested in the problem; second because it created a new kind of

movement, which interested all those writers mainly concerned with the classification of the faculties of the soul (Jean de la Rochelle, Vincent of Beauvais, Petrus Hispanus).

We shall encounter a third reason if we turn to the source for Albertus's passage in *De motibus animalium* (which we have just discussed). For Albertus is not as original as it may seem; he is influenced by, perhaps even draws on, a passage in Roland of Cremona's *Summa theologica*. The *Summa* dates from the mid 1230s, whereas Albertus's *De motibus animalium* was written in the late 1250s. Roland brings in Avicenna's example as an argument against Aristotle's thesis that there are many animals which do not have heads.<sup>95</sup> But all animals have touch, which derives from the brain, Roland argues. He refers to the sea sponge (*spongia marina*) 'in which only touch <and no other sense> is found. That it has touch is proved by the fact that if fire is brought close to it or if it is pricked ('pungitur'), it contracts, as Avicenna says'.<sup>96</sup> That Roland uses the sponges instead of the shellfish is curious since the Arabic original of Avicenna's passage mentions both sponges and shellfish, while the Latin has only the *conchylii*.<sup>97</sup> In the immediately following *solutio* to the problem, Roland argues that just as the heart, which is the starting-point of all *spiritus*, is indispensable, so is the brain, and that Aristotle is wrong. 'We have more belief in the medical scholars on this point', Roland says, suspecting that perhaps Aristotle wanted to say that in some animals such as the sea sponges the head – or that organ which takes the place of the head – cannot be distinguished.<sup>98</sup>

This passage has obvious parallels in wording with the one in Albertus ('pungitur – pungitur; loco cordis – loco cordis; principium omnium spirituum – principium aliorum; non potest distingui – occultum sit'), so that either Albertus is drawing on his Dominican predecessor or both are drawing on a common source, but one which is not among the works examined.

95. I was not able to trace this theory in Aristotle (cf. Bonitz, *Index Aristotelicus*, pp. 385b–387a, s.v. κεφαλή). There is one passage in his *De partibus animalium* where Aristotle says that all animals that have blood have a head, whereas in some bloodless animals, such as crabs, the part which represents a head is not clearly defined (685b36).

96. Roland of Cremona, *Summa theologica*, f. 33va, line 18: 'In sponsia marina non invenitur nisi tactus, et quod habent tactum probatur quia quando ei admovetur ignis vel pungitur, contrahitur ut dicit Avicenna'.

97. Averroes's commentary on *Peri psychês* mentions *spongia maris* four times, but always as an example for animals which have only one faculty of sense perception: touch. See Averroes, *Commentarii in Aristotelis de anima libros*, pp. 111, 155, 163, 177.

98. Roland, *Summa theologica*, f. 33va, line 20: 'Mihi videtur quod sicut non potest esse animal sine corde vel aliquo loco cordis quia tunc esset sine spiritu ergo esset sine omni sensu, quod est impossibile, cor enim secundum omnes Physicos est principium omnium spirituum, ita impossibile est animal esse sine capite quare et sine cerebro per rationes dictas et multas alias quae possent dici. Et illud quod dixit Aristoteles quod multa sunt animalia capita non habentia, dicimus esse falsum salva reverentia ipsius. Magis credimus Physicis medicinae de re ista quam sibi, nisi forte vellemus dicere quod hoc ideo dicit quia inveniuntur quaedam animalia in quibus non potest caput distingui vel illud quod est loco capitis, sicut potest esse in sponsia marina'.

92. Jean de la Rochelle, *Tractatus*, 2.2.36, p. 112; id., *Summa de anima*, ed. Bougerol, 110, p. 267.

93. Vincent of Beauvais, *Speculum naturale*, 25.104, p. 1840: 'motus animalis duplex est ...'.

94. Albertus, *De motibus animalium*, 2.1.1, pp. 283b–284a: 'Est autem animalium motus duplex in genere. Unus quidem qui in omni animali invenitur sive perfectum sit sive imperfectum, et hic est motus constrictionis in praesentia timoris et tristitiae et generaliter in praesentia nocentium et motus dilatationis in praesentia conferentium et voluptatis. Per hunc enim motum animal cognoscitur esse animal. Alius autem motus est qui est de loco ad locum, qui tamen non omni convenit animali. Est autem motus cordis primus in constrictione et dilatatione secundum systolem vel diastolem vel eius membri quod est loco cordis. Quamvis enim hoc aliquando occultum sit, tamen [non] convenit hoc esse necessarium in omni animali quia aliter non transmutaretur spiritus ab uno membro ad omnia membra quod est principium aliorum sicut in aliis libris et in isto dictum est. Hic autem motus qui est dilatationis et constrictionis invenitur in omnibus animalibus. Si enim pungantur ac[t]u, constringuntur. Et hunc motum etiam embriones habere inveniuntur antequam alius sensus vel motus deprehendi possit in eis'.



In contrast to Albertus and to all other writers, Roland is primarily interested in the example of the sea sponges, and in the fact that they have the faculty of touch; he does not mention the theory that there are two kinds of voluntary movement. Rather Avicenna's example is used by him to show that even animals which do not seem to have the faculty of touch display it if they are pricked. What is interesting about Roland, is that he explicitly states that the theory about the missing heads of many animals is false – *pace* Aristotle ('salva reverentia ipsius') – and that he agrees with the medical writers. Roland does not refer to Avicenna's example of the sea sponges in the *solutio*, but to his theory that estimation can be found in all animals. Nevertheless, Roland's attitude is the same for both Avicennian theories, which he finds convincing on scientific terms. Here, perhaps, is a third reason for the success of Avicenna's *De anima*: apart from being a philosophical treatise of high standard in itself, it also offers scientific knowledge which seemed to be more advanced than Aristotle's.

### Nerves

This is even more obvious in the case of the nerves, because the contrast between Aristotle, who did not yet know of their existence, and Avicenna, in whose philosophical and medical works the nerves figure prominently, could not escape medieval readers. Among these, Averroes is a particularly interesting case because his treatment of the matter testifies both to his profound knowledge of the Aristotelian corpus and to his deep-rooted belief in the truth of Aristotle's words, even when they seem in conflict with the scientific knowledge of Averroes's time:

And therefore it is necessary to believe that Aristotle wanted the sense of touch to be more than one and that flesh is like its medium.

This statement, however, is contrary to what Aristotle said in his book on animals. But perhaps the latter statement <in *De animalibus*> was made according to what appeared then, that is, what he knew about the limbs of the animals in that time. For then he did not yet know the nerves and said that the organ of <touch> is flesh.

The former statement <in *Peri psychēs*> says that the organs of animals, which have the ability to touch, are below the flesh (*intra carnem*). This is in accordance with what came out later <after Aristotle's death> through anatomy, namely that the nerves play a part in touch and movement. Therefore, what Aristotle knew in theory (*ratione*), later was apparent through experience (*sensu*).<sup>99</sup>

99. Averroes, *Commentarium magnum in Aristotelis de anima libros*, p. 298: 'Et ideo oportet opinari quod vellet Aristoteles quod sensus tactus est plus quam unus et quod caro est quasi ei medium. Licet iste sermo sit contrarius sermoni in libro de animalibus. (647a19, 653b25) Sed tamen forte ille sermo fuit secundum quod apparuit illic, scilicet quod scivit de membris animalium in illo tempore; tunc enim adhuc nesciebat nervos, et dixit quod instrumentum istius sensus est caro. Et iste sermo dat instrumenta esse illis animalibus

Averroes here carefully observes that Aristotle's position is not the same in his different writings. In *Peri psychēs* Aristotle argues that just as the objects of the other senses, so the object of touch does not come into contact with the sense organ directly, but via a medium. From this he deduces that the organ of touch is located within (ἐντός) and that flesh is the medium.<sup>100</sup> In *De sensu et sensato*, he specifies that the sense organ of touch (and also of taste) is near the heart (πρὸς τῇ καρδίᾳ).<sup>101</sup> Averroes is correct in pointing to the fact that Aristotle in his *De partibus animalium* seems to acknowledge the possibility that flesh is the organ of touch,<sup>102</sup> and he explains this by a development in Aristotle's knowledge about animal anatomy: Aristotle, Averroes says, had in the meantime, i.e. after the composition of the book on animals, grasped the right solution without actually knowing about the nerves, and that is why he decided that the organ of touch should lie 'within'.

This attempt to rescue Aristotle seems hardly convincing given that the differentiation between organ and medium (in *Peri psychēs*) is introduced by Aristotle for reasons of philosophical consistency and does not seem to be due to an instinct for the right anatomical solution. Also, to locate the organ of touch in close proximity to the heart, is again a philosophical decision, which links up with Aristotle's conviction that the heart is the centre of sensation. It is in other parts of his scientific corpus, namely the discussions of the *pneuma*, that Aristotle displays a certain awareness of problems that foreshadow the later discovery of the nerves.<sup>103</sup>

This discovery was made in Alexandria in the third century BC, and may be counted among the significant breakthroughs in the history of anatomy. The physicians Herophilus and Erasistratus carried out dissections, and probably also vivisections of human subjects, which enabled them to distinguish between nerves, veins and arteries.<sup>104</sup> This finding not only disproved Aristotle's theory that the organ of touch is located close to the heart, it also decided the long-lasting dispute about the localization of the centre of sensation in favour of the brain and against the heart, as Aristotle had maintained.<sup>105</sup> We shall see that the interconnection of

tangibilibus intra carnem, et hoc convenit ei quod post apparuit per anatomiam, scilicet quod nervi habent introitum in tactu et motu. Quod igitur scivit Aristoteles ratione, apparuit post sensu'. Averroes repeats this interpretation in the same book (p. 312): 'Iam enim apparuit post Aristotelem in tempore eius, scilicet Alexandri, quod in animalibus sunt quaedam corpora quae dicuntur nervi, et habent introitum in sensum et motum. Quod igitur apparuit Aristoteli ratione, manifestatum est post sensu'.

100. Aristotle, *Peri psychēs*, 423b18–27.

101. Aristotle, *De sensu et sensato*, 439a2–3.

102. Aristotle, *De partibus animalium*, 647a19, 653b25. However, in 656b34, Aristotle expresses the view of *Peri psychēs* that the organ of touch lies internally.

103. Solmsen, 'Greek Philosophy', p. 174.

104. Solmsen, 'Greek Philosophy', pp. 184–93; Nutton, 'Medicine in the Greek World', pp. 33–5. For a detailed treatment, see von Staden, *Herophilus*, pp. 139–53, on dissection and vivisection, and pp. 159–60 and 250–9, on the discovery of the nerves.

105. Solmsen, 'Greek Philosophy', pp. 191–2.

the two topics – organ of touch and brain versus heart – also plays a role in medieval discussions.

If we make a leap from third-century BC Alexandria to eleventh-century AD Persia, we find that the nerves have become part of common medical lore, as have the cavities of the brain, which were also discovered by the Alexandrian physicians; both appear in Avicenna's philosophical and medical writings. Avicenna displays his adherence to the Peripatetic tradition in reserving a prominent role for the heart: it is the organ which is generated first in a human being,<sup>106</sup> and it is from the heart that the faculties flow to the brain and liver.<sup>107</sup> The rest of Avicenna's theory, however, owes much more to the medical tradition than to Aristotle: the brain is the centre of sensation, where the motor and sensory nerves originate.<sup>108</sup> With regard to the sense of touch, Avicenna decides – against Aristotle – that there is no medium:

One of the peculiarities of touch is that the natural organ with which it perceives, namely nervous flesh or flesh and nerves, perceives by contact, even though there is no medium at all.<sup>109</sup> For without doubt it is changed by the touching things which have qualities, and when it changes, it perceives. It is not the case that the relation of all senses with their objects is like this.<sup>110</sup>

And in another passage in *De anima*, II,3 (which was not translated into Latin): 'It occurs in the case of touch that the natural organ itself is the medium'.<sup>111</sup> In contrast to the other senses, the organ of touch is affected and changed directly by the object and its qualities.<sup>112</sup> Avicenna goes on to explain that what perceives cannot be the nerve alone, because then some parts of the skin would not perceive, but others would. Therefore, both flesh and nerves are the perceiving organs of touch, the nerves having the special task of receiving and conveying the information to the brain:

It is not necessary to think that the perceiving thing is the nerve alone, because the nerve in fact is the conveyer of the sense of touch <in the process of generation> to a different organ, namely flesh. If the perceiving thing were the nerve alone, then the perceiving thing in the skin and flesh of the human being

106. Avicenna, *De anima*, V,8, ed. Rahman, p. 264, lines 2–3.

107. Avicenna, *De anima*, V,8, ed. Rahman, p. 266, line 19 – p. 267, line 6.

108. Avicenna, *De anima*, V,8, ed. Rahman, p. 267, line 14.

109. 'even though there is no medium at all': 'wa-in lam yakun bi-tawassuṭin al-battata' (*De anima*, ed. Rahman); 'wa-in lam yakun mutawassuṭin al-battata' (*Maṣṣiqiyūn*, MSS Nu and Ay: 'even though there is not anything mediating at all'); 'wa-in lam yakun mutawassuṭan min-hu' (ibid., MS Ah, f. 667v; *min-hu* (?) without dot; the underlined letters seem to be a misreading of *al-battata*). The Latin translation has 'quamvis non sit ibi medium aliquo modo' (*De anima*, II,3, ed. Van Riet, p. 138, line 4).

110. Avicenna, *De anima*, II,3, ed. Rahman, p. 71, line 20.

111. Avicenna, *De anima*, II,3, ed. Rahman, p. 74, lines 1–2.

112. Avicenna, *De anima*, II,3, ed. Rahman, p. 72, lines 1–2.

would be something spread out like fibres (*lif*) and its perception would not <concern> all parts of <the skin>, but only the parts with fibres in it.<sup>113</sup>

As is Avicenna's usual procedure, the definition in chapter I,5, which gives an overview of the whole system of faculties of the soul, is a condensed version of the discussion of the sense in later chapters. Thus, in contrast to the other senses, no medium is mentioned, but nerves and flesh are given as the place where the faculty of touch is located and where a change in quality is directly received from the object of touch:

Among the <five senses> is touch, which is a faculty located in the nerves of the entire skin of the body and <in> its flesh, perceiving what touches it and what has an effect on it by means of a contrariety which changes the mixture or the disposition of the composition.<sup>114</sup>

This definition proved to be very successful in the West, as in fact did most definitions in chapter I,5.<sup>115</sup> Even though they look innocent, they were responsible for a wide dissemination of Avicenna's views, which often differed from those of Aristotle. In this case, Aristotle would oppose the view that there is no medium and that the organ of touch is affected directly by the object. Also, he would not locate the organ in the nervous flesh, but inside the body, close to the heart. Many writers quote Avicenna's definition without giving a second thought to the fact that it does not agree with Aristotle's doctrine: e.g. Gundissalinus, John Blund, Michael Scot, Jean de la Rochelle, Anonymous (MS Siena), Vincent of Beauvais and Petrus Hispanus.<sup>116</sup>

The nerves are a helpful example to understand the reasons for the success of Avicenna's psychology, because one of the reasons certainly is that the way was paved already by the influence of the Arabic medical literature on twelfth-century writers.<sup>117</sup> Writers who do not yet betray the impact of the Salernitan translations and adaptations, like Cassiodorus, Hrabanus Maurus, Hugh of St-Victor and also Adelard of Bath, write about the five senses and the sense of touch, but do not mention the nerves.<sup>118</sup> It is in the works of William of Conches and William of St-Thierry that the

113. Avicenna, *De anima*, II,3, ed. Rahman, p. 72, lines 2–6.

114. Avicenna, *De anima*, I,5, ed. Rahman, p. 42, line 11.

115. See Index locorum, I.5.

116. See Index locorum, I.5.q (definition of touch).

117. Birkenmajer has drawn attention to the role played by medical writers in the reception of Aristotle: 'Le Rôle joué par les médecins et les naturalistes dans la réception d'Aristote aux XII<sup>e</sup> et XIII<sup>e</sup> siècles' (1930), pp. 1–15. On the same topic, see Jacquart, 'Aristotelian Thought in Salerno', pp. 407–428.

118. Cassiodorus, *De anima*, 11, p. 558; Hrabanus Maurus, *Tractatus de anima*, p. 1120: 'Quintus est tactus qui cum omnibus membris sit attributus, praecipue tamen manibus deputatur, quibus etiam usus actionis maxime est datus. Manibus enim fit quicquid faciendum est'. Cf. Hugh of St-Victor, *De unione corporis et spiritus*, p. 886, line 107; Adelard of Bath, *Quaestiones naturales*, 31, pp. 154–7.

nerves enter the discussion of the five senses.<sup>119</sup> The source of these writers is Constantine the African's *Theorica Pantegni*,<sup>120</sup> which is a reworking of the first part of 'Alī ibn al-'Abbās al-Mağūsī's *Kitāb Kāmil aṣ-ṣinā'a at-ṭibbiya* ('The Complete Book of the Medical Art'), written in the tenth and adapted into Latin in the eleventh century.<sup>121</sup> Apart from William of Conches and William of St-Thierry only few writers on the soul incorporated the new knowledge. Thus we find rather traditional accounts of the faculty of touch in Isaac of Stella, Pseudo-Augustine and Thomas of Cantimpré.<sup>122</sup>

If we compare the situation before and after the appearance of Avicenna's *De anima* in the West, we see that its impact is considerable in two respects: first, it is responsible for the wider dissemination, even popularization, of a physiological knowledge of the soul, which, although being available before, was picked up by only few writers; secondly, it adds a philosophical dimension to the otherwise rather straightforward medical discussion of physiology. Twelfth-century writers, for instance, do not make much use of the distinction between organ and medium.

The first point can easily be demonstrated in the case of the nerves, which appear in most discussions of the faculty of touch of the first half of the thirteenth century.<sup>123</sup> The second point may be illustrated by a comment of Jean de la Rochelle, which follows his discussion of the five senses according to Avicenna:

Note that the aforementioned definitions <by Avicenna> are necessary to a high degree, because they explain whatever is necessary for each sense to be the sense in actuality, namely the faculty (*potentia*), the organ, object and medium, the disposition of the organ, medium and object and perhaps more things, for example the action of the sense and its function. But because their description requires a very long treatise, we shall pass over it.<sup>124</sup>

119. William of Conches, *Philosophia*, 4.24, pp. 109–10; id., *Dragmaticon*, p. 297; William of St-Thierry, *De natura corporis et animae*, 45, p. 119.

120. Constantine the African, *Pantegni*, Lib. IV, cap. 15: 'Tactus aliis sensibus est similis, quia mutatur in rei substantiam quae tangitur quae mutatio menti mandatur per nervos, et ita illam mutationem sentit mens. Omnes propter tactum proprium habent membrum unde sentiunt. Tactus enim in membris totius est corporis praeter in unguibus atque pilis, ... pili et ungulae, quia nervis caruere, nullum sensum habere ...'.

121. See Burnett and Jacquart, eds, *Constantine the African*, p. vii, and the article in it by Ronca, 'The influence of the *Pantegni* on William of Conches's *Dragmaticon*', pp. 266–85, for a general assessment of the influence (without specific reference to the nerves).

122. Isaac of Stella, *Epistola de anima*, p. 1881; Pseudo-Augustine, *Liber de spiritu et anima* (p. 802), is more modern than Isaac in that he mentions the brain and the spine: '... visum videlicet, auditum, gustum, odoratum, et tactum. Qui tangendi sensus ab anteriori parte cerebri ad posteriorem transiens, et inde per cervicem et medullam spinæ descendens per totum corpus diffunditur'; Thomas of Cantimpré, *Liber de natura rerum*, 2.15, p. 95.

123. See the writers listed in Index locorum, I.5.q.

124. Jean de la Rochelle, *Tractatus*, 2.1.4, p. 74: 'Nota quod diffinitiones praedictae valde sunt necessariae quia exprimunt quicquid est necessarium ad unumquemque sensum ad hoc quod sit sensus in effectu, scilicet potentiam, organum, obiectum et medium, dispositionem organi, medii et obiecti et

Jean obviously has realized that Avicenna's definitions are not only useful to pillage, but contain *in nuce* many features of Avicenna's philosophical standpoint.

The question, then, is how the scholastics deal with the fact that Aristotle says something different on the topic. Principally, there are three different kinds of reaction: to take the Aristotelian or the Avicennian side, or to develop a compromise. John Blund's position is (whether deliberately or not) to make such a compromise: he takes over from Avicenna the idea (among a number of other points) that the nerves are the organ of touch, and he adopts from Aristotle the theory that the flesh or skin is the medium.<sup>125</sup> A similar standpoint can be found in the anonymous *Lectura in librum de anima* (1246–7)<sup>126</sup> and in the psychological section of the *Summa fratris Alexandri*. The anonymous author of the latter, who is called Considerans, speaks of the flesh as the medium of touch and of the 'sensibiles nervi' as its organ.<sup>127</sup> He does not tackle the question of touch directly, but raises the topic in connection with the question of the organ of common sense. Here we see that the connection with the brain-versus-heart dispute plays a role in the West; Considerans explains that according to the physicians the sensory nerves originate in the brain, whereas for Aristotle the common sense is located in the heart. Both positions are true in different respects, he says.<sup>128</sup>

Most interesting is Albertus's attitude towards the Avicennian theory of touch, because in his early *De homine* he still tries to combine it with divergent standpoints, whereas later he turns against Avicenna. To begin with *De homine*: in the *solutio* to the respective question about the medium and the organ of touch,<sup>129</sup> Albertus maintains that in one respect the whole body is the organ of touch and that there is no medium (which is close to Avicenna's opinion), but that touch primarily is located in the heart (which is Aristotle's view) and secondarily also in the skin and the nerves. In another respect, he says, touch is located in the brain. The *spiritus* is the vehicle of the information coming from the skin and the flesh. This latter part

forte plura scilicet operationem sensus et finem. Sed quia expositio earum valde longum expetit tractatum, ideo eam relinquimus'. A similar remark can be found in Albertus's *De homine*, 9.1, p. 109, where the topic is the nutritive faculty; see p. 64 above.

125. John Blund, *Tractatus de anima*, 16, p. 58, line 15 and p. 60, lines 3–9.

126. Anonymous (Gauthier 1985), *Lectura in librum de anima*, 2.20.4, p. 395, line 255. Compare Anonymous (Gauthier), *De anima et de potentiis eius*, who does not mention the organ of touch, but only the medium, which is flesh or something similar (p. 36, lines 209–210). Since this writer mentions the nerves in the case of the other four senses, he presumably believes that nerves play a part also in touch.

127. Alexander of Hales et alii, *Summa theologica*, 4.1.2.2.1, p. 433a: 'ex dispositione vero commixtionis omnium, quae est in carne, est medium in tactu'. Ibid., p. 438a: 'Et videtur quod sit aliqua pars cerebri in qua conveniunt sensibiles nervi; et hoc arguunt medici ...'.

128. Alexander of Hales et alii, *Summa theologica*, 4.1.2.2.1, p. 438b: 'Et potest utrumque esse verum, quod dicunt medici et quod dicit Philosophus; sed medici ad causam propinquam respiciunt, et ideo dicunt originem nervorum esse a cerebro et ramificari motus differenter, ut fiat sensus et motus; Philosophus vero respicit ad causam primam ...'.

129. Albertus, *De homine*, 33.3, p. 289b–290a; cf. Schneider, 'Die Psychologie', pp. 126–31.

of the *solutio* is a blending of Avicenna, Algazel<sup>130</sup> and the twelfth-century medical tradition.

Over a decade later, Albertus develops a much clearer view of the differences between the standpoints of his predecessors. As usual, Albertus's knowledge of the tradition surpasses by far that of his contemporaries. Let us quote the relevant passage from his *De anima*:

Now, it has been proven through anatomy that flesh does not have sense perception unless it is ministered by the nerve, and therefore the Aristotelian statement seems to be wrong. For not only in flesh do we find sense perception but in some bones such as in teeth. This is proved by experience.

And that is why Avicenna and many others despised following the statement of Aristotle and said that the nervous flesh is the organ of touch ... and they said that touch does not have any medium ...

But we, wishing both to save the truth and to give reverence to the father of the philosophers, Aristotle, we say that flesh is the medium of touch ...<sup>131</sup>

Albertus's attitude towards Aristotle has obviously seen a remarkable change. This is also reflected in the language he uses to attack people like Avicenna: 'sententiam Aristotelis imitari contempserunt'. However, Albertus is not as strict as he seems. For in the following sentences he modifies his statement substantially, and defines Aristotle's term 'flesh' as referring either to flesh itself or to organs which take the place of flesh in bloodless animals or to organs which have a similar complexion to flesh, like teeth, or organs which are mixed with flesh, like nerves. Albertus also seems to imply that the organ of touch is the nerves, which originate in the brain.<sup>132</sup> Albertus therefore rejects the Avicennian idea that there is no medium, but he also sees that Aristotle's theory of flesh cannot account for all phenomena connected with touch and hence interprets it along medical and Avicennian lines.

For a modern reader, the medieval problems related to the topic of touch are

130. Algazel, *Metaphysica*, p. 165, lines 5–10, who in turn draws on Avicenna's *Dānešnāme*, tr. Achena/Massé, II, pp. 56–7. Algazel adds the theory of the *spiritus* as the vehicle of the faculty, which is truly Avicennian (cf. *De anima*, V,8, ed. Rahman, p. 263, lines 9–10), but does not appear in this context in the *Dānešnāme*.

131. Albertus, *De anima*, 2.3.34, p. 147, line 19: 'Adhuc autem, per anatomiam probatum est quoniam caro non habet sensum nisi sibi ministratum a nervo et ideo videtur sententia inducta <scilicet Aristotelica> esse falsa; nec solum in carne fit sensus sed in ossibus quibusdam sicut in dentibus sicut experimento probatur. Et ideo Avicenna et multi alii hanc sententiam Aristotelis imitari contempserunt et dixerunt carnem nervosam esse organum tactus ... et ... dicunt tactum non habere medium aliquod ... Nos autem et veritatem salvare cupientes et reverentiam exhibere patri philosophorum Aristoteli dicamus carnem esse medium tactus ...'.

132. Albertus, *De anima*, 2.3.34, p. 147, line 74: 'Alibi autem, ubi <nervi> carni immixti sunt et medietati carnis vicini, sensum habent, quia ibi sunt plus habentes rationem medii in tactu quam organi rationem'.

difficult to understand. Aristotle's idea that there has to be a medium for touch amounts to forcing a philosophical distinction upon phenomena. Also, it does not seem to make any sense to insist on Aristotle's term 'flesh' if it has to be reinterpreted entirely in order to uphold his theory.

It has been shown above that the nerves are a helpful example in understanding the reasons for the success of Avicenna's psychology. The same is true for its decline. For even though Avicenna's theory of the nerves has great advantages over Aristotle's, its influence diminishes significantly in the second half of the thirteenth century, as we could see in the case of Albertus. It is not only that Avicenna is not quoted any more. In some works which discuss the sense of touch the nerves have apparently disappeared completely: e.g. in Adam of Buckfield's *Sententia de anima* (about 1245), Pseudo-Petrus Hispanus's *Expositio de anima* (about 1250?) and Thomas Aquinas's *Sententia libri de anima* (about 1267).<sup>133</sup>

It is important to note that it is not necessarily the genre of commentaries which is responsible for the disappearance of the nerves. There is a number of commentaries on Aristotle's *Peri psychēs* which mention or even discuss them: Anonymous (MS Siena), Anonymous (Gauthier 1985), Albertus's *De anima*, Anonymous (Vennebusch), Anonymous (Bazán)<sup>134</sup> – and Averroes, as we have seen. Whether the nerves appear in a commentary or not, therefore, is an excellent index to the author's attitude. Omitting the nerves certainly is a conscious decision in the thirteenth century: they belong to common medical knowledge, they appear in many theological and philosophical writings of the thirteenth century, including widely read books like Vincent's *Speculum naturale* and Averroes's commentary on *Peri psychēs*.<sup>135</sup> Moreover, the disappearance of the nerves is not restricted to the genre of commentaries: in the whole corpus of Thomas's works only motor and visual nerves are mentioned, but no sensory nerves.<sup>136</sup>

We have discussed the deeper reasons for the decline of Avicenna's *De anima* as a whole in the chapter on the later thirteenth century.<sup>137</sup> The conclusion we can

133. Adam of Buckfield, *Sententia*, ff. 40rb–42ra; Pseudo-Petrus Hispanus, *Expositio*, pp. 225–40; Thomas, *Sententia libri de anima*, II, 22, pp. 159–62.

134. See Index locorum, I.5.q and II.3.j. The passage in Anonymous (Vennebusch), *Quaestiones in tres libros de anima*, is *quaestio* 52, pp. 232–7.

135. See n. 99 above. A significant passage in Vincent's *Speculum* is in 24.56, p. 1753: 'Porro virtutis sentientis et virtutis moventis operationes extrahet cerebrum mediatione nervorum, quae sensui motique sunt organa voluntaria, cum aliquis spiritus animalis qui in cerebri ventriculis est et in nervis mittatur ad omnia membra. Unde cum aliquis nervorum qui ad aliquod membrorum illud pervenit inscitur, membrum illud sensu motique privatur'. See also the chapter *De organis quinque sensuum*, 25.24, p. 1790.

136. The sole exception of which I am aware is *De veritate*, 29.4, p. 858, line 143, in which he speaks about the theory (which he attributes to the physicians) that the sensory and motor nerves originate in the brain. For Thomas's medical knowledge see Jordan, 'Medicine and Natural Philosophy in Aquinas', pp. 233–46, and p. 71 above.

137. See pp. 75–8 above and the references given there on the topical dispute between physicians and

draw from the present investigation is that there is a tangible decrease in interest in the physiology of touch among philosophers of the later thirteenth century. This decrease in interest is reflected either in the author's silence about the nerves (as in the case of Adam, Pseudo-Petrus Hispanus and Thomas) or in physiological nonsense (measured by the standards of the time) and open contempt for non-philosophical matters. The latter attitude can be found in the anonymous author of *Quaestiones de anima* (1272–7), edited by Bazán. The author – in an obvious attempt to rescue Aristotle – not only maintains that the nerve, which is the organ of touch, is rooted in the heart,<sup>138</sup> but directly attacks the medical writers on a related subject, i.e., the brain as the location of common sense. He confuses blood vessels with nerves, and finally comes down on the side of the Aristotelian view that the heart is the centre of sensation:

If it is said on the authority of Avicenna that common sense is some organic faculty, I will agree with this part of the premise. But if it is said: existing in the first part of the brain, I will deny this following the natural philosophers, although the physicians maintain this view following Avicenna. To this it has to be remarked that the physicians are given up to the senses. Because the physicians see that all blood-vessels ('venae') of the body come together in the first part of the brain and because they think that the common sense is some organic faculty, therefore according to them the common sense is in the first part of the brain, so that the conjoining blood-vessels may assist <the common sense>. And because the philosophers are more subtle than the physicians, they speak much more subtly about the organ of the common sense, saying that the common sense is in the heart as its organ, in the way of a faculty and of something spiritual, because the common sense is an organic faculty and has a subtle and spiritual organ. Therefore the common sense is rather around the heart than the brain ('magis est circa cor quam circa cerebrum').<sup>139</sup>

philosophers, n. 363.

138. Anonymous (Bazán), *Quaestiones De anima*, 2.31, p. 451: 'Unde ... dico tamen quod organum tactus est quidam nervus cordis ventriculosus habens se per modum retis extendentis se per totum corpus, et iste nervus principaliter et originaliter radicitur in corde'.

139. Anonymous (Bazán), *Quaestiones de anima*, 2.40, p. 465, line 34: 'Ad primum, cum dicitur auctoritate Avicennae quod sensus communis sit quaedam virtus organica, concedo illam partem maioris. Et cum dicitur: in prima parte cerebri existens, hoc nego secundum naturales, quamvis tamen medici tenent illam viam cum Avicenna. Iuxta quod notandum quod medici sunt sensuales; quia medici vident quod in prima parte cerebri concurrunt omnes venae corporis et iudicant sensum communem esse quandam virtutem organicam, ergo sensus communis est in prima parte cerebri secundum ipsos, ut illae venae concurrentes ipsum possint coadiuvare. Et quia philosophi sunt subtiliores medicis, ergo multo magis subtilius loquuntur de organo sensus communis, dicentes quod sensus communis virtualiter et spiritualiter est in corde tamquam in organo quia sensus communis est quaedam virtus organica et habet subtile et spirituale organum. Ergo sensus communis magis est circa cor quam circa cerebrum ...'.

### 3. THE THEORY OF VISION

'Verborum *lux, lumen, radius, color, splendor* significationem obscurius distinxit Avicenna'. This complaint about Avicenna's obscure optical distinctions does not come from a scholastic writer, but was uttered some years ago by a Western scholar.<sup>140</sup> But although these distinctions, which appear in the third book of *De anima*, the book on vision,<sup>141</sup> are not easy to understand, they were to become the most popular part of Avicenna's optics. There is no other passage in the third book which was drawn upon as often. As a whole, however, the book on vision is one of the parts of *De anima* most neglected both by the scholastics and by modern writers<sup>142</sup> – ironically, for it is the longest book of the five and presents Avicenna's most refined discussion of a single topic. But Avicenna's optical theories and their reception in the West deserve much more attention, not the least because they show that Avicenna consciously turned against Aristotle's science, and that the story of the Latin reception of Avicenna's complicated, but by no means obscure, theory is a story which contains elements of both complete misrepresentation and excellence of understanding.

Book three of Avicenna's *De anima* is marked by length and argumentative convolutions. Here the text of Avicenna's *Mašriqiyūn* is of great help. Its optical section is an abridgement of book three: Avicenna dispenses with arguing against divergent opinions and concentrates on his own theories.<sup>143</sup> Sometimes he inserts sentences that explain the structure of the argument, for instance at the very beginning where we learn that the whole text is designed to fall into two parts, a fact that is not apparent in *De anima*:

A chapter on this topic needs to have two parts. The first is on light, the translucent and colour, the second on the way of connection which exists between the perceiver and the perceived object of vision.<sup>144</sup>

140. Gauthier, 'Le Traité *De anima et de potentiis eius*' (1982), p. 37.

141. Avicenna, *De anima*, III,1, ed. Van Riet, pp. 170–71, and III,3, p. 194.

142. Lindberg, *Theories of Vision* (1976), pp. 43–52, examines Avicenna's line of argumentation in *De anima*, III,5. See also Winter, *Über Avicennas Opus egregium* (1903), pp. 42–53 (an outline of book three); Wiedemann, 'Ibn Sina's Anschauung vom Schvorgang' (1912), pp. 239–41; Verbeke, 'Science de l'âme et perception sensible' (1972), pp. 63\*–90\*; Sabra, 'Optics, Islamic' (1987), p. 242; Russell, 'The Emergence of Physiological Optics' (1996), pp. 684–5. In a way, Albertus Magnus' *De homine* and *De sensu et sensato* still count among the most knowledgeable secondary works on Avicenna's optics. There is very little on Avicenna's influence on Western optics apart from Akdogan's dissertation *Optics in Albert the Great's 'De sensu et sensato'* (1978).

143. In a prologue to *as-Sifā'*, which Avicenna added after the completion of both *as-Sifā'* and the *Mašriqiyūn*, he explains the nature of his approach in the *Mašriqiyūn*: 'I also wrote a book ... in which I presented philosophy as it is in itself and as required by an unbiased attitude which neither takes into account in <this book> the views of colleagues in the discipline, nor takes precautions here against creating schisms among them as is done elsewhere; this is my book on Eastern philosophy'. Translation by Gutas, *Avicenna*, p. 52; on the *Mašriqiyūn* in general see *ibid.*, pp. 115–30.

144. Avicenna, *Mašriqiyūn*, MS Ahmet, f. 669v (MS Nuruosmaniye, f. 410v; MS Ayasofya, f. 95v).

In this examination we shall follow Avicenna in his bipartite division and analyse his theory of the key notions of optics (chapters III,1–4 of *De anima*) after which we shall move on to his views on the process of sight (chapters III,5–8). Avicenna's other works are less informative than the *Maṣriqīyūn*. In the *Compendium on the Soul*, the *Naḡāt* and the *Dānešnāme*, he says very little on vision (though still more than on the other senses): The *Compendium on the Soul* discusses three theories of vision which resemble those discussed in *De anima*, III,5.<sup>145</sup> The *Naḡāt* contain a refutation of the four possible ways in which light can issue from the eye, which again is similar to a passage in *De anima*, III,5.<sup>146</sup> The *Dānešnāme* treats the same topic, adding a comparison of the eye to a mirror which does not have an equivalent in *De anima*.<sup>147</sup>

### The Doctrine of Light

A key passage for understanding the development of Avicenna's optical theory is to be found in his correspondence with Bīrūnī, the famous polymath and scholar, which dates from around AD 1000 when Avicenna was still very young and had not yet written any of his major works.<sup>148</sup> One of the questions which Bīrūnī sends to Avicenna concerns the nature of the rays of the sun. Avicenna's answer contains a definition of light, which is based on the authority of Aristotle:

Light (*ḍau'*) is the essential colour of the translucent insofar as it is translucent. This has been defined by Aristotle in the second part of the book on the soul and in the first part of the book on sensation, saying that <light> is the perfection of the translucent insofar as it is translucent.<sup>149</sup>

This a correct description of Aristotle's standpoint.<sup>150</sup> Bīrūnī answers:

You say that light is colour received by the air or <another> translucent body. But I say the opposite, namely that light is seen on that which is not translucent, and it is not seen on the translucent and is not received by it.<sup>151</sup>

Twenty years later Avicenna had changed his mind. In his *De anima* he draws a distinction that was to become very influential in the West: the distinction between

Cf. *De anima*, III,1, ed. Rahman, p. 91, ed. Van Riet, p. 169. I shall use the following abbreviations: MS Ah = MS Ahmet III 2125; MS Nu = MS Nuruosmaniye 4894; MS Ay = MS Ayasofya 2403.

145. Avicenna, *Compendium on the Soul*, pp. 353–5 and 391–4.

146. Avicenna, *Naḡāt*, pp. 160–62; for an English translation see Rahman, *Avicenna's Psychology*, pp. 27–9.

147. Avicenna, *Dānešnāme*, tr. Achena/Massé, II, pp. 58–61.

148. For the dating see Strohmaier, *Al-Bīrūnī*, p. 11; Gutas, *Avicenna*, pp. 97–8.

149. Bīrūnī, *al-Asīla wa-l-aḡwiba*, p. 34, lines 6–9. For a German translation see Strohmaier, *Al-Bīrūnī*, p. 57. The references are to Aristotle, *Peri psychēs*, II.7, 418b4–13, and *De sensu et sensato*, 3, 439a18–19.

150. For an introduction to Aristotle's optics, see Lindberg, *Theories of Vision*, pp. 6–9.

151. Bīrūnī, *ibid.*, p. 55, lines 4–6. German translation by Strohmaier, *ibid.*, pp. 57–8.

two kinds of light, *ḍau'* and *nūr*, which Gundissalinus and Avendauth translate as *lux* and *lumen*. This is a sensible translation, for both Arabic words can be used interchangeably for 'light'.<sup>152</sup> They only acquire their specific and technical meaning through the definitions that Avicenna attaches to them. Unfortunately, we do not have two words for light in English, and hence *ḍau'* and *nūr* are translated as 'natural light' and 'light' respectively in what follows. Some studies use the French term *clarté* for *lumen*, but the problem with this translation is that the meaning 'brightness' is too specific, given the fact that both *nūr* and *ḍau'* mean 'light'.<sup>153</sup> The translation of *ḍau'* as 'natural light', on the other hand, rests on passages in the Arabic.<sup>154</sup>

In order to understand what Avicenna means with his famous distinction, let us go through the first half of the *Maṣriqīyūn* text, which is an abbreviation of *De anima* chapters III,1 to III,4. Avicenna starts with definitions of *ḍau'* and *nūr*:

There are two kinds <of light>, one of them is the quality which sight perceives in the sun and in fire, but<sup>155</sup> <it> is not said to be black or white or red or any other colour; it is something possessed in itself. It is called <natural> light (*ḍau'*).

The second is something which radiates from this thing, so that one thinks that it falls on the bodies, with the effect that <the colours> white, black and green appear; it is acquired (*mustafād*) by a thing<sup>156</sup> different from it. It is called light (*nūr*).<sup>157</sup>

The keyword for the differentiation between natural light (*ḍau'*) and light (*nūr*) is *istafāda* 'to acquire'. Natural light, on the one hand, is the light of the sun and of fire. If we look at it, we cannot distinguish any colour. Light, on the other hand, is acquired from the sun or fire. Note that both kinds of light are defined as qualities of certain bodies, but not as the actualization of the translucent medium, as Aristotle would have said. Avicenna proceeds with a justification of his theory; there is a systematic difference between something seen by itself and something seen only if covered by light:

That which<sup>158</sup> we call <natural> light is for instance what the sun and fire have. It

152. Cf. Lane, *An Arabic-English Lexicon*, part 5, p. 1809, and part 8, p. 2865: According to some Arabic lexicographers, the two terms are synonymous; according to others, *ḍau'* is applied to stronger light such as that of the sun, which is exactly the opposite of what Avicenna says.

153. Verbeke, 'Science de l'âme', p. 68\*. Bakoš, *Psychologie d'Ibn Sīnā*, II, p. 64.

154. In particular the statement that certain things 'have light (*ḍau'*) naturally (*ṭabī'īyan*) <and> necessarily and not acquired' (Avicenna, *De anima*, III,3, ed. Rahman, p. 104 lines 10–11). Cf. the Latin translation: 'et haec est res cui lux est naturalis comes' (ed. Van Riet, p. 193, line 44).

155. 'but': *wa-lā* (MSS Nu and Ay); *lā* (MS Ah).

156. 'a thing': *li-ṣ-ṣay'i* (MS Ah); *aṣ-ṣay'i* (MSS Nu and Ay).

157. *Maṣriqīyūn*, MS Ah, f. 670r (MS Nu, f. 410v; MS Ay, f. 95v). Cf. *De anima*, III,1, ed. Rahman, p. 91, line 10, ed. Van Riet, p. 170, line 11.

158. 'that': *bādā* (MSS Nu and Ay and *De anima*); *bādā ṣ-ṣay'u* (MS Ah).



is something which is seen by itself. For if something like air and water<sup>159</sup> are between a body which carries this quality <on the one hand> and sight <on the other>, then this body is seen necessarily. There is no need for the presence of that which, for instance, a wall needs; for in order that the wall may be seen in the state in which it is, it is not sufficient that there is air or water or something similar<sup>160</sup> between the wall and sight, but it is necessary that something<sup>161</sup> which we called light (*nūr*) falls on it so that it is seen. This light is an effect of a body possessing <natural> light (*ḍawʿ*) on <the wall>,<sup>162</sup> when it is facing <the body with natural light>, given that there is a body between them which is not of the sort that it prevents the effect of the <naturally> luminous thing on the receiver of light. Air and water are of this kind, because they transmit and do not prevent.<sup>163</sup>

After having stated that there is a principal difference between the qualities of having natural light, of having acquired light and of being translucent, Avicenna proceeds to say that likewise there are three different kinds of bodies: translucent bodies, bodies that are seen by themselves, and coloured bodies. The terms 'coloured' and 'having acquired light' are used interchangeably, since acquired light is the condition for colour.<sup>164</sup>

Bodies, according to a first distinction, are of two kinds: a body which is not of the sort to prevent <the light from reaching a body placed behind it> in the above mentioned way – this body shall be called translucent –, and a body of the sort to do this, such as a wall and a mountain.

Among the <bodies> of the second category, there is (1) something of the sort that it is seen without the need for the presence<sup>165</sup> of anything else but the existence of the translucent medium and this is the <naturally> luminous <body> like the sun and fire, which is not translucent but prevents the perception of what is behind it. This becomes clear from the overshadowing of a lamp by <another> lamp. For one of them prevents the other from having an effect on what is between both of them. It also prevents the vision from seeing what is behind it. And there is among these <bodies> (2) something which needs the presence of something else which makes it having a property and this is the

159. 'and water, ... is seen': *wa-l-mā'ru'ya* (MS Ay and *De anima*); *wa-innamā ru'ya* (MS Nu); *wa-l-mā'ay* (MS Ah).

160. 'similar': *yusūbū-bumā* (MSS Nu and Ay and *De anima*); *yusūbū-bā* (MS Ah).

161. 'something': *āṣ-ṣay'ū* (MSS Nu, Ah and *De anima*); *om.* (MS Ah).

162. 'on <the wall>': *fī-bi* (MS Ah and *De anima*); *min-bu* (MSS Nu and Ay).

163. *Maṣriqiyūn*, MS Ah, f. 670r. Cf. *De anima*, III,1, ed. Rahman, p. 91, line 19, ed. Van Riet, p. 171, line 23.

164. See *De anima*, III,1, ed. Van Riet, p. 172, line 37 to p. 173, line 45, where he differentiates between things that have natural light and those that have *lumen* and thus are *coloratus*. (The second *quiddam* in this passage is very misleading (line 39). Avicenna still speaks about the bodies that have natural light.)

165. 'presence': *ḥuḍūr* (MSS Nu and Ay and *De anima*); *ḡubūr* ('appearance': MS Ah).

coloured thing (*al-mulawwan*).<sup>166</sup>

One can see that Avicenna takes an approach very different from his early letter to Bīrūnī. There he had defined light as the colour of the translucent. Now, in contrast to Aristotle and in accordance with Bīrūnī, he maintains that the medium is not visible at all, and defines light with regard not to the medium but to bodies that are not translucent. Avicenna has not, however, simply accepted Bīrūnī's position but adds his own theory of bodies and their luminous qualities.

The central notions of Avicenna's theory are further developed in chapter *De anima*, III,1, which the *Maṣriqiyūn* repeat almost entirely. One passage, on actualization, is of special interest since it shows how Avicenna's theory of the translucent differs from that of Aristotle. For both writers, the condition for any perception of an object is that the medium becomes actualized. But because Avicenna accepts two kinds of light, he finds that there are two ways to actualize the translucent: a fire may do it, but also an illuminated wall. Or, as Avicenna puts it, actualization happens either through a change (*al-istiḥāla*) in an object such as a wall, or through the appearance or movement (*al-ḥaraka*) of a body such as the sun or fire:

As to change, the change which the translucent in potentiality needs in order to become translucent in actuality, is the change of the coloured body towards being illuminated and the presence of its colour in actuality. As to movement, the body which has <natural> light moves towards it <scil. the translucent> without a change in it. If one of these two <i.e. change and movement> occur, then that which is seen is conveyed and <the translucent in potentiality> becomes translucent in actuality because of the presence of something else.<sup>167</sup>

What is Aristotelian in this passage is the emphasis on the need for the actualization of the medium, but what is not Aristotelian is the fact that light, being the quality of certain bodies, exists independently of the medium. Where Aristotle says that light is the actualized state of the translucent, Avicenna relegates this actualization to an effect of the movement or change of bodies.<sup>168</sup>

Before coming back to his own theory, Avicenna now (in a passage that corresponds to *De anima*, III,2) switches to a refutation of divergent opinions, starting with the atomists:

There are some people who maintain that the light (*nūr*) which shines from the luminous upon the objects, is not a disposition which comes about in <the

166. *Maṣriqiyūn*, f. 670r. Cf. *De anima*, III,1, ed. Rahman, p. 92, line 10, ed. Van Riet, p. 172, line 33.

167. *Maṣriqiyūn*, MS Ah, f. 670v–671r. Cf. *De anima*, III,1, ed. Rahman, p. 94, line 19, ed. Van Riet, p. 176, line 96.

168. Cf. also Avicenna, *De anima*, III,1, ed. Van Riet, p. 175, line 79: 'translucens autem non est visibile ullo modo'. Ibid., p. 174, line 62: 'non est in eo aliquid lucidum'.



objects>, but is small bodies, which are separated from the luminous in <different> directions and which are moved through <the luminous body's> movement, so that <the objects> shine because of them.

In the *kitāb aṣ-Ṣifā'* I have laid out the arguments they attached to it, and I have presented a refutation of them.<sup>169</sup>

Here follows a refutation of the doctrine that light is the manifestation of colour (from *De anima*, III,2). Avicenna then returns to the presentation of his own stand-point (from *De anima*, III,3), explaining again the difference between natural and acquired light, emphasizing that only bodies with acquired light have colours that can be seen; the planets Mars and Saturn are exceptions since they seem to have natural light but are also coloured. Note his explicit use of the terms 'natural' (*ṭabīʿī*) and 'acquired' (*mustafād*):

It seems that it is true that (1) some things have colour in themselves. If they illuminate, their illumination becomes so strong that the <natural> light (*ḍau'*) overwhelms<sup>170</sup> vision and no colour is discerned. This thing has <natural> light (*ḍau'*) naturally and necessarily, not acquired. Some of them have the possibility for <having> colour. (2) Some things have a mixed substance: either a mixture of the composition of the luminous parts and of the parts capable of colour, such as fire, or a mixture of the complexion of the qualities, such as Mars and Saturn. It is not possible that I decide anything at the moment about the case of the sun.

The dispositions of <natural> light (*ḍau'*), of light (*nūr*), of colour and of the translucent have <now> become known.<sup>171</sup>

Avicenna is obviously willing to admit exceptions, but on the whole his theory of light emerges as being very systematic. It rests on exclusive definitions of the qualities that different bodies have, as the following diagram shows:

	natural light	acquired light/colour	translucent
sun, fire	yes	no	no
wall	no	yes	no
air, water	no	no	yes

Avicenna sums up his theory with a set of conclusions, which appear both in *De anima* and the *Maṣriqiyūn* and were to become well known in the Latin West. In striking contrast to the definitions with which he had opened the book on vision, Avicenna now seems to include a concession to Aristotle by inserting sentences saying that both natural light and acquired light, in certain respects, are the

169. *Maṣriqiyūn* f. 671r. Cf. *De anima*, III,2, ed. Rahman, p. 95, line 8, ed. Van Riet, p. 177, line 8.

170. 'overwhelms': *tabḥaru* (MSS Nu and Ay and *De anima*); no do (MS Ah).

171. *Maṣriqiyūn* f. 671v. Cf. *De anima*, III,3, ed. Rahman, p. 104, line 8, ed. Van Riet, p. 193, line 41.

perfection of the translucent:

(1) <Natural> light (*ḍau'*) is a quality which by itself is the perfection of the translucent as a translucent in actuality, while it is also a quality which a visible object, for example the sun,<sup>172</sup> has by itself and not because of an external cause. There is no doubt that the visible by itself also prevents vision of what is behind it. (2) Light (*nūr*) is a quality which the non-translucent body acquires from a thing which has <natural> light, so that the translucent becomes perfect through it as being translucent in actuality. (3) Colour is a quality which becomes perfect through <natural> light in the sense that the <coloured> body becomes an obstacle for the action of the <naturally> luminous on <another body> which has the <coloured> body between itself and the <naturally> luminous.

Thus the bodies are <naturally> luminous and coloured and translucent.<sup>173</sup> The colours therefore are existent. Their existence <does not imply> that they are <natural> lights (*aḍwā'*) or that <natural> lights are the appearances of them. Still, they are not what they are in actuality without <natural> lights.<sup>174</sup>

The Aristotelian ring of these definitions is misleading. From the very opening of his book on vision, Avicenna had described kinds of light as qualities of bodies. When these bodies move or when they are changed through the acquisition of light, the medium becomes translucent in actuality and thus perfect; actualization is relegated to an effect of these qualities. This is obvious in the second definition above, that of acquired light (*nūr*); but in the first definition Avicenna mentions the perfection of the translucent first even though it comes second in the chain of cause and effect. The root of disagreement between the Greek and the Arabic philosopher lies in the fact that Aristotle's theory starts with the philosophical distinction between actuality and potentiality whereas Avicenna starts with the heavenly and earthly bodies and their luminous qualities. It is therefore not correct to say that Avicenna 'accepts the Aristotelian doctrine of light as the actualization of the potentially transparent medium'<sup>175</sup> or that he 'conceives of light as the actuality of the transparent as such and as the actuality of colours'.<sup>176</sup> It is rather the other way around: Avicenna has turned his back on this very part of Aristotle's theory – very consciously, as we know from the fact that as a young man he had defended Aristotle against Bīrūnī.

The Latin translators, Avendauth and Gundissalinus, had their difficulties with

172. 'for example the sun': *ka-ṣ-ṣamsi* (MSS Nu and Ay); om. (MS Ah and *De anima*).

173. Here there is a leap from the middle of *De anima*, III,3 to the end of *De anima*, III,4, ed. Rahman, p. 115, line 12, ed. Van Riet, p. 212, line 23.

174. *Maṣriqiyūn* f. 671v. Cf. *De anima*, III,3, ed. Rahman, p. 104, line 16, ed. Van Riet, p. 194, line 50.

175. Sabra, 'Optics, Islamic', p. 242.

176. Verbeke, 'Science de l'âme', p. 90\*: '... il conçoit la lumière comme l'acte du diaphane en tant que tel et comme l'acte des couleurs'.

Avicenna's optics. They wisely decide to use the terms *lux* and *lumen* for the two kinds of light, but unfortunately do not employ them consistently. They usually use *lux* for natural light (*ḡau'*) and *lumen* for acquired light (*nūr*), but sometimes exchange the terms, most notably at the beginning of book three, with the effect that one is led to misattribute the definitions which follow upon this sentence.<sup>177</sup> Nor are the translators consistent in their translation of the terms 'acquired' (*mustafād*) and 'acquire' (*istafāda*) the importance of which they do not seem to have recognized. Compare the three examples:

- (1) Sit autem una earum ... lux, et *utilitas* eius sit lumen.
- (2) ... et haec est res cui lux est naturalis comes, non *adveniens aliunde*.
- (3) Lumen vero est qualitas quam *mutuat* corpus non translucens a lucido ...<sup>178</sup>

A further source of major confusion was that in version B of the manuscript tradition the definition of *lumen* in chapter III,1 was augmented by a redactor's addition: 'scilicet splendor'.<sup>179</sup> This word does not have any equivalent in the Arabic. One may observe that Avendauth and Gundissalinus had a liking for the term *splendor*, which they sometimes use instead of *lux* or *lumen*, notably in *De anima*, III,2 where Avicenna refutes the theory that light is the manifestation of colour. This may have induced the redactor of version B to add the gloss 'scilicet splendor'. Perhaps he also wanted to clarify the definition 'secunda est id quod resplendet ex his ...' by adding a word which was similar to the preceding 'resplendet'. The term *resplendere*, however, is a not very convincing translation of the verb *ṣaṭa'ū* which means 'to shine' or 'to diffuse itself, radiate'.<sup>180</sup> Whatever its origin, the addition misled a number of readers.

John Blund was the first of these. He writes:

In <Avicenna's> commentary a distinction is made between *lux* and *lumen* and *splendor*. The commentator calls *lux* the perfection of the translucent; he calls *lumen* an effect created in the translucent such as in the air; he says that *splendor* is an effect created of colour in something translucent, such as of red or something similar.<sup>181</sup>

177. Avicenna, *De anima*, III,1, ed. Van Riet, p. 170, lines 7–8. The definitions follow lines 10–15.

178. Avicenna, *De anima*, III,1, ed. Van Riet, p. 171, lines 21–2; *ibid.* III,3, p. 193, lines 44–5; *ibid.* III,3, p. 194, lines 54–5.

179. Avicenna, *De anima*, III,1, ed. Van Riet, p. 170, line 14.

180. It originally means 'to ascend'. Cf. Lane, *An Arabic-English Lexicon*, part 4, p. 1358. There is no need to assume with Van Riet (*De anima*, III,3, p. 170, n. 14) that the Arabic word behind the alternative reading 'descendere' was something different from *ṣaṭa'ū*; the translators probably thought of the sun, from which natural light issues and descends upon the bodies on the earth.

181. John Blund, *Tractatus de anima*, 10, pp. 32–3: 'Distinguitur autem in commento inter lucem et lumen et splendorem. Lucem appellat Commentator perfectionem translucentis; lumen vero appellat passionem generatam in translucente, ut in aere, splendorem autem dicit esse passionem generatam ex colore aliquo in re translucente, ut ex rubore vel aliquo consimili'.

There are several remarkable features about this passage. Firstly, the definition of *lux* is quoted in an abbreviated version which omits the core concept of *lux* as a natural quality of certain bodies. What remains is the part of Avicenna's definition which sounds most Aristotelian. Secondly, *lumen* is defined as an effect created in the translucent – instead of, correctly, the non-translucent – which turns Avicenna into an Aristotelian. Thirdly, the definition of *splendor* is an adaptation of the corrupted *scilicet splendor* passage in *De anima*, III,1 – which means that what appears as a definition of *splendor* is in fact Avicenna's definition of *lumen*.<sup>182</sup> Blund further blurs the meaning by saying that *splendor* is an effect created in something translucent – instead of non-translucent. This amounts to a complete misrepresentation of the key notions of Avicenna's optics. It seems that John Blund was misled by the assumption that Avicenna agrees with Aristotle and that he therefore understood Avicenna's different kinds of light as being defined in relation to the translucent medium.

The authority of Aristotle is only one of several obstacles for understanding Avicenna's optical distinctions. Another obstacle is that in the West there already existed an indigenous tradition of differentiating between the entities involved in vision, the theory of the *tria necessaria*: Calcidius, Macrobius, William of Conches, the Sigtuna commentary on the *Timaeus* and other writers discuss the necessary conditions for vision, usually naming interior light, an illuminated medium and an illuminated object. This discussion, based on the theory of extramission, already operated with the terms *lux*, *lumen* and *splendor*.<sup>183</sup> In addition, there is also the well-known distinction between *lux* and *lumen* drawn by Robert Grosseteste in his treatise *De luce seu de inchoatione formarum* (dating from the 1220s). What Grosseteste calls *lux* is not visible but is the perfection of the first body of the universe, the firmament; *lumen*, on the other hand, is the spiritual body (or bodily spirit) which issues from the first body and creates further bodies, such as the spheres, by multiplying itself.<sup>184</sup> Grosseteste's theory therefore is less concerned with vision than with creation.

There is hardly any Western reader who does not give an Aristotelian or Grossetestian bent to Avicenna's concept of acquired light (*lumen*). Roger Bacon, for example, writes that, according to Avicenna:

182. Cf. other definitions of *splendor*: Anonymous (ed. Gauthier), *De anima et de potentiis eius*, p. 37, lines 224–6: 'lux ... in terso denso splendor est'; Anonymous (ed. Callus), *De potentiis animae et obiectis*, p. 151, lines 29–30: 'In corpore vero opaco, quemadmodum est terra et omne corpus praebens resistentiam, <lux derelinquit> splendorem'; Albertus, *De homine*, 21, p. 184: '... ut dicit Avicenna ... Splendor autem est reflexio luminis procedens a reflexione radiorum'; Thomas, *De anima*, 2.14, p. 129, line 321: 'Si autem <lux> causetur ex reverberatione radii ad corpus lucens vocatur splendor'.

183. See Ricklin, 'Vue et vision', pp. 30–32.

184. Robert Grosseteste, *De luce seu inchoatione formarum*, ed. Baur, pp. 52–5. See in general Lindberg, *Theories of vision*, pp. 94–102, and for a recent discussion Speer, 'Lux est prima forma corporalis', pp. 62–5.

*lumen* is that which is multiplied and created by *lux*; it comes about in the air and in other fine bodies which are called media, because the species are multiplied through the mediating activity of these bodies.<sup>185</sup>

This is a strange mixture of Grosseteste's theory of the creation of species and of Avicenna's optical theory of acquired light. Also, Roger Bacon, just as John Blund, misrepresents Avicenna's theory of *lumen* by saying that it is an effect created in the translucent medium – instead of non-translucent objects. This is, in fact, a very common mistake among Avicenna's Latin readers. Whenever they mention the Avicennian distinction between *lux* and *lumen* they Aristotelianize the definition of *lumen*:

Anonymous (ed. Gauthier): 'lux ... in diaphano id est in transparenti lumen est'.<sup>186</sup>

Anonymous (ed. Callus): 'lux ... derelinquit in corpore transparente effectum lumen'.<sup>187</sup>

Bonaventura: '... dicit Avicenna ... quod lumen est affectio corporis habentis lucem cum oppositum fuerit illi, scilicet pervium'.<sup>188</sup>

Thomas, *Scriptum super sententiis*: 'Avicenna dicit quod ... lumen est qualitas quam mutuatur corpus diaphanum a corpore lucido'.<sup>189</sup>

Thomas, *De anima*: 'Ipsa igitur participatio vel effectus lucis in diaphano vocatur lumen ... Lumen autem commune est ad omnem effectum lucis in diaphano'.<sup>190</sup>

John Pecham: 'Secundo de lumine in radio quod proprie lumen dicitur'.<sup>191</sup>

The mistake is so common<sup>192</sup> that it may have its root in a corrupted textual tradition of *De anima*. There is evidence for such a corruption: Simone Van Riet's apparatus lists a manuscript (V) which omits the word 'non' before 'translucens' in

185. Roger Bacon, *De multiplicatione specierum*, 1.1, p. 4: 'Avicenna dicit ... quod lux est ... Lumen vero est illud quod est multiplicatum et generatum ab illa luce quod fit in aere et in ceteris corporibus raris quae vocantur media quia mediantibus illis multiplicantur species'.

186. Anonymous (ed. Gauthier), *De anima et de potentiis eius*, p. 37, lines 224–5.

187. Anonymous (ed. Callus), *De potentiis animae et obiectis*, p. 151, lines 27–9.

188. Bonaventura, *In quatuor libros sententiarum*, 2.8.3.2, p. 328.

189. Thomas, *Scriptum super sententiis*, ii.13.1.3.sc, p. 332 (I have changed *mutuatur* to *mutuat*).

190. Thomas, *Sententia libri de anima*, 2.14, p. 129, lines 318–23.

191. John Pecham, *Tractatus de perspectiva*, 2, p. 28.

192. For a modern example see Sturlese, 'Optik', p. 1420: 'Avicenna ... folgte der aristotelischen Theorie und führte die in der Scholastik klassisch gewordene Unterscheidung zwischen "lux" und "lumen" hinzu, wobei er lux als eine Qualität der lichtstrahlenden Körper und lumen als deren Effekt auf das optische Medium verstand'. Cf. also Lindberg, 'Optics, Western European', p. 249: 'Ibn Sina's distinction between *lux* and *lumen* was widely (but not universally) employed, *lux* being viewed as the luminous quality of the fiery body and *lumen* as its effect propagated through the surrounding transparent medium. *Lux* was light in the body; *lumen* was light in the medium'. Cf. id., 'The Western Reception', p. 722.

the definition of *De anima* III,3: 'Lumen vero est qualitas quam mutuatur corpus [non] translucens a lucido ...'. It seems more likely, however, that the Aristotelian understanding of Avicenna's non-Aristotelian theory came first and was followed by textual corruption.

Some of the confusion goes back to careless citation of the Avicennian text. If Bonaventura quotes Avicenna's definition '*lumen* is the effect of a luminous body if it is opposite to it' and adds 'namely the translucent <is opposite to it>',<sup>193</sup> he ignores the next sentence in Avicenna's text: 'and if there is a body between them which does not prevent the effect of the luminous thing ... just as air ...'.<sup>194</sup> What is opposite to *lux* is not the translucent, but a non-luminous body which acquires light, such as an illuminated wall. Bonaventura's gloss 'scilicet pervium' therefore is wrong. There are two reasons for this mistake, apart from the above-mentioned tendency to read Aristotle into Avicenna. Firstly, the passage in question is difficult to understand because it is badly translated: Avicenna gives an example for an illuminated object, the wall, which Gundissalinus and Avendauth render with the pronoun *id*.<sup>195</sup> Secondly, it may well be that Bonaventura did not read Avicenna but repeated what others had quoted before him. This is likely because he says '*lumen* est affectio' just as Albertus Magnus before him<sup>196</sup> instead of quoting Avicenna literally as '*lumen* erit in eo affectio'.

Thus the story of the reception of Avicenna's optical distinctions is a story of misleading translations, of a partially corrupt textual transmission, of careless citation, and of the readers' tendency to conflate Aristotle or Grosseteste with Avicenna.<sup>197</sup> It is all the more impressive to see that one person stands out: Albertus Magnus. In his *De homine* (1242–3), he juxtaposes a number of key passages of Avicenna's theory<sup>198</sup> and adds his own interpretation:

With regard to the last question one has to say that according to the meaning of the words, just as Avicenna says, *lux* is in <something's> own nature, whereas *lumen* is the receiving thing ...<sup>199</sup>

193. See n. 188 above.

194. Avicenna, *De anima*, III,1, ed. Van Riet, p. 172: '... et fuerit inter ea corpus quod non solet tegere affectionem lucidi ... sicut aer'.

195. Avicenna, *De anima*, III,1, ed. Van Riet, p. 171, n. 26.

196. Albertus, *De homine*, 21.1, p. 177: 'Lumen est affectio corporis habentis lucem cum oppositum fuerit illi'.

197. Exceptions are the physicians Taddeo Alderotti (d. 1295), *Expositio in Isagogas Joannitianas*, f. 392va, and Pietro d'Abano (d. 1315), *Conciliator*, diff. 64, f. 95rb; see Hasse, 'Pietro d'Abano's *Conciliator* and the Theory of the Soul in Paris', in press.

198. Albertus, *De homine*, 21.1, p. 177: 'Item Avicenna in vi de naturalibus. Lumen est affectio corporis habentis lucem cum oppositum fuerit illi ... Item, Avicenna: Lux est qualitas, quae est perfectio translucentis secundum quod est translucens ... Item, Avicenna ibidem: Lumen est qualitas, quam mutuatur corpus non translucens a lucido, et translucens efficitur per eam translucens in effectu'. Cf. Avicenna, *De anima*, III,1, ed. Van Riet, p. 172, line 30, and III,3, p. 194.

199. Albertus, *De homine*, 21.1, p. 184b: 'Ad id quod ultimo quaeritur dicendum quod secundum

This is correct. Unlike his contemporaries, Albertus does not force the Aristotelian concept of the translucent upon Avicenna's definitions. Albertus's phrase 'receiving thing' ('subiectum recipiens') does not refer to the translucent but (rightly) to an illuminated object, as one can see from a remarkable passage in his treatise *Super Dionysium de divinis nominibus* (c. 1250):

To elucidate the present question one first has to note how *lux*, *lumen* and *radius* differ according to Avicenna. For he says that it is *lux* insofar as it is in a body which is luminous (*lucidus*) in actuality, but that it is *lumen* insofar as it occurs as a result of reflection in an illuminated body ...<sup>200</sup>

This is an intelligent and elegant rephrasing of Avicenna's theory: Albertus takes up the Avicennian word *lucidus* (*mudī* – having natural light) as the adjective corresponding to *lux* – without confusing it with the Greek-Latin translation *lucidus* for the Aristotelian translucent medium – and uses the term *illuminatus* to describe the status of a body whose light is acquired. Remember that the translators did not choose a consistent translation for the term *mustafād* ('acquired').<sup>201</sup> Albertus has not only grasped the central idea of Avicenna's optics but also found an adequate way to express it. He repeats it in other works, for instance in his commentary *Super Iohannem* (c. 1252): 'Avicenna calls *lux* the light (*lumen*) in its own nature; it is not illuminated'.<sup>202</sup> It is only in his commentary on the *Sentences* (and the late *Summa theologiae* which is dependent upon it) that Albertus seems to misquote Avicenna: he writes *translucens* instead of *non translucens*;<sup>203</sup> perhaps the problem will disappear when the commentary receives a critical edition.<sup>204</sup>

It is one thing to understand Avicenna's theory, another to accept it. In his early *De homine*, Albertus agrees with Avicenna's interpretation of the terms involved in optics, as we saw, but at the same time states that all natural philosophers agree on the fact that *lux* is a *habitus* of the translucent – which Avicenna would have denied.<sup>205</sup> In *De anima* (from 1254–7) Albertus defines *lumen*, just as Avicenna, as

rationem nominum ut dicit Avicenna lux est in natura propria, lumen autem in subiecto recipiente ...'. It follows definitions of *radius*, *radius* and *splendor*, which also go back to Avicenna's *De anima*, III,1.

200. Albertus, *Super Dionysium de divinis nominibus*, 2, p. 63: 'Solutio. Ad evidentiam huius quaestionis praenotandum est qualiter differant lux, lumen et radius secundum Avicennam. Dicit enim quod lux est secundum quod est in corpore actu lucido, lumen vero secundum quod ex reverberatione fit in corpore illuminato, ...'. Cf. *ibid.*, 2, p. 83.

201. The term *reverberatio* probably is Albertus's adaptation of the term *resplendet* in Avicenna's definition of *lumen*, *De anima*, III,1, ed. Van Riet, p. 170, line 14.

202. Albertus, *Super Iohannem*, 1.9, p. 42: 'Sed contra dicit Avicenna quod lux dicit lumen in propria natura et illa non est illuminata'.

203. Albertus, *Super secundum sententiarum*, 13.c.2, p. 245: 'Lumen est qualitas quam mutuatur corpus translucens a lucido ...' (Cf. *Summa theologiae*, II.11.51.1, p. 535).

204. For a recent analysis of the development of Albertus's optics, see Anzulewicz, 'Perspektive und Raumvorstellung', pp. 252–67.

205. Albertus, *De homine*, 21.1, p. 181a: 'Ex hoc patet quod lux est habitus diaphani et quod colores non acquirunt habitum ex luce. Hoc etiam videntur dicere omnes naturales philosophi'.

something received by a body, but immediately switches back to Aristotle's concept of light:

*lumen* however is what is received in another illuminated body. And therefore *lumen* is the received *habitus* in the nature of the translucent ...<sup>206</sup>

However, there are also indications that Albertus accepts Avicenna's distinction, without identifying received light with light in the translucent. For example in *De intellectu et intelligibili* (c. 1258), where the distinction between issued light, *lux*, and received light, *lumen* – he uses the terms *fundere* and *recipere* – is presented as part of Albertus's own theory.<sup>207</sup>

One can conclude that the story of the reception of Avicenna's doctrine of light is remarkable for gross misrepresentations of the original theory and for the exceptional part played by Albertus. Still, even if Avicenna's theory was quoted in a distorted version, it had a truly Avicennian impact, for it disseminated the conviction that a theory about the nature of light is essentially concerned with the distinction between different kinds of bodies, which have light as their property.

### *The Process of Sight*

The traditional battlefield of optical theory is not in the concepts we have discussed so far, but in the extramission and intromission theories, i.e. the clash between writers such as Euclid and Galen, who maintain that we see because light issues from the eyes (extramission), or writers such as Aristotle who maintain that light enters the eye (intromission).

If we now turn to the topic which Avicenna calls 'the way of connection which exists between the perceiver and the perceived object of vision',<sup>208</sup> we will see that Avicenna has a clear opinion on the issue. He names three theories, of which the first, following David Lindberg,<sup>209</sup> may be labelled 'Euclidean', the second 'Galenic', the third 'Aristotelian':<sup>210</sup>

In the second part <of this chapter on vision> we say that the well-known theories about sight are three. (1) One of them is the theory of those who maintain that

206. Albertus, *De anima*, 2.3.8, p. 110, line 68: 'Lumen autem est quod receptum est in alio corpore illuminato. Et ideo lumen est receptus habitus in natura diaphani'.

207. Albertus, *De intellectu et intelligibili*, 3.1, p. 498b: 'Dicamus igitur quod in luce tria sunt, sunt quae lux, lucere, et lumen: quae si considerentur in se, differentiam nullam realem omnino vel parvam videbuntur habere. Si autem considerentur relata ad quaedam alia, tunc magnam inter se habent differentiam: quia lux est forma luminis in corpore quod fundit lucem, et lucere est emanare formam illam in aliud, et lumen est iam recepta forma illa ab eo quod primo lucet'.

208. See p. 107, n. 144 above.

209. Lindberg, *Theories of Vision*, p. 44.

210. The following passage comes from Avicenna, *Maṣṣiqiyyūn*, MS Ah, f. 671v. Cf. *De anima*, III,5, ed. Rahman, p. 115, line 20, ed. Van Riet, p. 212, line 32.

linear rays go forth from the eyes<sup>211</sup> like a cone on the point of which is the eye and on the base of which stands the object. <They say> that the <ray> which is best in perceiving is the arrow<sup>212</sup> from it (<the eye>? *min-hā*) and that seeing an object is transporting the arrow towards it.

(2) The second one is<sup>213</sup> the theory of those who maintain that the ray sometimes goes forth from the eyes, but that its amount is not so big that it reaches for example half of the sphere of heaven except through a diffusion which <such> a diffusion of sight needs. But if <the ray> goes forth and connects with the luminous air,<sup>214</sup> then <the air> becomes its instrument and <the ray> perceives through it.

In the *kitāb aṣ-Ṣifā* we have laid out the arguments of all partisans of these two theories and we have presented a refutation of both of them and a solid verification of the falsity of the two theories.<sup>215</sup>

(3) The<sup>216</sup> third theory, which is<sup>217</sup> the correct opinion, is<sup>218</sup> the theory of those who maintain that just as the other objects of the senses are not perceived in the way that something of the senses<sup>219</sup> is reflected<sup>220</sup> on them, going forth towards them, connecting with them, or sending a messenger towards them, likewise vision does not<sup>221</sup> happen in the way that a ray is issued at all so that it attaches to the object of sight, but in the way that the form of the object reaches the perceiver by means of the translucent transmitting it.<sup>222</sup>

For<sup>223</sup> if the air (// f. 672r) is translucent in actuality and the colours are colours in actuality and if the faculty of vision is healthy,<sup>224</sup> then the presence of nothing else is needed in order that vision should occur.

This passage, an abbreviation of *De anima*, III,5, very explicitly states Avicenna's adherence to the theory of intromission – or rather, his dismissal of extramission theories, which Lindberg has analysed in greater detail.<sup>225</sup> But what is Avicenna's

own theory? This is difficult to discern in *De anima*, but apparent in the *Maṣriqiyūn*, which single out a central passage in chapter III,8 of *De anima*. Whereas chapters III,6 and III,7 are devoted to a lengthy rebuttal of extramission theories passed over in the *Maṣriqiyūn*, chapter III,8 contains an account of Avicenna's own theory, which the *Maṣriqiyūn* repeat. Unfortunately, Avicenna begins this chapter by saying that he is setting out to solve problems discussed by his opponents. It appears as if the whole chapter is concerned with the question of why it happens that we see things double. As a consequence, even a perceptive reader such as Albertus Magnus misinterprets the passage on Avicenna's own theory of intromission as giving a solution to the problem of double sight.<sup>226</sup> The *Maṣriqiyūn* omit these misleading introductory sentences and begin as follows:<sup>227</sup>

We say that the image of the object is transmitted through the mediation of the translucent towards the receiving member of the body, which is smooth and luminous, without the substance of the translucent receiving it in any way in the sense that <the substance> is this form; rather it happens in no time, when <object and perceiver> face each other. <We say> that<sup>228</sup> the image of the object at the moment it gets imprinted is imprinted in the crystalline humour and that <the faculty of> sight in fact is not situated in the humour, otherwise one thing would be seen as two, because there are two images in the two crystalloids, just as when something is touched<sup>229</sup> with two hands, there are two sense perceptions of touch.<sup>230</sup> The whole of this image is conveyed in two hollow nerves towards their intersection in the form of a cross. Just as a thin cone<sup>231</sup> extends – in imagination (*fi l-wahm*) – from the external form until it lets its point fall behind the surface of the crystalloid, likewise the image, which is in the crystalloid, is conveyed through the mediation of the conveying spirit, which is in the two nerves, towards their intersection in the way of a cone, so that the two cones meet and cross there and one image-like form is formed out of the two in the part<sup>232</sup> of the spirit which carries the faculty of vision <in the way of> a spirit, which conveys the perceived <form>, <but> does not perceive a second time, otherwise perception would be divided a second time in this spirit which carries the faculty of common sense. The faculty of common sense then receives this form, being the perfection of vision.<sup>233</sup>

226. Albertus, *De anima*, 2.3.14, p. 120, line 44.

227. *Maṣriqiyūn* f. 672r. Cf. *De anima*, III,8, ed. Rahman, p. 151, line 11, ed. Van Riet, p. 268, line 35.

228. 'that': *wa-inna* (MS Ah); *fa-inna* (MSS Nu and Ay).

229. 'is touched': *lumisa* (MS Ah and *De anima*); *lamsānā* ('we touch': MSS Nu and Ay).

230. 'two sense perceptions of touch': *kāna lamsāni* (MS Ah); *kāna lamsaini* (MSS Nu and Ay and *De anima*).

231. 'cone': *maḥrūṭun* (MS Ah and *De anima*); *maḥrūṭan* (MSS Nu and Ay).

232. 'in the part': *inda l-ḡuzʾi* (MS Ah and *De anima*); *an al-ḡirmi* ('from the body': MSS Nu and Ay).

233. The last sentences are a considerably abridged version of *De anima*, III,8, ed. Rahman, p. 152, lines 3–8, which distinguish more clearly between the different spirits and their functions.

211. 'from the eyes': *min al-baṣar* (MS Ah and *De anima*); om. (MSS Nu and Ay).

212. The Latin translator of *De anima* adds (ed. Van Riet, p. 213, line 37): '<sagitta> quae est linea media radii, aequidistans ab extremis'.

213. 'is': *buwa* (MSS Nu and Ay); om. (MS Ah).

214. 'air': *al-hawāʾ* (MS Ah and *De anima*); *ar-ruʾya* ('sight': MSS Nu and Ay).

215. 'In the *kitāb* ... the two theories': om. (MS Ah).

216. 'The': *fa-ammā* (MS Nu and Ay); om. (MS Ah).

217. 'which is': *wa-buwa* (MS Ah); *wa-buwa anna* (MS Nu); *wa-buwa anna anna* (MS Ay).

218. 'is the theory': *maḍhab* (MS Ah); *fa-maḍhab* (MSS Nu and Ay).

219. 'senses': *al-hawāss* (MSS Nu and Ay and *De anima*); *al-ḡawābir* ('substances': MS Ah).

220. 'is reflected': *yuraddu* (MSS Nu and Ay and *De anima*); *yuridu* (MS Ah).

221. 'not': *laisa yakūnu* (MS Ah and *De anima*); *li-yakūna yakūnu* (MSS Nu and Ay).

222. 'it': *iyābā* (MS Ah); *iyābu* (*De anima*); *ilaibā* (MSS Nu and Ay).

223. Here there is a leap to a sentence later in *De anima*, III,5, ed. Rahman, p. 123, line 17, ed. Van Riet, p. 225, line 41.

224. 'healthy': MS Ah adds: *bi-l-fiʾl* ('in actuality').

225. Lindberg, *Theories of Vision*, pp. 43–52.

One cannot say, therefore, that Avicenna's account of his own theory 'seems unduly economical'.<sup>234</sup> Avicenna certainly favours a theory of intromission, and in this he agrees with Aristotle. There are, however, also points of disagreement. In Aristotle it is light which actualizes the medium, and it is colour which sets it into motion. The air then acts upon the sense organ, since it extends continuously between organ and object.<sup>235</sup> Avicenna, on the other hand, maintains that the medium is actualized whenever a body with natural or acquired light is present. The air does not receive the image of the object in any way nor is it moved by it. Instead of saying that colour sets the medium in motion, Avicenna maintains that the image of the object is instantaneously transmitted by the medium.

As is obvious in the above passage, Avicenna incorporates much material from the Galenic tradition, notably about the crystalline humour of the eye, about the optic nerves which carry the pneuma or spirit, and about the junction of the nerves. But there are also differences, which go beyond Avicenna's general dismissal of extramission theories: Galen and Hunayn ibn Ishāq had maintained that the faculty of sight is located in the crystalline humour.<sup>236</sup> Avicenna, in contrast, says that the faculty of sight is located in the optical spirit (or the nerve containing the spirit)<sup>237</sup> after the intersection of the two nerves.<sup>238</sup> Thus, for Avicenna, the transmission of visual impressions does not stop at the crystalline humour. In fact, it does not even stop at the intersection of the nerves after an image-like form is created out of the two images: the visual form is further conveyed to the faculty of common sense, in which it is connected with other sense data. It is then stored in imagination, from where it can be recalled again by the faculty of estimation. The spirit of the ventricles of the brain serves as a transporter between the different internal faculties.<sup>239</sup> Avicenna thus goes beyond Galen by maintaining the transmission of visual forms to the realm of the internal senses; different parts of the brain perform the systematically different tasks of receiving, storing and recalling images.

Avicenna then finishes his discussion of optics in the *Maṣriqiyūn*.<sup>240</sup>

Estimation presents <the perceived form> to the soul with the mediation of the cogitative and imaginative faculties and there ends the transmission of the sensible forms.<sup>241</sup> Memory has a different function; this will be discussed later. The reasons

for seeing one<sup>242</sup> thing as two are four<sup>243</sup> ...

Here follow the four reasons, taken from *De anima*, III,8,<sup>244</sup> and the end of chapter III,8,<sup>245</sup> which discusses the number of the senses and the common sensibles, arguing against the theory that there is a special sense for the perception of the common sensibles.

In the final analysis, Avicenna's theory of vision is a defence of intromission theory but not of Aristotle's version of it. It discards the notion of contact between object and medium (and medium and eyes) in favour of a theory of the transmission of images. It includes much material from the medical tradition, but disagrees with it on a number of issues, such as on the location of the faculty of sight, on the transmission of visual forms after their reception in the crystalline humour, and on the principal question of extramission versus intromission. It is therefore not fully correct to say that 'the true theory of vision, in Avicenna's opinion, is the Aristotelian',<sup>246</sup> and it is wide of the mark to conclude that Avicenna, under the influence of Neoplatonism and Stoic theories of *pneuma*, offers a 'spiritualist' interpretation of vision.<sup>247</sup> The *spiritus* theory that we find in Avicenna is clearly part of the medical tradition.<sup>248</sup>

If Avicenna's distinctions between different notions of light were highly successful in the West, his theory of intromission was not. The central passage in *De anima*, III,8 is quoted very rarely; Albertus – probably misled by the introductory phrases, as indicated above – draws upon the chapter when dealing with the problem of double vision.<sup>249</sup> The main carrier of Avicenna's opinion was not book three, but the oft-quoted abbreviated definition of vision which is given in chapter I,5:

<visus> est vis ordinata in nervo concavo, ad apprehendendum formam eius quod formatur in humore cristallino ex similitudinibus corporum coloratorum venientibus per corpora radiosa in effectum ad superficies corporum tersorum.<sup>250</sup>

Unfortunately, this is not a good translation. Avendauth and Gundissalinus translate

242. 'one': *al-wāḥid* (MSS Nu and Ay and *De anima*); om. (MS Ah).

243. 'four': *arba'atu asbābin* (MSS Nu and Ay and *De anima*); *arba'atu aṣyā'a* (MS Ah).

244. Avicenna, *De anima*, III,8, ed. Rahman, p. 154, line 13 to 158, line 16; ed. Van Riet, p. 272, line 3 to p. 278, line 17.

245. Avicenna, *De anima*, ed. Rahman, p. 159, line 9 ff.

246. As Lindberg says, *Theories of Vision*, p. 49.

247. As Verbeke claims, 'Science de l'âme', p. 90\*.

248. The *spiritus* theory plays an important role in Avicenna's *Canon*. Cf. for instance the description of the brain, which mentions the different *spiritus* of the ventricles; Avicenna, *Canon*, Lib. III, Fen I, Tract. I, Cap. I, ff. 165r–166r, especially f. 165vb.

249. See n. 226 above.

250. Avicenna, *De anima*, I,5, ed. Van Riet, pp. 83–4, lines 59–62, recension B. The most notable differences between the two recensions is *optico* (B) for *concavo* (A) and *habentium colorem quae veniunt* (B) for *coloratorum venientibus* (A).

234. As Lindberg maintains, *Theories of Vision*, p. 49.

235. Aristotle, *Peri psychés*, ii.7, 419a8–15.

236. See Lindberg's description of Hunayn's position on this point, *Theories of Vision*, pp. 40–41.

237. See Avicenna's abbreviated definition of the faculty of vision in *De anima*, I,5, ed. Rahman, p. 41, line 19.

238. This has been pointed out by Verbeke, 'Science de l'âme', p. 85\*.

239. Avicenna, *Maṣriqiyūn*, MS Ah ff. 672r–v, and *De anima*, III,8, ed. Van Riet, pp. 268–72.

240. *Maṣriqiyūn* f. 672v. Cf. *De anima*, III,8, ed. Rahman, p. 154, line 8, ed. Van Riet, p. 272, line 97.

241. 'form': *ṣūra* (MSS Nu and Ay and *De anima*); *ṣuwar* ('forms': MS Ah).



*similitudines* instead of *simulacra*, reading *ašbāḥ* (اشباح) as *ašbāḥ* (اشباه). Moreover, they use the misleading term *radiosus* for *šaffāf*, which in all other passages they render with *translucens* or *pervius*. Also, they translate *venire* where they usually say *reddi* (for *ta'addā*). Thus, in the standard vocabulary of the two translators, the sentence would have sounded: '... ex simulacris corporum coloratorum redditus per corpora translucencia in effectu ad superficies corporum tersorum' ('... out of images of coloured bodies which <scil. the images> are transmitted by actually translucent bodies to the surfaces of polished<sup>251</sup> bodies <i.e. the eyes>').

John Blund is one of the victims of this translation. See his quotation of the passage:

Vision is a faculty located in the hollow nerve <the function of which is> to perceive the form of that which is formed in the crystalline humour out of the likeness of coloured bodies through rays which actually come to the surface of polished bodies. This description comes from Avicenna's commentary on *Peri psychēs*.<sup>252</sup>

Here Avicenna's theory about images which are transmitted instantaneously by the translucent medium has been transformed into a theory about rays which somehow participate in the formation of an image in the eye by travelling themselves. Nevertheless, it seems that Latin readers could still realize that this is an intro-mission theory.

What some of them certainly understood, was that Avicenna had a firm opinion on the location of the faculty of sight. The anonymous *Quaestiones super librum de anima* (MS Siena) approvingly quote Avicenna's abbreviated definition and proceed by explaining that the act of sight is not finished with the impression in the eye, because otherwise one thing would be seen as two. The unknown author thus intelligently connects Avicennian teachings from chapters I,5 and III,8.<sup>253</sup> Petrus Hispanus, with characteristic negligence, at first claims that the organ of sight is the crystalline humour, which is administered by the optical nerve; but later in the same book he states that the faculty of sight is located in the hollow nerve, thus turning from the Galenic to the Avicennian standpoint.<sup>254</sup> Albertus, finally, takes an

intermediate position in *De homine* maintaining that Avicenna is right in one respect, but that one may also say that vision is located in the anterior part of the brain and in the crystalline humour. With his usual insight, Albertus points to the different criteria behind the conflicting theories: the incipient state of the faculty of sight (in the crystalline humour), its progress to perfection (in the nerve) and its state of perfection (in the anterior part of the brain).<sup>255</sup>

A typical example of the restricted interest in Avicenna's optics is Roger Bacon. In the fifth and optical part of the *Opus maius*, he says at the beginning that a study on optics has to start with the parts of the brain and the corresponding faculties.<sup>256</sup> He then uses Avicenna's *De anima* expressly and repeatedly for his account of the internal senses, drawing on chapters I,5 and IV,1. But there is no trace of Avicenna's optical doctrine of the conveyance of visual images in the brain from chapter III,8. The theory of the eye is based, as Roger Bacon says himself,<sup>257</sup> on Alhazen, Constantine the African and Avicenna; but the only Avicennian works used are the *Canon* and *De animalibus*. The theory of vision itself relies mainly on Alhazen.<sup>258</sup> Therefore, with regard to the Latin tradition as a whole, one cannot say that Avicenna profoundly influenced thirteenth-century theories of the process of sight.<sup>259</sup>

There is, however, one area in which Avicenna was quite successful, namely with his refutation of theories other than his own. This is again due to Albertus Magnus, who draws heavily on the respective chapters in *De anima*, III. In his *De homine* and, more extensively, his *De anima*, Albertus uses Avicenna's description of, and argumentation against, the atomists' doctrine of corporeal particles.<sup>260</sup> The theory that light is the manifestation of colour (III,3 and III,4) is refuted with Avicennian arguments in *De homine*, *De anima* and *De sensu et sensato*.<sup>261</sup> These two theories belong – according to Avicenna – to the first part of the theory of vision, the one on the nature of the things involved. The second part – on the process of sight – is not the proper topic in Albertus's *De anima*, as he says himself: 'All this will be clearly confirmed when the process of seeing is described in the book *De sensu et*

251. On the term *tersus* see Gauthier's note in his 'Le Traité', p. 37, note on line 225.

252. John Blund, *Tractatus de anima*, 9, p. 24: 'Visus est vis ordinata in nervo concavo ad apprehendendam formam eius quod formatur in humore cristallino ex similitudine corporum coloratorum per radios venientes in effectum ad superficies corporum tersorum. Hanc descriptionem ponit Avicenna in commento de Anima'.

253. Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 134va, p. 394: 'Est ergo virtus visiva secundum Avicennam vis animae sensibilis ordinata in nervo optico ad apprehendendum formam eius, quod imprimatur in humore cristallino. Hic tangitur eius organum, et ideo dicitur nervus opticus id est visibilis qui nervus bifurcatur ad utrumque oculum, nec perficitur actus videndi donec species rei visibilis ad illum locum bifurcationis multiplicetur. Aliter enim una res visa videretur duae cum in utroque oculo appareat idolum rei in se'.

254. Petrus Hispanus, *Scientia libri de anima*, 6.6, p. 219, and 6.13, p. 277.

255. Albertus, *De homine*, 19.1, p. 166a: 'Ad aliud dicendum quod virtus visiva secundum sui perfectionem est in anteriori parte cerebri, sed secundum inceptionem est in humore cristallino, sed secundum progressum ad perfectionem est in nervo optico et spiritu visibili qui discurrit in illo'.

256. Roger Bacon, *Opus maius*, 5.1.2, p. 4 (vol. 2): 'Quoniam vero nervi optici, id est, concavi facientes visum, oriuntur a cerebro ... multaque alia inferius tractanda supponunt certificationem virtutum animae sensitivae, ideo oportet a partibus cerebri et virtutibus animae inchoare, ut inveniamus ea quae ad visum sunt necessaria'.

257. Roger Bacon, *Opus maius*, 5.2.1, p. 13.

258. Cf. Lindberg, *Theories of Vision*, p. 109.

259. As Lindberg does, *Theories of Vision*, p. 235, n. 77.

260. Albertus, *De homine*, 21.1, p. 182b, *De anima*, 2.3.9, pp. 111–12.

261. Albertus, *De homine*, 21.1, pp. 178–9, *De anima*, 2.3.11, p. 116, line 13, and *De sensu et sensato*, 2.2, pp. 43–6.



*sensato*.<sup>262</sup> Avicenna's arguments against the Galenic<sup>263</sup> and the Euclidean<sup>264</sup> theory of extramission can be found in *De homine* and *De sensu et sensato*; the latter work stands out in Albertus's œuvre for drawing most heavily on Avicenna's refutations, often without mentioning him. Avicenna does not name his opponents in *De anima*, but Albertus does when he employs Avicenna's arguments: in *De homine* they are directed against Euclid, Plato and Alkindi,<sup>265</sup> in *De sensu et sensato* against Empedocles and Plato.<sup>266</sup> The exact scope of Avicenna's influence on Albertus remains to be studied, as does the influence of Albertus's optical works on later writers. It seems to me that a significant part of Avicenna's influence consisted in the popularization of his intromission theory indirectly – through Albertus's powerful and oft-repeated refutation of non-Avicennian theories.

If we take the whole of Avicenna's optical theory into perspective, we find that it profoundly influenced thirteenth-century concepts of light, and indirectly paved the way for an intromission theory based on physiological doctrines. A striking feature of this story is that, unlike any other field of psychology, the reception of Avicenna's optics fell victim to inadequate translation. The abbreviated definition of vision in chapter I,5 was neither fully understood by the translators nor was it translated with the vocabulary they employed elsewhere; this may be due to the fact that the translators had not yet worked on book III on vision. In general, Avendauth and Gundissalinus did not recognize the significance and meaning of a number of key terms, which they translated inconsistently. Perhaps, then, it is not a coincidence that Gundissalinus's own *Liber de anima* displays a lack of interest in Avicenna's optics.<sup>267</sup>

Of all subjects dealt with in Avicenna's *De anima*, it is probably the theory of vision which most obviously points to Albertus's extraordinary position in the thirteenth century: not only because he was the first and only person to make extensive use of book III, but also because of the fact that he alone did not misrepresent Avicenna's concept of acquired light. Albertus must have had an excellent ability to read literature translated from Greek and Arabic without being

irritated by the many obstacles to understanding Avicenna, obstacles that proved too great for his contemporaries as well as for many modern medievalists. This extreme case is a reminder that some Latin readers were much more used to the hurdles of reading translated literature than we are today.

#### 4. ESTIMATION AND 'INTENTIONS'

'People probably drivelled the most about this faculty', wrote Samuel Landauer in 1876.<sup>268</sup> For the theory of the internal sense of estimation, *wahm* in Arabic, and its objects, the so-called 'intentions', *ma'ānī*, is indeed one of the most widely known theories of Avicenna, paralleled only by the distinction between essence and existence and the theory of the separate active intellect. Modern research concerned with estimation and 'intentions' has followed very different paths. One tradition of scholarly dispute has grown out of the search for the sources for Avicenna's doctrine of *wahm*: Landauer, like Adam of Buckfield in the thirteenth century, maintained that it went back to the Greek δόξα,<sup>269</sup> whereas Harry Wolfson argued that it corresponded to the faculty of 'sagacity, prudence or forethought' which Aristotle attributed to animals.<sup>270</sup> This interpretation was criticized by Fazlur Rahman, who claimed that *wahm* 'is just as much a differentiation of Aristotle's φαντασία as the rest of the internal senses' – a position held already by Albertus Magnus.<sup>271</sup> Recent research stresses the Galenic roots of the concept.<sup>272</sup>

Quite independently of this debate, scholars have investigated Avicenna's theory of 'intention', especially since Herbert Spiegelberg suggested that Avicenna was the first to develop a theory about the contents of mental states like fear or hope and was thus the grandfather of modern theories of intentionality.<sup>273</sup> Subsequent research has done a lot to clarify the history of the concept in ancient and medieval logic and psychology,<sup>274</sup> but an investigation into Avicenna's own theory is still a *desideratum*; it requires a careful analysis of the complicated terminology of the Arabic – and Avicennian Arabic at that.

262. Albertus, *De anima*, 2.3.14, p. 120, line 62: 'Haec autem omnia liquide constabunt quando modus videndi demonstrabitur in libro de sensu et sensato'.

263. Albertus, *De homine*, 22, pp. 218–20 and 222, and *De sensu et sensato*, 1.7, pp. 13–17.

264. Albertus, *De homine*, 22, p. 221 and 227b, and *De sensu et sensato*, 1.8 and 1.9, pp. 17–24 and 1.10, p. 27.

265. Albertus, *De homine*, 22, pp. 217–18. See Schneider, 'Die Psychologie Alberts', pp. 109–111, especially note 2 on p. 110 on the topic of Albertus's attribution of the different theories to Euclid, Plato, Alkindi and Empedocles, and Anzulewicz, 'Perspektive und Raumvorstellung', pp. 262–3.

266. Akdogan, *Optics in Albert the Great's 'De sensu et sensato'*, p. 6.

267. Note that Gundissalinus's *Liber de anima* quotes almost every chapter of Avicenna's *De anima*, but not book III. The only exception is a quotation on colour theory. See Gundissalinus, *Liber de anima*, 9, p. 69, line 30, to p. 70, line 2. The passage is drawn from Avicenna, *De anima*, III,4, pp. 205–6, lines 17–26.

268. Landauer, 'Die Psychologie des Ibn Sinā', p. 401, n. 6: 'Ueber diese Kraft wurde wohl am meisten gefaselt'.

269. Landauer, 'Die Psychologie des Ibn Sinā', p. 401, n. 6. For Adam see p. 152 below.

270. Wolfson, 'The Internal Senses' (1935), p. 90. This interpretation was followed by Goichon, *Directives et remarques* (1951), p. 319.

271. Rahman, *Avicenna's Psychology* (1952), p. 79. See the discussion of Albertus's reception of the theory in this chapter, pp. 148–50. Black points to a passage in Avicenna in which he himself seems to indicate that he divides Aristotle's concept of imagination into a number of different powers; see 'Estimation (*Wahm*) in Avicenna', p. 245, n. 2.

272. Strohmaier, 'Avicennas Lehre von den "inneren Sinnen"' (1988), p. 236.

273. Spiegelberg, "Intentionen" und "Intentionalität", English version (1976; originally in German 1936), p. 110.

274. See Engelhardt, 'Intentio' (1976), pp. 466–74; Knudsen, 'Intentions and Impositions' (1982), pp. 479–95; Sorabji, 'From Aristotle to Brentano' (1991), pp. 227–59; Caston, 'Towards a History' (1995), pp. 213–45.

It is important not to confuse the following questions in dealing with the notion of 'intention'. Those scholars whose concern was the history of intentionality asked: what is the content of mental states like fear and hope? Those who focused on logic asked: what is the mental counterpart of a significant spoken word?<sup>275</sup> In ethics we ask: what is the purpose of acts or of those who act?<sup>276</sup> Avicenna displayed little interest in ethics, so we do not have to deal with the ethical notion of 'intention' in this context. But both his logical and his psychological writings contain passages about *intentiones*, which are of interest for us because they became very well known among the scholastics and modern scholars.

It will be shown that Avicenna's psychological theory of 'intentions' has hardly anything to do with intentionality, nor in fact with ethical or logical 'intentions'. *Intentio* is a word which appears countless times in Latin translations of Arabic texts,<sup>277</sup> and the scholastics were used to distinguishing between its different meanings. They understood the Avicennian notion quite well, in sharp contrast to most modern philosophers and historians of philosophy. To retain the word 'intention' in the present investigation would be defending a hopeless case, given the many misunderstandings that the term has given rise to. It seems wiser to use the Arabic and Latin words (*ma'nā* and *intentio*) and an English translation different from 'intention'. Before this translation is introduced, I shall use 'intention' in quotation marks.

The original meaning of Avicenna's theory of 'intentions' in Arabic is still obscure.<sup>278</sup> The problem is not so much that there are different words underlying the Latin,<sup>279</sup> but that the keyword *ma'nā* has several technical meanings that vary according to context. In his logic, the first part of *aṣ-Šifā'*, Avicenna frequently uses *ma'nā* to refer to the meaning of a word, for instance:

Likewise the word 'logical species' has two meanings (*ma'ānī*) among the logicians: one of them is more general, the other more specific.<sup>280</sup>

275. See for instance Perler, 'Peter Aureol vs. Hervaeus Natalis on Intentionality', p. 228.

276. Not all scholars keep these questions apart. Engelhardt tries to give an overview of the whole range of the word *intentio* in history, but mixes together ethical, psychological and logical matters in a way that makes his article very difficult to use. Knudsen focuses on the logical side of the field in the Middle Ages and only occasionally mixes it with problems of intentionality (see Knudsen, 'Intentions and Impositions', p. 480, where he mixes Avicenna's logical with his psychological doctrines). Sorabji and Caston concentrate lucidly on the problem of intentionality. See n. 274 for the references.

277. See n. 345 below.

278. The only scholars to have studied the problem, apart from Goichon's valuable entry on *ma'nā* in her *Lexique* (1938), pp. 253–5, are Black ('Estimation (*Wahm*) in Avicenna' (1993), pp. 219–58) and Gyekye ('The Terms' (1971), pp. 32–8), who drew attention to the fact that the Latin *intentio* is a translation of three different words in the Arabic: *ma'nā*, *ma'qūl* or *qaṣd*. Also helpful is Gätje's article on Averroes's internal senses, which includes a discussion of the word *ma'nā* in Averroes's psychology ('Die "inneren Sinne"' (1965), pp. 279–82).

279. As Gyekye pointed out; see preceding note.

280. Avicenna, *aṣ-Šifā', al-Mantiq, al-Madḥal*, ed. Anawati et al., I, 10, p. 54, lines 14–15. The Arabic-

But when he speaks about the object of logic, he uses *ma'nā* together with the participle *ma'qūla* ('intelligible') and then the whole phrase means 'intelligible concept' or simply 'intelligible'. Avicenna differentiates between first and second intelligibles:

The subject of logic is the secondary intelligible concepts <i.e. secondary intelligibles> which are based on the primary intelligible concepts <i.e. primary intelligibles>.<sup>281</sup>

This was translated correctly into Latin as:

Subiectum vero logicae, sicut scisti, sunt intentiones intellectae secundo, quae apponuntur intentionibus intellectis primo.<sup>282</sup>

What exactly Avicenna means by *al-ma'ānī al-ma'qūlāt* in this context must be left to a careful examiner of Avicenna's logic.<sup>283</sup> That the meaning of *ma'nā* – or, as one might also say, the meaning of 'meaning' – is dependent upon the context in his works, is stated by Avicenna himself when he introduces the word in his *De anima*: 'What only the internal senses perceive without the external sense is specified in this place with the word *ma'nā*.'<sup>284</sup>

Let us start our investigation by quoting Avicenna's famous definition of the faculty of estimation, from *De anima*, I,5:

Then <follows> the estimative faculty and this is the faculty which is located in the end of the middle ventricle of the brain and perceives non-sense-perceptible 'intentions' which exist in the particular sense-perceptible objects; like the faculty existing in the sheep judging that this wolf is something to flee from and that this child is something to have affection for. It is likely that this faculty is also responsible for combining and separating the forms <stored in the faculty> of

Latin index in this edition is a guide to the very many occurrences of *ma'nā*. The Latin translation is the following: 'Et sic nomen speciei logicae continet secundum logicos duas intentiones, quarum una est communior et alia magis propria' (Avicenna, *Opera philosophica, Logica* (1508), f. 7ra).

281. Avicenna, *Metaphysics*, ed. Anawati/Zayed, p. 10, lines 17–18.

282. Avicenna, *Liber de philosophia prima*, I,2, p. 10, lines 73–4. Van Riet remarks in her apparatus that the proper translation of the Arabic sentence would have been: 'intentiones intellectae secundae' (instead of 'secundo') and 'intentionibus intellectis primis' (instead of 'primo'). But in fact, this would have misled readers, since in the Arabic the numerals 'first' and 'second' do not refer to 'concepts', but modify 'intelligible'. The distinction is between things intellectured first and things intellectured second, and the Latin translator could only render this faithfully by choosing adverbs ('primo' and 'secundo'). The sentence as a whole is quoted in modern literature whenever scholars speak about the Avicennian origin of the distinction between first and second 'intentions' in logic. But the influence of this statement of Avicenna's remains to be proven philologically.

283. See Sabra, 'Avicenna on the Subject Matter of Logic', pp. 746–64, for a discussion of the 'secondary intelligibles' as the subject matter of Avicenna's logic. As to the role of primary and secondary intelligibles in Avicenna's theory of the intellect, see Hasse, 'Das Lehrstück von den vier Intellekten', pp. 31–40.

284. Avicenna, *De anima*, I,5, ed. Rahman, p. 43, line 14.

imagination.<sup>285</sup>

There are several points which need to be clarified. The first step will be to answer the question 'what are "intentions"?' and to examine their ontological status. Then we will turn to the examples given by Avicenna for 'intentions'. The third step will be concerned with the relation between the faculty of *wahm* and its object, 'intentions', which will lead us to what will be called Avicenna's core theory of estimation and 'intention'. Then follows an examination of the other functions attributed to the faculty of estimation and of its general role in the whole psychological system of Avicenna.

Our main source for Avicenna's theory of estimation is his *De anima*. The *Maṣrīqiyūn* and the *Naḡāt* repeat passages from *De anima*,<sup>286</sup> whereas the *Dānešnāme* and the *Īsārāt* mention estimation only very briefly.<sup>287</sup> More informative is Avicenna's account in the *Canon* where he distinguishes the estimative faculty from imagination and from the imaginative/cogitative faculty.<sup>288</sup> Avicenna's early *Compendium on the Soul* (edited by Landauer) contains a theory of the internal senses which is in many parts incompatible with all the later ones;<sup>289</sup> obviously, Avicenna's theory here is still in the making, and I shall therefore not use it as a source.

First, what are 'intentions'? According to Avicenna, they exist in the sense-object, e.g. the wolf in the passage from *De anima*, I,5 quoted above. This is a crucial point since it distinguishes Avicenna's doctrine from many other theories on intentions and intentionality: the 'intention' is not in the perceiver but in the object. This view is repeated in *De anima*, IV,3: '... how <estimation> obtains the "intentions" which are in the sense-objects'.<sup>290</sup> Avicenna also uses the expression that someone or some faculty 'perceives' (*adraka*) an 'intention' 'in' (*fī*) the object: the sheep perceives an 'intention' in the wolf, the ram perceives an 'intention' in the ewe.<sup>291</sup> Once he remarks that 'intentions' are mixed (*muḥālifa*) with the sense-objects.<sup>292</sup> The most informative passage about their mode of existence is *De anima*, II,2, where the topic is abstraction and its different degrees:

... <estimation> obtains the 'intentions' which are not material by nature although it happens to them accidentally that they are in matter ... Estimation therefore

perceives immaterial things and takes them away from matter ... However, it does not abstract this form from <all> appendages of matter because it grasps it in particulars and according to some matter and in relation to it and connected with the sense-perceived form – which is accompanied by the appendages of matter – and with the cooperation of imagination <i.e. the storage place of forms> with regard to them.<sup>293</sup>

We can deduce from this passage that 'intentions' are immaterial, but exist accidentally in matter. They are connected to a particular sense-perceptible form in such a way that they cannot be completely separated from it. After this passage, Avicenna goes on to explain intellectual abstraction. Comparing this section with the preceding one about estimation, one can infer that Avicenna conceived of 'intentions' not as universals but as particulars which either are particulars in themselves or which become individuated through something else, like the relation to matter or to the sensible form mentioned above. Thus, 'intentions' exist in sense-objects; they are mixed with them; they are particular and immaterial but accidentally linked to matter.

Avicenna's examples of 'intentions' are the following: 'the good, the bad, the agreeing, the disagreeing and what is like these';<sup>294</sup> '... "intentions" ... about what is harmful and what is useful' and: 'useful or harmful "intentions"';<sup>295</sup> 'it is something like the hostility, badness and antipathy which the sheep perceives in the form of the wolf – in sum the "intention" which causes it to shun the wolf –, and <something like> the sympathy which it perceives about its master – in sum, the "intention" which makes it feel at ease with the master';<sup>296</sup> 'hostility and affection'.<sup>297</sup>

It is therefore not correct to say that an 'intention' is a certain knowledge which the internal sense has.<sup>298</sup> It is rather an indicator pointing to the significance or meaning of an image with which this indicator is connected. In the example of the wolf, the sheep perceives the form or outer appearance 'wolf' plus the 'intention' 'bad' or 'disagreeing' or 'harmful' or 'hostile', then forms a judgement about it and flees. Neither the sheep's judgement<sup>299</sup> nor its fear<sup>300</sup> or pleasure and pain<sup>301</sup> are

293. *De anima*, II,2, ed. Rahman, p. 60, lines 11 and 19, and p. 61, line 2.

294. *De anima*, II,2, ed. Rahman, p. 60, line 13.

295. *De anima*, IV,3, ed. Rahman, p. 184, line 9, line 18.

296. *De anima*, IV,1, ed. Rahman, p. 166, line 7. Van Riet translates *munāfara* with 'aversion' (*De anima*, IV,1, p. 7, n.83), but in this case it seems to be used in analogy to *murwāfuqa* ('agreement'), thus denoting a relation of disagreement between the sheep and the wolf. I have rendered the terms as 'antipathy' and 'sympathy'.

297. *Qānūn*, ed. Būlāq, I.1.5, p. 72, line 4.

298. Thus Verbeke, 'Science de l'âme', p. 42\* ('connaissance').

299. Harvey, *The Inward Wits*, p. 45: 'The *intentio* in these cases is a kind of judgement based on sensory experience'.

300. As Inati says, 'Ibn Sīnā', p. 237: 'These notions are exemplified by the lamb's fear of the wolf'.

301. Thus Black, 'Estimation (*Wahm*) in Avicenna', p. 231, last line; Rahman, 'Ibn Sīnā', p. 494, line 29.

285. Avicenna, *De anima*, I,5, ed. Rahman, p. 45, line 6; ed. Van Riet, p. 89, line 48.

286. *Maṣrīqiyūn*, MS Ahmet, f. 663r (= *De anima*, I,5, ed. Rahman, p. 43), f. 663v (= *De anima*, I,5, p. 45), f. 674r (= *De anima*, IV,1, p. 166), f. 677r (= *De anima*, IV,3, p. 182), f. 677v (= *De anima*, IV,3, pp. 183–5); *Naḡāt*, p. 162 (= *De anima*, I,5, p. 43), p. 163 (= *De anima*, I,5, p. 45).

287. *Dānešnāme*, tr. Achena/Massé, p. 62; *Īsārāt*, ed. Dunyā, v. 2, p. 379 (= tr. Goichon, *Directives*, p. 317).

288. *Qānūn*, ed. Būlāq, I.1.5, p. 72, line 2; in the Latin translation: *Canon*, I.1.5, f. 25ra.

289. *Compendium on the Soul*, ed. Landauer, pp. 358–61 and 399–403.

290. *De anima*, IV,3, ed. Rahman, p. 183, line 14.

291. *De anima*, I,5, ed. Rahman, p. 43, line 11; *Īsārāt*, ed. Dunyā, v. 2, p. 379.

292. *De anima*, IV,3, ed. Rahman, p. 184, line 9.

correct examples for *ma'nā*. The 'intention' is something in the object and not in the perceiver, as Avicenna repeatedly stresses. It is an attribute of the object, such as 'hostility', which has a connotation for the perceiver. *Ma'nā* is therefore probably best translated as 'connotational attribute'. I shall use this translation from now on.

How then does Avicenna conceive of the relation between the faculty of *wahm* and its object, i.e., connotational attributes? The most common verb used by Avicenna is *adraka*, to perceive, with the word *ma'nā* as the direct object, a verb which he normally uses for sense perception. Other verbs employed are *nāla* 'to obtain', *ahada* 'to take, grasp', *aqala* 'to comprehend', *waqafa 'alā* 'to come to know', *ra'ā* 'to see'.<sup>302</sup> He also says that connotational attributes are 'conveyed' to the faculty of estimation, using a term for transmitting sense data from the object to the external senses (*ta'addā ilā*).<sup>303</sup> It is thus obvious that Avicenna modelled his theory of the perception of connotational attributes on the process of sense perception, so that it can hardly be called a theory of intentionality in the sense that it is concerned with the content of mental acts or states.

Perception of connotational attributes is not the only action performed by estimation. Avicenna repeatedly remarks that estimation passes judgements, the Arabic verb being *hakama*.<sup>304</sup> Avicenna speaks of a particular, non-universal, non-rational, 'imaginative judgement, which is connected with particularity and with the sense-perceptible form',<sup>305</sup> but goes beyond sense perception. Avicenna's use of the word *hakama* poses a problem. See the following sentence, which is the only one in *De anima* to mention the connection between the action of making judgements and the connotational attributes:<sup>306</sup>

Sometimes, we make judgements with regard to (*fi*) perceptible objects about/by means of (*bi*) connotational attributes ...

The preposition *bi* often introduces the object of a verb denoting a mental act, as a syntactical alternative to an accusative, and Avicenna regularly uses the verb *hakama* in this way.<sup>307</sup> It is unlikely, therefore, that *bi* means 'by means of' as the

302. *nāla*: *De anima*, II,2, ed. Rahman, p. 60, line 11. *De anima*, IV,3, p. 183, line 14. *ahada*: *De anima*, II,2, p. 60, line 20, p. 61, line 3. *aqala*: *De anima*, II,2, p. 60, line 17. *waqafa 'alā*: *De anima*, IV,3, p. 185, line 8. *ra'ā*: *De anima*, IV,3, p. 185, line 2. I do not give examples for *adraka* because there are too many.

303. *Qānūn*, ed. Būlāq, I.1.5, p. 72, line 12; cf. *De anima*, IV,1, ed. Rahman, p. 166, line 13.

304. *De anima*, IV,1, ed. Rahman, p. 166, line 5; *Qānūn*, ed. Būlāq, I.1.5, p. 72 passim; *Isārāt*, ed. Dunyā, v. 2, p. 379.

305. *De anima*, IV,1, ed. Rahman, pp. 166–7.

306. *De anima*, IV,1, ed. Rahman, p. 166, line 5.

307. A good example is *De anima*, ed. Rahman, p. 104, line 14 (other passages are: p. 22, line 9; p. 45, line 9; p. 165, lines 16–17; p. 182, line 17). For a construction with the accusative, see: *De anima*, ed. Rahman, p. 78, line 18; p. 96, line 10; p. 166, lines 12–13; p. 214, lines 2–3.

Latin translator thought,<sup>308</sup> and one could argue that it introduces the content of the judgement: 'Sometimes, we judge connotational attributes with regard to perceptible objects ...' – that is, 'we assign connotational attributes to perceptible objects'. This would introduce a subjectivist element into the theory. However, there are arguments against this interpretation, namely the few other passages where Avicenna speaks about the relation between judgements and connotational attributes. The first is from the *Canon*:<sup>309</sup>

... just as sense perception in animals judges about (*'alā*) the forms of perceptible objects, so estimation in them judges about (*'alā*) connotational attributes ...

The second is from the *Isārāt*:<sup>310</sup>

... the ram perceives in the ewe a connotational attribute imperceptible to the senses in the way of a particular perception which (*bi*) it judges, just as the senses judge what (*bi*) they apprehend.

In the first passage, the preposition *'alā* indicates that the connotational attributes are the object on which a judgement is passed. In the second passage, it is impossible to construe the preposition *bi* as introducing the content of a judgement since what the external senses apprehend cannot be a judgement. Both passages show that Avicenna's theory of connotational attributes is developed in close analogy to sense data. I should propose therefore the following translation for the *De anima* passage:

Sometimes we make judgements with regard to the perceptible objects about connotational attributes ...

Hence, estimation does with connotational attributes what the external senses (plus common sense) do with sense data: perceiving and making a judgement about them. This becomes clearer if we look at the following passage from *De anima*, IV,3, which gives examples of judgements about the past and the future made by the faculty of estimation:

Sometimes in the course of remembering, some grief, anger and sorrow arises which resembles the state <of the soul> at the time when the <remembered> thing was present; for the only reason of grief, anger and sorrow about the past is the imprinting of this form (*sūra*) in the interior of the senses. If the form returns, it produces this <disposition> or something similar. Wishes and expectation also produce this. Expectation is different from wishing because expectation is the

308. *De anima*, IV,1, ed. Van Riet, p. 6, line 79: 'Deinde aliquando diiudicamus de sensibilibus per intentiones ...'; cf. also Black, 'Estimation (*Wahm*) in Avicenna', p. 249, n. 27: 'Then we make judgements concerning the sensibles by means of intentions ...'.

309. Avicenna, *Qānūn*, ed. Būlāq, p. 72, lines 10–11.

310. Avicenna, *Isārāt*, ed. Dunyā, v. 2, p. 379, line 4.

imagination of some thing with the judgement or opinion that it probably will happen, while wishing is the imagination of some thing and desire for it and the judgement that joy will ensue if it takes place. Fear is the opposite of expectation<sup>311</sup> in the way of contradiction; despair is its absence. These are all judgements of estimation.<sup>312</sup>

Avicenna's theory may be expressed through a scheme such as the following, in which the = sign stands for: 'is the result of a judgement with regard to ... about (+)'.

grief/sorrow/anger (about the past)	= form <sup>stored in memory</sup> + connotational attribute <sup>negative</sup>
expectation	= form <sup>imagined</sup> + connotational attribute <sup>neutral</sup>
wish	= form <sup>imagined</sup> + connotational attribute <sup>positive</sup>
fear (about the future)	= form <sup>imagined</sup> + connotational attribute <sup>negative</sup>

If we turn back to the judgements concerning an object which is actually present, as in the sheep-and-wolf-example, a similar scheme may be drawn:

fear	= form <sup>perceived</sup> + connotational attribute <sup>negative</sup>
joy/love	= form <sup>perceived</sup> + connotational attribute <sup>positive</sup>

Again, the mental states of fear and joy follow a judgement about the connotational attribute with regard to the perceived form.

These judgements happen either out of a natural instinct or through experience, as Avicenna remarks in *De anima*, IV,3 in an important passage in which he provides us with a number of examples.<sup>313</sup> I shall give the examples in translation because they tell us more than the frequently quoted one about the sheep and the wolf. For the first category (inspiration/natural instinct):

... for instance, the disposition of the baby who at the time it is born hangs at <its mother's> breast; and also that of the baby who when it is lifted and made to stand so that it is about to fall, immediately reacts by trying to grasp <something>, due to the nature in <its> soul which divine inspiration produces in it. If a <speck of> dust<sup>314</sup> comes into contact with the pupil of its eye, it immediately shuts the lid before it understands what is happening to it.<sup>315</sup>

311. Here one would expect Avicenna to say 'fear is the opposite of wish', and not 'of expectation'.

312. *De anima*, IV,3, ed. Rahman, p. 187, line 13.

313. *De anima*, IV,3, ed. Rahman, pp. 183–5; ed. Van Riet, p. 37, line 19 – p. 40, line 57. On this passage see Rahman, 'Ibn Sinā', p. 494; and Van Riet's notes to *De anima*, IV,3, p. 37, where she discusses the problematic word *ilhām* (inspiration) which I have rendered here with 'instinct'.

314. *qīḍan* ~ 'fine dust', *qāḍan* ~ 'foreign body in the eye'. The Latin *lippitudo* misses the meaning.

315. *De anima*, IV,3, ed. Rahman, p. 183, line 18.

Every sheep fears the wolf even if it has not yet seen any at all and it has not received any harm from the wolf. Many animals fear the lion. Eagles are feared by other birds, and without any experience the weak birds find them frightening.<sup>316</sup>

Another example which is probably of this type is brought up in the *Isārāt*:

... just as the ram perceives a connotational attribute in the ewe which is not perceptible by the senses.<sup>317</sup>

For the second category (experience) Avicenna has only one example:

... dogs fear mud bricks, wood and similar things.<sup>318</sup>

The correct explanation of this last example probably is that the dog was beaten by a stick or hit by a mud brick thrown at him and that he associates this experience with the image of the object.<sup>319</sup> Another example, which occurs in the *Canon*, presumably also belongs to the second category:

... the faculty which judges ... that someone who takes care of the fodder is a friend from whom one does not flee.<sup>320</sup>

Obviously, Avicenna uses the word judgement (*ḥukm* – *iudicium*) very differently from us. We might say that judgement is involved in the case of the fodder and of the dog, but not when the eyelids shut. According to Avicenna, the whole process of the perception of the image and of the connotational attribute, the judgement about it and the reaction can happen instantaneously. It is different from rational judgement, as Avicenna explicitly says.<sup>321</sup>

A modern reader of Avicenna's theory of estimation and connotational attributes might find parts of it rather problematic. One of the main characteristics of this theory is that by paralleling sense perception and the perception of connotational attributes Avicenna gives connotational attributes a very independent ontological status. But is it possible that they exist independently from the observer? In the case of sense data, one might say that this is possible. Fire has a certain temperature without our perception of it. But the connotational attribute 'harmful' or 'bad' is relational. How can it exist independently from the observer? The wolf has a 'bad' connotational attribute for the sheep, but a 'good' connotational attribute for the she-wolf.

316. *De anima*, IV,3, ed. Rahman, p. 184, line 9.

317. *Isārāt*, ed. Dunyā, v. 2, p. 379.

318. *De anima*, IV,3, ed. Rahman, p. 185, line 3.

319. See Rahman, 'Ibn Sinā', p. 494, and John Pecham, *Tractatus de anima*, 10, p. 37: 'Quarta vis est secundum Avicennam aestimativa ... apprehendens intentiones ... vel naturaliter ... vel per experientiam sicut timet canis iactum lapidis'.

320. *Qānūn*, ed. Būlāq, I.1.5, p. 72, lines 3–4; Latin translation: *Canon*, f. 25ra.

321. *De anima* IV,1, ed. Rahman, p. 167, line 2; ed. Van Riet, p. 8, line 99.

But Avicenna is not as subject- or mind-oriented as a modern reader. To get a clearer concept of what his position was, let us briefly counter the arguments raised. It may be granted that the connotation of hostility or love is relational, that for instance the shepherd is 'good' only for a specific sheep. But that does not imply that these connotations cannot have an independent ontological status. For they can be perceived by a third observer: a girl who accompanies the shepherd may observe that the sheep trusts the shepherd and that the cause for this is the friendliness of the shepherd himself. The good relationship between him and the sheep is not only in the mind of the two, but exists and has its real basis in the manner or character of the two persons or objects. The sheep does not flee from the wolf for the reason that it instinctively feels fear when it comes to see one, but instead because it perceives an actually existing hostility together with the various sense data it receives about the wolf.

This is the kind of theory which Avicenna developed. It seems to me a relatively strong theory about instinct, because it tries to explain how animals and human beings not only react immediately but also perceive real causes for their reactions which cannot be grasped by sense perception.

A real problem with Avicenna's theory, however, is that he tried to put too much into the scheme he developed. This becomes clear if we introduce the modern distinction between instinct and reflex. Avicenna's theory of the perception of connotational attributes is clearly a theory about instinct and not about reflexes, yet not all his examples are covered by his theory: the explanation that hostility or friendliness can actually be perceived cannot be applied in the case of the leg that the baby grasps and the speck of dust that gets into its eye. It seems unlikely to me that a theory of connotational attributes could be applied in these cases of reflex reactions, and it is telling that Avicenna does not mention connotational attributes in the relevant passages which are quoted above. The same is true for the example of the dog's experience with the stick: the dog does not perceive any hostility in the stick, and hence Avicenna omits any mention of connotational attributes.

For convenience, therefore, we will call the instinct theory of the perception of connotational attributes Avicenna's core theory. It is exactly this part of his theory which he singles out for abbreviated descriptions such as the one quoted at the beginning of this section.

A fact which is often overlooked is that the faculty of estimation has many more functions than this core function.<sup>322</sup> In *De anima*, IV,1 Avicenna remarks (in an

322. Deborah Black has recently drawn attention to this in an impressive article which considers numerous passages from many writings of Avicenna. See Black, 'Estimation (*Wahm*) in Avicenna' (1993), pp. 219–58. She points convincingly to the reasons which led Avicenna to postulate a faculty such as estimation as the analogue of reason in the animal soul. I do not think, however, it is a good idea to shift the focus away from his core theory (which she labels the 'canonical presentation', p. 220), since Avicenna must have had reasons to single it out for his abbreviated definitions. A consequence of Black's

already discussed sentence) that we sometimes:

pass judgements with regard to perceptible objects about connotational attributes which we do not perceive with the senses, be it that they are by nature non-perceptible for the senses or be it that they are perceptible by the external senses but we do not perceive them at the time of the judgment.<sup>323</sup>

The first alternative is the one we have been speaking about. For the second alternative he gives the following example:

We see, for instance, something yellow<sup>324</sup> and judge that it is honey and sweet. For the perceiving sense does not convey this to <estimation> at this moment.<sup>325</sup>

And Avicenna explains that in this case false judgements can be made. An example of a false judgement is to be found in *De anima*, IV,3, among the general remarks about estimation that open the chapter on the internal senses of memory and estimation:

This is like when a man happens to find honey abominable because of its similarity to gall. Because estimation judges that it <i.e. honey> has the same qualities as that <i.e. gall>, and the soul follows this estimation even though the intellect would deny it.<sup>326</sup>

As in the first example, there is a lack of information through sense perception: the man would find honey sweet if he tried it at that moment. The intellect knows that the judgement is wrong, probably because of previous experiences with honey.

These examples are very different from those of the first alternative because the connotational attributes involved are perceptible to the external senses. In fact, what the man in the first example should perceive is that the yellow thing has the taste of honey and (in the second example) that honey is sweet and not abominable. But

shift in focus is that she marginalizes the aspect of instinct (ibid., p. 244), which Rahman saw – correctly, as I think – as the heart of the theory ('Ibn Sīnā', p. 494). Also, she goes too far in including passages with the verb *tawahhama*, which means 'imagine', an action very unlikely to be performed by the faculty of estimation (ibid., pp. 238–41). Finally, one should be careful not to understand the word *wahm* as always referring to the faculty of estimation. Cf. the non-technical use of it in a passage in Avicenna's optics quoted on p. 142 in this chapter.

323. *De anima*, IV,1, ed. Rahman, p. 166, line 5; ed. Van Riet, p. 6, line 79.

324. Rahman's text has *ṣayān* – 'thing', whereas the *Maṣriqiyūn* text of MS Ahmet (but not the other two MSS which agree with *De anima*) reads *minā* – 'blue stone, enamel', see Dozy II p. 639b (email); Wehr (1966), p. 936; the Latin translator (IV,1, ed. Van Riet, p. 7, line 89) obviously had a MS with the MS Ahmet reading, because he translated *ceruleum* – something blue. But since all MSS have *asfar* (including MS Ahmet) and since a blue stone or a blue enamel cannot be thought to be yellow, it seems that Rahman's reading is the correct one.

325. *De anima*, IV,1, ed. Rahman, p. 166, line 12.

326. *De anima*, IV,3, ed. Rahman, p. 182, line 15.

'taste of honey' and 'sweet' are not connotational attributes of the first kind but rather sense data. Why then did Avicenna add this puzzling statement? Could these judgements not be ascribed to common sense? Common sense, according to Avicenna, is the place where all sense data come together and where, for instance, a certain image is connected to the taste of sweetness. This is what enables animals to find their food.<sup>327</sup> Thus, he would probably respond to the questions we raised by saying that judgements made on the grounds of similarities (the similarity of honey to gall, of something yellow to honey), and especially false judgements involve a different kind of 'estimation' than the pure connection of sense data achieved by the faculty of common sense and that therefore this task must be performed by a different faculty. The problem remains, however, that this function of estimation cannot be compressed into a single scheme with the core function described in Avicenna's abbreviated definitions of estimation, where the objects are connotational attributes that are not perceptible to the external senses.

There are also other functions of estimation which do not involve non-perceptible connotational attributes. The first is about presenting the visual form (or image) to the soul, a function described in *De anima*, III,8:

Thus the <visual> form which is in imagination is imprinted in the spirit of the estimative faculty ... (p. 154) Estimation presents the form to the soul through the mediation of the cognitive or imaginative faculty. There <scil. at estimation> ends the transmission of the sensible form.<sup>328</sup>

The connection of the theory of the internal senses to the theory of vision is a truly Avicennian idea which we have discussed above in the chapter on optics. Nevertheless, the idea that a visual form is transmitted by estimation does not agree with what we know already from Avicenna about the faculty of estimation.

A second task is the perception of perception. Avicenna at one point hints at the fact that this job is done not by sense perception but by the intellect or estimation; however, to the best of my knowledge, it is only the intellect which gets mentioned again in connection with the topic of introspection:

As for the perception that <the perceiving faculty> perceives, it is not done by sense perception, because the perception is not colour so that it could be seen or sound so that it could be heard. Instead, this is perceived by means of an act of the intellect or <by means of> estimation.<sup>329</sup>

A third function is to assist the intellect in abstracting universals, a task also performed by imagination, as Avicenna says in V,3.<sup>330</sup> The relation between the

intellect and estimation, however, remains largely unexplained. It may be that estimation, like imagination, prepares the intellect to receive the intelligibles from the separate active intellect, as explained in *De anima*, V,5.<sup>331</sup> We are also told that the internal senses in general are different in human beings and in animals because of the assistance of the intellect. The intellect has a certain influence on the internal senses, especially on memory, Avicenna says, with the result that human beings are able to develop sciences.

Apart from these functions, however, the faculty of estimation is very well integrated into the whole psychological system. This becomes clear when we look at Avicenna's theory of decision and movement.<sup>332</sup> There he gives a longer explanation of phenomena such as fear or sexual desire, in which estimation plays a vital role:

The faculty of decision follows the previously mentioned faculties <of anger and desire>, for if the tending towards something becomes stronger, the decision is made. All these also follow the estimative faculties, because all desire presupposes estimating the object of desire. Sometimes there is estimation but no desire.<sup>333</sup>

The theory of decision-making that Avicenna develops<sup>334</sup> involves the following steps:

- (1) sense perception of the form (external senses, common sense)
- (2) perception of its connotational attribute (estimation)
- (3) judgement about the connotational attribute with regard to the form (estimation)
- (4) development of attraction or repulsion (will = irascible and concupiscible)
- (5) decision (faculty of decision)
- (6) movement performed with the help of nerves and muscles

Some of these actions or functions are accompanied by mental states such as fear, grief, sorrow, anger, joy, greed, hunger, sexual desire and relief. We have already seen that Avicenna regards some of these as the products of the judgements of estimation. In *De anima*, IV,4, however, he says that they are accidents (*awāriq*)<sup>335</sup> of the irascible and concupiscible faculties.<sup>336</sup> How does that fit together? Could

331. *De anima*, V,5, ed. Rahman, p. 235.

332. Estimation also plays an important role in Avicenna's theory of remembering (*De anima*, IV,3).

333. *De anima*, IV,4, ed. Rahman, p. 196, line 8.

334. Simone Van Riet has studied this theory in *De anima*, ed. Van Riet, IV,4, p. 58 (notes) and her article 'Recherches concernant ... la notion d'idjmā'-voluntas', pp. 641-8. On the same notion see more recently: Gätje, 'Zur Psychologie der Willenshandlungen', pp. 357-61.

335. *De anima*, IV,4, ed. Rahman, p. 196, line 1.

336. *De anima*, IV,4, ed. Rahman, p. 196; ed. Van Riet, pp. 58-9.

327. *De anima*, IV,1, ed. Rahman, p. 163, line 14; ed. Van Riet, p. 2, line 16.

328. *De anima*, III,8, ed. Rahman, p. 153, line 13 and p. 154, line 8.

329. *De anima*, II,2, ed. Rahman, p. 67, line 2.

330. *De anima*, V,3, ed. Rahman, p. 222, line 3; ed. Van Riet, p. 102, line 5.



one perhaps even say that what is done by estimation can be performed by the faculties of will as well? No. Because the main difference between these faculties is that estimation is a faculty of perception, whereas the irascible and concupiscible faculties belong to movement. As a consequence, Avicenna assigns some of the aforementioned mental states to the faculties of perception only, namely relief and joy,<sup>337</sup> whereas the others are treated as a product of the faculties of movement and perception together. He groups them in the following way:

perception only	perception + movement	
	<u>irascible</u>	<u>concupiscible</u>
relief, joy	fear, grief, sorrow, anger	greed, hunger, sexual desire

Avicenna's remarks are a bit sketchy: we are not told anything about the criteria for assigning mental states to certain faculties. I presume that those mental states are attributed to the paired 'moving faculty/perceiving faculty' which provoke an action in the subject if the mental state becomes strong enough. If the sheep's fear increases to a certain point, it flees. Then, however, we would have to take grief and sorrow out of the 'irascible' section and assign them to the faculties of perception. Even immense grief does not normally trigger an action towards or away from something.

At any rate, we have already discussed the mental states which Avicenna describes as an effect of the judgement of the estimative faculty: expectation, despair, wishing, fear regarding the future. They certainly belong to the column on the left because estimation is one of the faculties of perception. In this way estimation is linked to mental states and to the faculties of decision and movement.

So much, then, for the analysis of Avicenna's theory of estimation and connotational attributes. It should be clear now that it is not very helpful to discuss the different shades of meaning of the words *wahm* and *ma'nā*, because of the complexity of Avicenna's theories. Nor does it make much sense to argue about which notion or faculty in Aristotle might have been the ultimate source for Avicenna's doctrine. Avicenna is a good philosopher and a good philosopher cannot be explained solely in terms of his sources.<sup>338</sup>

337. *De anima*, IV,4, ed. Rahman, p. 196, line 7.

338. It seems to me that Avicenna's theory rests on a fusion of the Peripatetic and the Galenic tradition. Cf. Strohmaier, 'Avicennas Lehre', as in n. 272, and the following passages in Rhazes: 'Infants and animals employ reasoning with <which> these actions are performed; for if they did not imagine that something bad is <connected> with this individuum approaching, they would not flee from it and be afraid of it, as of a lion or something similar; and <if they did not imagine> that something good is <connected> with this other individuum, they would not approach it happily and would not trust it, as is the case with the behaviour of a dog towards its master and of a mule towards its leader' (Ibn Zakariyā' ar-Rāzī, *Kitāb as-Šukūk 'alā Ġālīnūs*, p. 26, line 22 – p. 27, line 2), and in Isaac Israeli: '... significat autem

Nonetheless, in order to understand what the scholastic writers meant when they pointed to the differences between the doctrines of Aristotle and Avicenna, we have to examine briefly Aristotle's position. The first and most important observation is that Aristotle in *Peri psychēs* and the *Parva naturalia* speaks about common sense, φαντασία and memory, but not about a faculty of estimation. The second observation is that there are at least three passages in *Peri psychēs* which bear a certain similarity to Avicenna's theory. Aristotle maintains in III,7, 431a14–17, that the soul avoids and pursues φαντάσματα which are bad or good, a statement which resembles parts of Avicenna's definition of estimation. In III,3, 429a4–8, Aristotle states that numerous human beings act according to φαντάσματα like animals, which is again similar to what we find in Avicenna.<sup>339</sup> Aristotle's distinction between φαντασία αἰσθητική and φαντασία λογιστική/βουλευτική (III,10, 433b27–30, and III,11, 434a4–12) might also have been a starting point for Avicenna's doctrine.<sup>340</sup>

But in general, Aristotle's remarks about the seemingly deliberate actions of animals are rather sketchy and groping. It is the merit of the Peripatetic tradition, and especially of Avicenna, to have developed a fully fledged theory about what we today would call instinct.

#### *The Latin Tradition*

Measured by the sheer number of medieval Latin writers who made use of Avicenna's doctrine of estimation, this theory is by far the most influential of all those put forward in *De anima*. Almost every writer after 1200 who wrote on the soul – and there are few scholastic writers in the thirteenth century who did not write on the soul – mentioned at least the basic ingredients of Avicenna's doctrine: the name of the faculty, the connotational attributes and the example of the sheep and the wolf. The Latins learned these features from three works translated from Arabic: Avicenna's *De anima* (the most important source), Avicenna's *Canon* and Algazel's *Metaphysica*, which reports the Avicennian theory.

The success of the theory in the thirteenth century was based on a good translation. It must have been difficult to find a translation for *wahm*, which obviously had a very technical meaning in Avicenna's philosophy. There are

quod bestiae sunt aestimantes et non discernentes, illud quod in asino invenimus. Invenimus enim quod cum ipse ultime sitit, si ad aquam ducatur et videat formam suam in ea aut formam alterius, terretur ex ea et refugit: et cum aqua tamen existit eius vita et ipsius constitutio. Et cum videt leonem, intendit ad eum et quaerit ipsum et vadit ad eum, et ipse tamen interficit ipsum et perdit ipsum' (*De definitionibus*, p. 314).

339. Avicenna, *De anima*, IV,3, ed. Van Riet, p. 35, lines 0–1.

340. Gätje ('Die "inneren Sinne"', pp. 282–3) has shown that Averroes's theory of the *virtus cognitiva* has its roots especially in this third passage in *Peri psychēs*. Averroes combines Aristotelian teachings about φαντασία and δυνάμεις with the Avicennian doctrine of *wahm* and *ma'nā* (pp. 277–84).

passages where he uses it in a non-technical way, for instance when speaking about the physiology of sight: 'Just as a thin cone extends – in *wahm* – from the external form until it lets its point fall behind the surface of the crystalloid, likewise ...'.<sup>341</sup> *Fi l-wahm* 'in estimation' here means 'not in reality'.<sup>342</sup> Fortunately, the translators did not stress this fantasizing aspect of *wahm*, but instead chose the terms *aestimatio* or *aestimativa* (Gundissalinus, Avendauth and Iohannes Hispanus) or *virtus existimativa* (Gerard of Cremona).<sup>343</sup> This is a good translation in view of the fact that one of the two main activities of estimation is to judge, while the other is to perceive connotational attributes. It was fortunate that the term was not used for a faculty in the Greek-Latin translation of Aristotle's *Peri psychēs*, so that its peculiar Avicennian meaning was easier to grasp.<sup>344</sup>

The word *intentio* for *ma'nā* is a less convincing translation because it does not convey the meaning 'connotational attribute'. However, the Latins probably knew the different meanings of the word very well from Arabic-Latin translation literature. According to the glossaries in modern editions (of which we still have far too few), there are countless occurrences of the word in the Arabic-Latin translations of Aristotle, Avicenna, Averroes and Alhazen.<sup>345</sup> *Intentio* usually translates *ma'nā*, sometimes also *ḡaraḍ* (purpose) or *iḥtiyār* (preference, choice) or *qaṣd* (intent), which in turn is sometimes used in the syntactical construction *fi l-qaṣdi l-awwal ... fi l-qaṣdi t-tānī ...*, meaning 'in the first place ... in the second place ...'.<sup>346</sup> Given the widespread dissemination of the word in the new Arabic-Latin literature, it is likely that the Latin readers of Avicenna knew that in passages about estimation *intentio* did not mean 'purpose' but something like 'meaning' or 'concept' and that at any rate one had to pay attention to the context of the different

occurrences of the word. The sheep-and-wolf-example, finally, did not pose any problems of understanding for the Latin readers.

The seemingly rational behaviour of animals was not a new topic when Avicenna's theory became known in the West. It was traditionally held that animals cannot have souls because their life depends on blood and perishes with the death of the body.<sup>347</sup> Against this opinion Adelard of Bath argued that animals had a soul because they make use of discernment of sensations and judge what to seek and what to avoid.<sup>348</sup> Adelard's viewpoint, which entailed the immortality of animal souls, did not gain ground. But very occasionally, twelfth-century writers discuss the animal faculty of discernment, for example John of Salisbury:

Brute animals also have in some way a discerning power by which they discriminate between foods, avoid traps, jump over objects in the way, and recognize what must be done. However, they do not exercise reason, but rely on their natural appetite and especially on imagination. In no way can they examine the causes of things.<sup>349</sup>

The difference to Avicenna's theory is obvious: even Adelard and John, who do not marginalize the topic of animal faculties, describe the phenomenon of discernment in animals but do not give an explanation for it. Also, Avicenna's theory sets out to explore a behaviour common to animals and human beings. It is no surprise therefore that the advent of Avicenna's Peripatetic philosophy totally transformed the discussion.

The theory of estimation was among the very first of Avicenna's doctrines to become known in the West. For the Toledan translator Gerard of Cremona (d. 1187) in annotations (if they are indeed by him) to his translation of Rhazes's *Libri X ad Almansorem* already includes a reference to estimation:

347. See Cassiodorus, *De anima*, 3, p. 536, and Hrabanus Maurus, *Tractatus de anima*, 1, pp. 1109–10: 'Anima igitur proprie hominum dicitur, non etiam pecorum. Anima namque hominum longe distat a vita pecorum. Vita namque pecorum in sanguine constat: adeo ut cum defectione sanguinis et fine corporis ipsa etiam vita cum spiritu finiatur'. On the topic see Baumgartner, 'Die Philosophie des Alanus', pp. 84–8, and Talbot, 'Ailred of Rievaulx', p. 35.

348. Adelard of Bath, *Quaestiones naturales*, ed. Burnett, 13, pp. 112–114 (with Introduction, pp. xxv–xxvi, and n. 21 on p. 229).

349. John of Salisbury, *Metalogicon*, 4.16, pp. 153–4: 'Habent enim et bruta animalia vim quodam modo discretivam qua discernunt cibos, declinant insidias, praecipitia transiliunt, necessitudinem recognoscunt. Non tamen rationem exercent, sed naturali appetitu vigent, et imaginantur pleraque, sed causas rerum discutere nequaquam possunt'. Cf. Pseudo-Augustine, *Liber de spiritu et anima*, 14, p. 790: 'Nec istud mirum est cum etiam in sensu et memoria pecudis sit quaedam imitatio rationalitatis, et in appetitu voluntatis et in iis quae refugit reprobationis ...; ... quaedam sine discretione intelligentiae providentia, in qua quidem quasi rationis imago est <scil. corporea vita>, et nulla ratio est. In his omnibus corporea *vita* spiritualem *vitam* imitatur. Primo in eo quod sentit. Secundo in eo quod sensum concipit. Tertio in eo quod concepta retinet. Quarto in eo quod sive in imaginatis sive in sensibus secundum quandam rationis similitudinem sive ad appetendum sive ad fugiendum se inflectit'.

341. Avicenna, *Maṣriḡyūn*, see above, p. 121; the passage is also in *De anima*, III,8, ed. Rahman, p. 151, line 19, ed. Van Riet p. 268, line 45: 'in aestimatione'.

342. See Macdonald, 'Wahm in Arabic', pp. 505–21, on the different meanings of *wahm* in classical Arabic. Since his article in 1922, however, we have learned a good deal more about *wahm*, which still has to be put into perspective (cf. Walzer, *Greek into Arabic*, p. 96, and above, p. 127 and n. 338). The Greek-Arabic translation literature is particularly important in this respect. *Tawabhum* was used to translate φαντασία in the extant translation of *Peri psychēs* (ed. Badawī, p. 69), and *wahm* was used for φαντασία in the Arabic tradition of the lost Greek paraphrase of Aristotle's *Peri psychēs* from late antiquity edited by Arnzen (*Aristoteles' De anima: eine verlorene spätantike Paraphrase*, p. 628).

343. It is an interesting but open question whether Gerard was influenced in his choice by Gundissalinus.

344. The term *existimatio* appears in the later Arabic-Latin translation of *Peri psychēs*, rendering δόξα (see esp. 428a16–24).

345. Aristotle, *De animalibus*, ed. Oppenraaij, p. 387; Aristotle, *Analytica posteriora*, ed. Minio-Paluello and Dod, p. 437 ('passim' – without Arabic equivalences); Avicenna, *Liber de philosophia prima*, ed. Van Riet, *Lexiques*, pp. 245–6; Avicenna, *Logic/Eisagoge*, ed. G. C. Anawati et al., p. 144; Averroes, *Commentarium medium in De generatione et corruptione*, ed. Fobes, p. 185; Averroes, *Compendia librorum Parva naturalia*, ed. Shields, p. 204; Averroes, *Commentum medium super libro Peri Hermeneias*, ed. Hissette, pp. 162–3; Alhazen, *The Optics*, tr. Sabra, v. II, p. 186.

346. See, for instance, the entry *qaṣd* in the 'Lexique Arabo-Latin' of Van Riet's edition of Avicenna's *De anima*.

<The medical writers> also omitted the estimative faculty, through which the sheep perceives the enmity of the wolf and the friendship of the lamb. The faculty of memory, which they referred to, preserves the *intentiones* and is to be found only in human beings, because no animal perceives *intentiones* without matter.<sup>350</sup>

It is not clear whether Gerard has understood Avicenna's theory, of which he names the basic features. It is slightly puzzling that he does not assign memory to animals, as Avicenna does in the *Canon* passage on which Gerard draws. The point that philosophers and medical writers disagree on the internal senses stems from the *Canon*: the physicians, Avicenna says, know only three internal senses because they differentiate between no more than three types of mental damage, relating to the three ventricles of the brain.<sup>351</sup> Gerard's annotation was picked up by Raoul de Longchamps (d. after 1213) in his commentary on Alan of Lille's *Anticlaudianus*, erroneously attributing it to Rhazes and not to Gerard.<sup>352</sup> Unlike Gerard, Raoul does not say that it is the physicians who omit this faculty, but the ancients ('antiqui'), and he does not mention *intentiones*. A similarly groping and inadequate attempt to understand the theory of estimation is in Alexander Neckam's *Speculum speculationum*:

Estimation seems to consist particularly in a certain perception deriving from sense perception and imagination together with some *intentio*.<sup>353</sup>

In the following sentence Alexander gives the example of the sheep and the wolf, which shows that already around 1210 the basic ingredients of Avicenna's theory were known – even by a somewhat conservative theologian like Alexander Neckam, who might have learnt about it from his younger countryman John Blund.<sup>354</sup> The doctrine circulated without being properly understood and without being connected to the name of Avicenna.

In contrast to this groping understanding, one cannot help but be struck by the

350. Rhazes, *Opera parva ... Arasi ...*, f. 3r: '... virtutem quoque aestimativam praetermiserunt per quam discernit ovis inimicitiam lupi et amicitiam agni. Virtus autem memorialis quam nominaverunt custodit intentiones et a solo homine habetur, nullum enim animal percipit intentiones nudas a materia'.

351. Avicenna, *Qānūn*, ed. Būlāq, I.1.5, p. 71, line 23 and p. 72, line 27. Latin translation, f. 24vb: 'Una est virtus quae vocatur sensus communis et phantasia et apud medicos quidem sunt una virtus, sed apud certificantes qui sunt ex philosophis duae sunt virtutes'; f. 25rb: '... medici virtutem existimativam non consideraverunt ...'. On the term *certificantes* see p. 40, n. 158 above.

352. Raoul de Longchamps, *In Anticlaudianum*, 64, p. 61, line 1: 'Sunt et quaedam virtutes animae aliae principales, scilicet virtus memorativa qua mediante apprehensa ab anima firmiter retinetur et virtus aestimativa quae est apprehensiva convenientis vel inconvenientis. De hac dicit Rasis in anatomia: virtutem aestimativam praetermiserunt antiqui per quam percipit ovis inimicitiam lupi. Haec enim virtus in brutis recompensat logisticam'.

353. Alexander Neckam, *Speculum*, 3.95, p. 375: 'Aestimativa tamen videtur praecipue subsistere in quadam apprehensione proveniente ex sensu et imaginatione cum quadam intentione'.

354. As remarked above (p. 18), Hunt has shown that Neckam draws on Blund's *Tractatus* in several passages (Hunt, 'Introduction', pp. viii–xi).

masterly manner in which John Blund, around 1204, takes up the issue. He quotes what was to become the *locus classicus* on estimation (Avicenna's *De anima*, I,5), names the author, and adds the following explanation:

By *intentio* the commentator <i.e. Avicenna> means a singular quality ('qualitas') which does not reach the senses and is either harmful or good for the thing: harmful like the attribute ('proprietas') which is in the wolf on account of which the sheep flees the wolf; good like the attribute which is in the sheep and on account of which it is approached by its lamb.<sup>355</sup>

John Blund's understanding of *intentiones* as qualities and attributes of perceived objects is very accurate, more accurate than most modern interpretations. Blund proceeds to lay his finger on the very core concept of Avicenna's theory by asking: if *intentiones* pass through sense perception and through the imagination until they reach estimation which is located behind them in the brain, why are they imperceptible to the senses and to imagination? And he develops this objection in the following argument, which witnesses to Blund's understanding of *intentiones* as an equivalent of sense data:

Since the wolf is a thing separate from the sheep, how does a likeness of the *intentio* which exists in the wolf come about in estimation if there has not been a change, affected by the *intentio* existing in the wolf, in the sense perception of the sheep? For sense perception is in the middle between the object and estimation. How could fire warm a man from the distance if the air, which is in the middle, had not received heat from the heat of the fire?<sup>356</sup>

Avicenna's *De anima* does not have an answer to this question: it is left unclear how exactly connotational attributes reach the perceiver. But John Blund tackles the problem and defends Avicenna's theory by saying that estimation directly perceives *intentiones* without any intermediate perception by other senses. He adds:

But because this could appear difficult to understand for someone, one can say that a likeness of the *intentio* comes about in sense perception and in imagination, but that the soul does not perceive them with these faculties, since sense perception and imagination do not have a nature which is in accordance with the original carrier of the *intentio*. But the organ of estimation is similar in nature to that which is *per se* and originally the carrier of the *intentio*, and therefore the

355. John Blund, *Tractatus*, 19, p. 69, line 2: 'Intentionem appellat commentator qualitatem singularem non cadentem in sensum quae est vel rei nocitiva vel expediens. Nocitiva ut illa proprietas quae est in lupo propter quam ovis fugit lupum. Expediens ut illa proprietas quae est in ove propter quam eam appetit agnus'.

356. Ibid., line 17: 'Cum lupo sit res separata ab ove, qualiter constituetur in aestimatione similitudo intentionis existentis in lupo, nisi prius fuerit inmutatio formata ab intentione existente in lupo in sensu ovis, cum sensus sit medium inter sensatum et aestimationem? Qualiter enim posset ignis remotus ab homine calefacere hominem nisi aer in medio reciperet calorem a caliditate ignis?'.

perception of the *intentio* happens through the estimative faculty.<sup>357</sup>

Note that John Blund in order to discuss and further develop this tenet of Peripatetic psychology – which had hardly touched western soil – coins his own language: he speaks of the 'original carrier of the *intentio*' ('*proprium subiectum intentionis*'), e.g. the wolf, and the likeness or image of the *intentio* ('*similitudo/ima-go intentionis*') which comes about in the faculty of estimation. These terms are new. They show us that Blund is radicalizing Avicenna's theory: *intentiones* are nowhere else than in the object; what is perceived is only representations of them. Blund concludes the passage by insisting (with Avicenna) that estimation discerns only particulars, not universals, and that it does not differentiate between the true and the false; several decades later, Albertus Magnus will argue in the same vein.

The quality of John Blund's discussion is exceptional. Most writers of the first half of the thirteenth century simply adopt the doctrine of the estimative faculty, usually in a correct quotation. Michael Scot is one of those who add a qualification of their own:

Estimation is the perception of non-perceptible attributes through perceptibles. By means of this estimation, the lamb perceives that the wolf is its enemy and a man gets to know spiritually about the <potential> harmfulness of a thing which later happens to do him some <harm> of that kind.<sup>358</sup>

Michael fills a gap in the theory of Avicenna, who does not give any examples for the perception of human beings, apart from those concerning the babies' reflexes. Michael gives a more specific example in another passage where he says that we avoid dangerous things like pits and obstacles in our way and reach things we like because we follow our estimation.<sup>359</sup> We are able to sense danger, Michael Scot seems to claim, and in this he goes further than Avicenna, who does not speak about objects present in the future: the wolf, the shepherd, the lion – they are all perceptible to the senses at that moment. Michael develops the Avicennian idea more in the direction of a *ratio sensibilis*, as he himself says, which enables us to foresee things. Here we encounter a noticeable astrological tone and one might say

357. Ibid., p. 70, line 2: 'Sed quia illud alicui videbitur difficile ad intelligendum potest dici quod similitudo intentionis fit in sensu et in imaginatione, sed anima secundum eas non apprehendit, quoniam sensus et imaginatio non sunt naturae concordantis cum proprio subiecto intentionis. Sed instrumentum aestimationis est consimilis naturae cum eo quod est per se et proprie subiectum intentionis, et ideo secundum vim aestimativam fit apprehensio intentionis'.

358. Michael Scot, *Liber introductorius*, f. 37rb–va: 'Existimatio est insensibilium proprietatum per sensibilia perceptio. Qua existimatione agnus percipit lupum esse sibi inimicum et homo in spiritu certificatur de damno rei quae postea sibi contingit faciens tale quid'.

359. Michael Scot, *Liber introductorius*, f. 46va: 'Vis extimativa sive ratio sensibilis est illa quam in praecavendis malis nobis et in delectabilibus consequimur, ut est quando imaginati sumus rem aliquam et virtute rationis tamquam sententia iudicis eligimus quod melius est. Et postea nos abstinemus a re periculosa quae adhuc non est in actu velut nobis esset in opposito ut lignum in via vel fossa et cetera'.

that he has rather cleverly bent the sense.<sup>360</sup>

If we turn to works of the 1230s and 1240s, we will find that many writers mention the estimative faculty, often without a reference to Avicenna: e.g. William of Auvergne, Robert Grosseteste, Hugh of Saint-Cher, Roland of Cremona,<sup>361</sup> Jean de la Rochelle (whose account is particularly comprehensive),<sup>362</sup> the *Summa fratris Alexandri*, and Vincent of Beauvais.<sup>363</sup> The *virtus existimativa* was common philosophical knowledge at the time – perhaps the greatest success that a philosophical theory can have. It thus surpasses the other famous Avicennian theories which, like the separate active intellect, were commonly known but not commonly accepted.

But even though Avicenna's doctrine of estimation would survive well into the sixteenth century, especially in handbooks,<sup>364</sup> its fortune declined in the second half of the thirteenth century when its compatibility with Aristotle's philosophy became an issue. Often, the first step towards a conflict among authorities is knowledge about the origins of a tradition. One of the earliest works to betray such a knowledge is the anonymous *De anima et de potentiis eius* from about 1225. Its author, a Parisian master of arts, mainly quotes Avicenna on the faculty of estimation,<sup>365</sup> but also draws on a passage in Isaac Israeli, which comes from the same Arabic tradition on animal instinct,<sup>366</sup> and, more importantly, knows Aristotle's viewpoint: 'That is why Aristotle says that imagination in irrational beings is the equivalent to reason in human beings.'<sup>367</sup> This quotation from Aristotle could have served as a starting point for a reduction of the Avicennian theory to its Aristotelian roots, but this is not what the Parisian master is interested in.

Many subsequent writers are not aware of the potential danger of a clash of authorities, but simply mention that 'all philosophers' agree on the existence of

360. See pp. 25–26 above.

361. Roland of Cremona, *Summa theologica*, f. 33rb, line 43: 'Consequenter dicendum est de vi extimativa. Sentit inimicum et horret et diligit amicum et congaudet illi sicut dicunt philosophi quod mus sentit catum et horret et fugit et hoc est ex vi extimativa. Et ovis etsi non videat quodammodo sentit lupum et horret et fugit et ovis congaudet alii ovi et agno suo'. Phrases such as *etsi numquam viderit*, which can be found in many writers, ultimately derive from Avicenna *De anima*, IV,3, p. 38, line 35.

362. See Jean de la Rochelle, *Summa de anima*, 101, p. 248.

363. See Index locorum, I.5.aa, II.2.f, and IV.3.b for references to these writers. I was not able to trace a passage about animal instinct with Avicennian vocabulary in Bonaventura.

364. See Park, 'The Organic Soul', pp. 471, 480–81, and Sudhoff, 'Die Lehre von den Hirnventrikeln', pp. 149–50, 175–6, 180, figs 4, 5, 6, 7, 8, 9, 10, 14 (drawings of the human skull).

365. Anonymous (Gauthier), *De anima et de potentiis eius*, p. 46, line 372. He even mentions that *appetitus, fuga, timor* and *audacia* follow upon the estimation or imagination of something (p. 47, line 390); this may be a faint reflection of Avicenna's theory of mental states.

366. Ibid., p. 46, lines 377–9. See Gauthier's note on the passage and n. 338 above.

367. Ibid., p. 47, line 397: 'Unde Aristoteles dicit quod imaginatio est in irrationabilibus sicut ratio est in hominibus'. The reference is to Aristotle, *Peri psychês*, 433a9–12.

estimation (thus Roland of Cremona),<sup>368</sup> or criticize the physicians for not recognizing the faculty (thus Jean de la Rochelle, like Gerard of Cremona before him).<sup>369</sup> After what has been said about Albertus Magnus in the previous chapter, it is perhaps not surprising that he (in his *De homine* from 1242–3) is the first to pinpoint the differences among the authorities. This time, however, he does not align himself with the Peripatetic tradition, but with Aristotle. On the one hand, Albertus names all five of Avicenna's internal faculties, with slight changes in terminology: he includes common sense among the external senses; adopts the Avicennian theory of imagination; calls the imaginative/cogitative faculty of Avicenna *phantasia*, influenced by Algazel;<sup>370</sup> takes over estimation and memory from Avicenna and establishes recollection as a separate faculty – following either Aristotle or Avicenna.<sup>371</sup> But on the other hand, he forces the complex Avicennian theory into the tight corset of Aristotle's philosophy. This he does by tracing the functions of a number of Avicennian faculties back to passages about *phantasia* in *Peri psychês*:

We should say that if *phantasia* is understood in a broad sense, there will be only a slight difference between *phantasia*, imagination and estimation with regard to function, object and organ. In this way <*phantasia*> seems to be understood by Aristotle, who says that *phantasia* is the faculty according to which a phantasma occurs to us,<sup>372</sup> and that it is a motion produced by sense perception in actuality;<sup>373</sup> all of this applies to the imaginative <faculty>. He also says that *phantasia* is true

and false,<sup>374</sup> which applies to the faculty that combines and divides perceived images <i.e. *phantasia* in a strict sense>. He also says that *phantasia* is moving<sup>375</sup> insofar as it determines the joyful and the sad and the harmful and the useful<sup>376</sup> in perceived images, which seems to apply to the estimative faculty.<sup>377</sup>

This is a fine piece of source analysis which nevertheless does not do justice to Avicenna: the doctrine of estimation is not an amplification of one or the other sentence in Aristotle, it is not simply the practical branch of *phantasia*, as Albertus says (just as the practical intellect is an extension of the theoretical intellect),<sup>378</sup> it is a full-blown theory about how instinctive reactions happen.

Avicenna's core concept, the connotational attributes, which had interested John Blund so much, now become the object not only of estimation but also of *phantasia* and of the intellect. For Albertus, the term *intentiones* can refer to everything derived from sense data, i.e. not only to the harmful and useful, but also to the true and wrong (*phantasia*) and – perhaps following Averroes – to the universal form (intellect).<sup>379</sup> Again, this is an attempt to harmonize Aristotle and Avicenna. It leads to a misrepresentation of the theory of connotational attributes, since for Albertus even *intentiones* such as 'harmful' and 'useful' are not perceived in the object, as Avicenna maintains, but 'in perceived images', in *imaginibus apprehensis*. The faculty of *phantasia* (in the broad sense) derives *intentiones* from sense data by combining and separating these data – a theory special to Albertus.<sup>380</sup> He has a favourite term for extracting *intentiones* which reappears throughout his oeuvre: *elicere ex imaginibus*.<sup>381</sup> Thus, Albertus's concern is only with the 'connotation' aspect, not the

368. Roland, *Summa theologica*, f. 33va, line 5: 'Si in esset, decepti sunt omnes philosophi qui locuti sunt de hac materia qui dicunt quod estimativa est una de viribus animalibus ... estimativa est in cerebro secundum autores ...'.

369. Jean de la Rochelle, *Tractatus*, 2.2.35, p. 111, line 239: '... apprehensiva deintus, quae dividitur secundum veritatem et philosophos in sensum communem, et phantasiam, et imaginativam sive cogitativam, et aestimativam, et rationalem, et memorialem; sed secundum phisicos sive medicos in sensum communem sive phantasiam, in imaginativam sive cogitativam et in memorialem'.

370. Cf. Albertus, *De homine*, 38.1, p. 330a: 'Aliam diffinitionem dat Algazel dicens quod phantasia est virtus quae operatur componendo et dividendo ...', and Algazel, *Metaphysica*, pp. 170–71, esp. p. 170, lines 19–21. In fact, the definition from Algazel which Albertus cites is not of *phantasia* (*hayâl*) – which is an alternative term in Algazel (not in Avicenna's *De anima*!) for *virtus imaginativa* (*al-mutaṣawwira*), the storing-place of sense data – but of *virtus cogitativa* (*al-mutaḥayyila*). Cf. Avicenna's text (which is Algazel's Vorlage) in *Dānešnāme*, tr. Achena/Massé, pp. 62–3, and the original Arabic of Algazel's text, *Maqāṣid al-falāsifa*, pp. 356–7. The Latin translator is consistent. Hence, Albertus's understanding of the Peripatetic tradition of *phantasia* rests partly on a misreading by himself.

371. Albertus, *De homine*, qu. 35–41, pp. 306–56. Albertus's theory of the internal senses has been examined by numerous writers (Schneider, Reilly, Wolfson, Klubertanz, Michaud-Quantin, Steneck, Mahoney, Park), who have not reached a consensus either about questions concerning particular senses or about whether Albertus had a coherent system or not. See Steneck, *The Problem of the Internal Senses*, pp. 20–26 for a good overview of the discussion before 1970, and his article 'Albert the Great on the Classification ...' (1974), pp. 193–211.

372. Aristotle, *Peri psychês*, 428a1–2.

373. Ibid., 428b30–429a2.

374. Ibid., 428b17.

375. Cf. ibid., 433b28–30.

376. Cf. ibid., 431a9–17.

377. Albertus, *De homine*, 38.4, p. 334a: 'Dicendum quod si phantasia large accipiatur, tunc parva erit differentia inter phantasiam et imaginationem et aestimationem quantum ad actum et obiectum et organum. Et hoc modo videtur sumere Aristoteles, qui dicit phantasiam esse potentiam secundum quam phantasma nobis fit, et quod phantasia est motus a sensu secundum actum factus, quod totum convenit imaginativae. Dicit etiam phantasiam esse veram et falsam, quod convenit potentiae componenti et dividenti imagines apprehensas. Etiam dicit phantasiam esse moventem per hoc quod determinat delectabile et triste et nocivum et conveniens in imaginibus apprehensis, quod videtur convenire aestimativae'.

378. Albertus, *De homine*, 39.3, p. 339a: 'Dicendum quod aestimativa et phantasia operantur in eodem organo, aestimativa enim nihil aliud est quam extensio phantasiae in praxim, sicut etiam intellectus speculativus extendendo se sit practicus'.

379. Ibid., 39.2, p. 338a. Cf. Averroes, *Commentarium magnum in De anima*, Index, p. 584, s.v. *intentio*, and especially pp. 423–4 and 469. See Gätje, 'Die "inneren Sinne" bei Averroes', p. 281.

380. Albertus, *De homine*, 37.1, p. 325b: '... imaginatio <est> virtus tenens imagines sensibilibus re non praesente, absque eo quod eliciat ex eis componendo et dividendo intentiones aliquas non acceptas per sensum, hoc enim est phantasiae secundum Avicennam et Algazelem'. Ibid., p. 326a: '... memoria vero non tantum retinet imaginationes sensibilibus, sed etiam intentiones elicatas a compositione et divisione sensibilibus facta per phantasiam et aestimationem'.

381. See preceding note and, for instance, *Super ethica*, 2.5, p. 114, line 53: '... quae elicit intentiones non acceptas a sensibus ut dicit Avicenna'. Also: *De memoria et reminiscencia*, 1.1, p. 98b; *De anima*, 2.4.7,

'attribute' aspect of Avicenna's theory.

His position has not changed very much in the treatise *De anima* from 1254–7. Some of the names for the internal faculties are different, but the functions are essentially the same: this time common sense belongs to the internal faculties; then follows the Avicennian imagination (also called *formalis* or *imaginativa*), the faculties of estimation and memory, and finally *phantasia*, which again is Albertus's term (borrowed from Algazel) for the Avicennian cogitative/imaginative faculty.<sup>382</sup> He gives a new explanation for the compatibility of the theory of the internal senses with Aristotle's psychology:

And in this way all these internal faculties of the perceiving soul seem to exist in one common essentiality and substance, but they differ according to their material being in the different parts of the brain in which these faculties are installed, all of which have organs. And this is the reason why Aristotle in most passages uses these faculties as if they were the same ...<sup>383</sup>

In contrast to *De homine*, Albertus here maintains that all five (and not only three) internal senses are essentially one – and not only if *phantasia* is understood in a strict sense. Note that Aristotle did not recognize two of these faculties. Albertus's explanation may be a clever way of suggesting to his readers that what he is saying basically is in agreement with Aristotle; historically, it is wrong. As to the faculty of estimation, Albertus repeats his Aristotelianizing interpretation from *De homine*: estimation extracts *intentiones* from perceived images ('elicit <intentiones> a forma acquisita'),<sup>384</sup> it is the practical counterpart of the faculty of *phantasia*.<sup>385</sup> This is not to say that the basic features of Avicenna's doctrine, *intentiones* and the example of the sheep and the wolf, do not appear often in Albertus's works,<sup>386</sup> but the gist of the theory is lost.

This is not without consequences for later writers. Petrus Hispanus does his best to present a thoroughly Avicennian account of the faculty of estimation. In his

treatise *Scientia libri de anima* he quotes every passage on the topic he could find in Avicenna's *De anima*, among them sentences never cited elsewhere, such as the example of the baby who at the time it is born hangs on to its mother's breast.<sup>387</sup> Petrus is not the person to discuss theories carefully, and when he comes to his own remarks on the faculty of estimation they sound familiar:

In these ways estimation, starting with the imaginative faculty, receives sense-perceptible forms and extracts from them imperceptible *intentiones*, just like nuts from their shells, ...<sup>388</sup>

The phrase 'elicere intentiones a formis sensibilibus' comes from Albertus, as does Petrus's differentiation between individual and universal *intentiones*, which follows this passage: the former are objects of estimation, the latter objects of the intellect.<sup>389</sup> Petrus may not have realized that what he is adopting is an Aristotelianized version of Avicenna's theory.

All the writers discussed so far, from Avicenna to Petrus Hispanus, agree in their understanding of estimation as an important part of animal and human psychology. Thomas Aquinas also reserves a place for estimation – others drop the concept completely, as we shall soon see – but he relegates it to animal psychology.<sup>390</sup> He says in *De veritate* (around 1259):

In other living beings <i.e. not human beings> some specific notions, which are necessary for them, are implanted according to natural estimation, such as in the sheep <the notion> that the wolf is its enemy and similar things ...<sup>391</sup>

The Avicennian roots are still apparent here, but the theory growing out of them takes a very different form: the negative notion of the wolf is inborn and not perceived, and it only exists in animals, not in human beings. In the later *Summa theologiae* and *Sententia libri de anima* (dating from the late 1260s) Thomas develops his theory more fully. Natural estimation ('aestimativa naturalis' – he repeats this phrase from *De veritate*) exists in animals only; it perceives individual *intentiones*,

p. 157, line 63: '... elicativum intentionum ...' Other words used by him are *apprehendere*, *recipere* and *accipere*. See Index locorum, I.5.aa.B.2.

382. Albertus, *De anima*, 2.4.7, pp. 156–8. As to Algazel, see n. 370 above.

383. Albertus, *De anima*, 3.1.3, p. 168, line 67: 'Et hoc modo videntur omnes istae vires animae sensibilis interiores esse in una essentialitate communi et substantia, differentes autem secundum esse materiale in diversis partibus cerebri, in quo organizantur istae potentiae, quae omnes sunt organicae. Et haec est causa, quod Aristotelis in plerisque locis utitur istis virtutibus tamquam eisdem et aequivoce ponit nomen unius pro alterius nomine, sed si tamen subtiliter distinguantur, ut hic sunt distinctae, sic habent distinguere'.

384. Albertus, *De anima*, 3.1.2, p. 167, lines 93–4.

385. Ibid., p. 167, line 58: 'Oportet igitur dici quod sicut intellectus practicus se habet ad speculativum, ita se habet aestimativa ad imaginationem; et ideo haec virtus non penitus apprehensiva sed et motiva est per hoc quod determinat ad quid movere debet animal et a quo fugere'.

386. Cf. for instance Albertus, *De anima*, 2.4.7, p. 157, line 32. For many more passages in Albertus's works see Index locorum, I.5.aa.

387. Petrus Hispanus, *Scientia libri de anima*, 7.4, p. 321.

388. Ibid., p. 322: 'Per has igitur vias aestimatio incedens ab imaginativa formas accipit sensibiles et ab ipsis intentiones elicit insensatas, sicut grana a corticibus, et ad thesaurum memoriae discurrens formas et intentiones in ea repositas considerat, et circa ipsas iudicium deliberat'.

389. Ibid., p. 323: 'Similiter autem eius actio versatur circa intentiones individuales formis accidentalibus per se sensibilibus velatas. Unde ipsas formas detegit et iudicat et distinguit. Universales autem intentiones soli intellectui debentur'.

390. This was seen by Rohmer, 'La Théorie de l'abstraction' (1928), p. 108. For the extensive literature on Thomas's psychology of the internal senses see Mahoney, 'Sense, intellect, and imagination' (1982), pp. 606–7.

391. Thomas, *De veritate*, 22.7, p. 629: '... aliis animalibus sunt inditae secundum naturalem estimationem quaedam speciales conceptiones eis necessariae sicut ovi quod lupo sit ei inimicus et alia huiusmodi ...'. Other passages in *De veritate* that argue in a similar vein are: 24.3, p. 686, and 25.2, p. 733.



such as the harmful and useful. Note that Thomas drops the theory of inborn notions and returns to the Avicennian idea of the perception of *intentiones* – without any further elaboration. The counterpart to estimation in human beings is the cogitative faculty, which likewise perceives individual *intentiones*.<sup>392</sup> The concept of a human cogitative faculty is taken over from Averroes;<sup>393</sup> Thomas transforms it into a theory about human rational power which derives singular conclusions from universal sentences and gives orders to the faculty of striving.<sup>394</sup> Thomas's interest is a systematic one; it is only of secondary concern for him whether a theory is compatible with Aristotle or the Peripatetic tradition or both. In the *Summa theologiae* he argues for the existence of four internal senses and dispenses with Avicenna's cogitative/imaginative faculty.<sup>395</sup> In contrast, in his commentary on *De sensu et sensato* (c. 1269) he uses Avicenna as an authority to justify Aristotle's group of three faculties: *phantasia*, memory and common sense – but at the same time manages to mention his concept of natural estimation in animals.<sup>396</sup> For his own theory, the authority of Aristotle is not needed.

Other writers, however, cautiously avoid Peripatetic notions in commenting on Aristotle. Some proceed like Albertus and reduce the internal senses to an extension of Aristotle's philosophy. Thus the anonymous *Lectura in librum de anima* (1246–7) describes estimation as a kind of common sense, and claims that all internal senses are one in substance;<sup>397</sup> Adam of Buckfield (c. 1245) identifies the Aristotelian faculty of *opinio* with estimation;<sup>398</sup> and the anonymous *Quaestiones in tres libros de anima* (c. 1268) maintain that Aristotle included all internal senses under

392. Thomas, *Summa theologiae*, L78.4.c, and I.81.3.c; id., *Sententia libri de anima*, 2.13, pp. 121–2, lines 191–222. The term *naturalis aestimativa* appears again p. 190, line 198 and also in *De veritate*, 22.7, p. 629, line 44, and 24.3, p. 686, line 111.

393. Who in turn depends upon Avicenna; see Averroes, *Commentarium magnum in De anima*, pp. 415–16, 449, line 175. See Gätje, 'Die "inneren Sinne"', pp. 277–84, and Gauthier's annotations on pp. 121–2 in Thomas's *Sententia libri de anima*.

394. Thomas, *Summa theologiae*, I.81.3.c: 'Loco autem aestimativae virtutis est in homine sicut supra dictum est, vis cogitativa; quae dicitur a quibusdam ratio particularis, eo quod est collativa intentionum individualium. Unde ab ea natus est moveri in homine appetitus sensitivus. Ipsa autem ratio particularis nata est moveri et dirigi secundum rationem universalem: unde in syllogisticis ex universalibus propositionibus concluduntur conclusiones singulares. Et ideo patet quod ratio universalis imperat appetitui sensitivo ...'.

395. Thomas, *Summa theologiae*, I.78.4.c. Thomas calls Avicenna's second faculty *phantasia* (instead of *imaginatio*). Goichon has claimed that the reason for this lies in the occurrence of the word *phantasia* for *imaginativa* in *De anima*, IV, 1 in some manuscripts (*Directives*, pp. 320–21). The intrusion of the term *phantasia*, however, may well go back to Albertus; see pp. 148–50 above.

396. Thomas, *De sensu et sensato*, 2.2, pp. 109–10.

397. Anonymous (Gauthier 1985), *Lectura*, p. 442, line 468, and p. 441, line 423: 'Et secundum eos dicendum est sic quod istae virtutes, sensus, phantasia, imaginatio, aestimatio, opinio particularis et memoria sunt idem secundum substantiam, differunt autem secundum rationem'.

398. Oxford, Bodleian Library, Ms. Canon misc.322, f. 48rb: 'intendit hic per opinionem virtutem aestimativam'.

imagination, except for common sense.<sup>399</sup>

Finally, there are also writers on the soul who completely dispense with the notion of the estimative faculty. The first, to the best of my knowledge, is Pseudo-Petrus Hispanus, *Expositio de anima*, who does not seem to mention any faculty of estimation, but instead – closely following Aristotle – attributes the role of the *suprema virtus* in animals to imagination.<sup>400</sup> Other examples are two anonymous authors of questions on the soul from the 1270s, edited by Bazán and Van Steenberghen; the latter treatise adopts the notion of the *virtus cogitativa* from Averroes (via Thomas Aquinas), extends it to animals and thus eliminates any mention of the faculty of estimation.<sup>401</sup>

These writers very probably know what they are doing when they omit estimation: the faculty has long been a Peripatetic commonplace, and it continued to be quoted by writers such as John Pecham and Roger Bacon.<sup>402</sup> What we observe here is a gradual loss of interest in Peripatetic, i.e. non-Aristotelian, teachings among the masters of arts. To be sure, there are authors of commentaries who discuss the notion of the estimative faculty, among them Albertus Magnus and the anonymous Siena commentary.<sup>403</sup> But from the early 1240s onwards, most of Avicenna's Western readers felt the need to reconcile the teachings of the Arabic philosopher with Aristotle's. The effect was not only one excellent (Albertus) and many simplistic theories about the sources of Avicenna's theory, but a general misunderstanding of its central idea: the perception of connotational attributes. This time, part of the blame goes to Albertus Magnus.

399. Anonymous (Vennebusch), *Quaestiones in tres libros de anima*, 2.55, p. 248, line 152: '... Aristoteles determinando de virtutibus sensitivis interioribus omnes comprehendit sub imaginatione; praeter sensum communem quem distinguit ab aliis, quia solum apprehendit ad praesentiam sensibilibus extra'.

400. Pseudo-Petrus Hispanus, *Expositio*, p. 300, line 12: 'imaginatio est suprema virtus et nobilissima eorum'.

401. Anonymous (Van Steenberghen), p. 238, line 43: '... sic virtus cogitativa apprehendit intentiones particulares et confert ipsas ad invicem, secundum commentatorem hic. Sed differt cogitativa in brutis et in hominibus: quia in brutis non comprehenditur intentio individualis nisi per comparisonem ad opus: ut ab ove cognoscitur herba, non inquantum herba, sed inquantum comestibilis; nunc autem virtus cogitativa in homine comprehendit intentiones individuales in communi'. Van Steenberghen gives Averroes, *Commentarium magnum*, p. 225, lines 44–55 and p. 228, lines 30–52 as the sources for the first sentence. Another important passage is p. 415, lines 62–8. On Averroes's doctrine see Gätje, 'Die "inneren Sinne"', pp. 277–84. Cf. Thomas, *Sententia libri de anima*, 2.13, pp. 121–2, lines 191–222.

402. Both cite the basic ingredients of the Avicennian theory. In his *Tractatus de anima*, John Pecham adds a new example about a hare fleeing from a dog and about wounded animals that find the right cure (p. 37). In the *Quaestiones de anima* we find a curious mixture of passages by Avicenna and Averroes (p. 78). Roger Bacon avoids the word *intentio* and replaces it with *forma insensata* (*Opus maius*, 5.1.4, pp. 7–8).

403. Anonymous (MS Siena), *Quaestiones*, ed. Gardinali, p. 399. The passage about estimation is very close to the text of Avicenna's *De anima*.



# 5. PROPHECY

Avicenna's theory of prophecy and connected teachings about the imaginative faculty, will-power and the highest level of human powers, the 'sacred faculty', count among the famous parts of his philosophy. Not without reason, for they play a central role in his thinking, as is obvious for instance in his last philosophical summa *al-Īsārāt wa-t-tanbihāt* ('Pointers and Reminders'), which gives prophecy a prominent place at the end of the book. From recent studies we know that Avicenna wrote his well-known autobiography as an illustration of the powers of intuition (*ḥads*), which is Avicenna's core concept of the theory of extraordinarily powerful souls, and that he used the concept of intuition to find a methodological standpoint within the Aristotelian tradition which enabled him to go beyond Aristotle.<sup>404</sup>

Among the different treatises that Avicenna devoted to prophecy, *De anima* is particularly important because it is the only text (apart from the *Maṣṣiqiyyūn*) which distinguishes and describes three<sup>405</sup> different kinds (or levels or conditions – this will be investigated below) of prophecy: one connected with the imaginative faculty, one with the motive faculties and one with the intellect. Avicenna does not discuss prophecy in a chapter of its own, but in the different parts of the book which deal with the respective faculties (IV,2, IV,4 and V,6). His theory can be outlined as follows:

(1) The imaginative faculty separates and combines sense data, which it retrieves from their storing-place, i.e. the faculty of imagination.<sup>406</sup> The soul can impede this function of the imaginative faculty either by occupying imagination with the storing of sense data<sup>407</sup> or by a direct order not to produce anything unreal.<sup>408</sup> In sleep both impediments are removed, whereas in illness and in great fear the first impediment remains.<sup>409</sup> Then unreal images are presented to imagination and common sense as if they existed outside.<sup>410</sup> In some persons, the imaginative faculty and the soul are so powerful that they have visions in waking life.<sup>411</sup> This is the prophecy which belongs to the imaginative faculty.<sup>412</sup> Such people either have very powerful souls and imaginative faculties or do not employ their faculty of discernment.<sup>413</sup> A vision

only comes about if there is a connection between the divine realm, the soul and the imaginative faculty.<sup>414</sup> The external senses and the intellect may impede the soul in its capability to connect to the divine realm.<sup>415</sup>

(2) The soul can produce a change of the temperament in the elements of its own body.<sup>416</sup> This is because of the origin of the soul from higher principles.<sup>417</sup> Therefore it is also possible that the soul effects these changes without any physical contact.<sup>418</sup> Often the soul produces an effect in a different body, such as in the case of the Evil Eye.<sup>419</sup> If the soul is particularly noble and powerful, matter throughout the world obeys it.<sup>420</sup> Such a soul does not incline to its own body, and its body is of a pure nature.<sup>421</sup> By sheer will-power, it is able to heal the sick, make evil persons ill, turn something into fire or earth, produce rain and fertile seasons.<sup>422</sup> These are properties of prophetic powers which belong to the faculty of movement and decision.<sup>423</sup>

(3) People differ a great deal in their ability to acquire knowledge,<sup>424</sup> that is, to make contact with the active intellect. In general, the ability to acquire an intelligible form depends upon whether the middle term of the corresponding syllogism is obtained.<sup>425</sup> Some people need much training and instruction until they hit upon a middle term, others obtain it directly through intuition (*ḥads*).<sup>426</sup> Those who possess a very high degree of intuition are able to receive all forms (including the middle terms) from the active intellect in almost no time.<sup>427</sup> This faculty is called the 'sacred faculty' (*qūwa qudsīya*) and is a kind of prophethood, in fact the highest of the prophetic powers.<sup>428</sup>

In spite of recent advances in scholarship, we still do not know enough about the first and second kinds of prophecy.<sup>429</sup> Are they different conditions for prophets or

404. Gutas, *Avicenna* (1988), pp. 159–76 and id., 'Avicenna: *De anima*' (1998), pp. 90–107.

405. Rahman, 'Ibn Sīnā' (1963), p. 498, distinguishes four kinds of prophecy in Avicenna because he adds Avicenna's 'socio-political' level of prophecy, which is set out in the *Metaphysics*, book X,3. This level, however, is only loosely connected with the teachings on prophecy in *De anima*, which form a relatively coherent theory, as we shall see.

406. Avicenna, *De anima*, IV,1, ed. Rahman, p. 166, line 4. It also retrieves connotational attributes from memory.

407. *De anima*, IV,2, ed. Rahman, p. 171, lines 18–19.

408. *De anima*, IV,2, ed. Rahman, p. 172, lines 3–4.

409. *De anima*, IV,2, ed. Rahman, p. 172, lines 12–14.

410. *De anima*, IV,2, ed. Rahman, p. 172, line 18 – p. 173, line 1.

411. *De anima*, IV,2, ed. Rahman, p. 173, line 12.

412. *De anima*, IV,2, ed. Rahman, p. 173, lines 20–21.

413. *De anima*, IV,2, ed. Rahman, p. 177, lines 16–18.

414. *De anima*, IV,2, ed. Rahman, p. 178, lines 1–3.

415. *De anima*, IV,2, ed. Rahman, p. 178, lines 3–4.

416. *De anima*, IV,4, ed. Rahman, p. 199, lines 1–2.

417. *De anima*, IV,4, ed. Rahman, p. 199, line 5.

418. *De anima*, IV,4, ed. Rahman, p. 199, lines 11–12.

419. *De anima*, IV,4, ed. Rahman, p. 200, lines 11–12.

420. *De anima*, IV,4, ed. Rahman, p. 200, lines 12–13.

421. *De anima*, IV,4, ed. Rahman, p. 200, lines 18–19. For a justification of this reading, see n. 456 below.

422. *De anima*, IV,4, ed. Rahman, p. 200, line 20 – p. 201, line 3.

423. *De anima*, IV,4, ed. Rahman, p. 201, lines 6–8.

424. *De anima*, V,6, ed. Rahman, p. 248, line 9.

425. *De anima*, V,6, ed. Rahman, p. 249, line 4.

426. *De anima*, V,6, ed. Rahman, p. 249, line 6.

427. *De anima*, V,6, ed. Rahman, p. 249, line 13.

428. *De anima*, V,6, ed. Rahman, p. 250, lines 2–4.

429. On the third kind of prophecy (by intuition), see Gutas's study (as in n. 404). To mention the major steps in this century's research: Gardet distinguished the different kinds of prophecy in Avicenna's books (*La Pensée religieuse* (1951), pp. 119–25); Gätje compared the different teachings on dream and divination in the major Islamic philosophers ('Philosophische Traumlehren' (1959), pp. 258–85). In 1958, Rahman gave an account of Fārābī's and Avicenna's theories on prophecy which became widely

different kinds or levels of prophecy? Our examination starts with this question and then explores the three kinds of prophecy in sequence. Special attention is paid to the vocabulary used for the imaginative faculty (*hayāl*, *qūwa mutahayyila* or *tahayyul*), to the ambiguous role of this faculty in the prophetic process, to the connection of the faculties to the divine realm, to the doctrine of the purification of the soul, and to naturalistic traits in Avicenna's theory of prophecy.

Let us first consider the question of conditions versus kinds. Louis Gardet maintained that:

three conditions, according to *aṣ-Ṣifā'*, are required in order that someone may be a prophet: clarity and lucidity of the intellect, perfection of the imaginative faculty, the power of making the external matter obedient to oneself.<sup>430</sup>

Other scholars have repeated this interpretation.<sup>431</sup> I could not trace Gardet's quotation in Avicenna, and I suspect that the passage in fact is a reworking of a sentence by Thomas Aquinas. Thomas does not quote Avicenna but gives his own summary of the Avicennian theory:

Praeterea ad prophetiam non requiruntur nisi tria, scilicet claritas intelligentiae et perfectio virtutis imaginativae et potestas animae ut ei materia exterior oboediat ut Avicenna ponit in .vi. de naturalibus.<sup>432</sup>

In fact, Avicenna himself does not mention conditions which have to come together in one prophet. Instead he speaks of different kinds (*ḍarb*) of prophethood, each having different properties (*ḥawāṣṣ*).<sup>433</sup> In only one passage does he explicitly address the topic of combining two kinds of prophethood in one person, in *De anima*, V,6, where he deals with the theory of intuition:

accepted (*Prophecy in Islam*, pp. 30–52). His opinions about the Greek and particular Stoic sources have been challenged convincingly by Gutas (pp. 169–70). Marmura drew attention to the fact that Avicenna usually speaks of the possibility of prophecy, but that he only once tried to prove its existence, namely in *Fi iṭbāt an-nubūwāt* (*Proof of Prophecies*) ('Avicenna's Psychological Proof of Prophecy' (1963), pp. 54–5). Davidson, who gives the most recent account of Avicenna's theory, doubts that *Fi iṭbāt* can be attributed to Avicenna (*Alfarabi, Avicenna, and Averroes* (1992), p. 87, n. 56). Elamrani-Jamal devoted an article to the connection between the theory of prophecy and the hierarchy of the faculties ('De la multiplicité' (1984), pp. 125–42).

430. Gardet, *La Pensée religieuse*, p. 121: 'Trois conditions, enseigne le *Ṣifā'*, sont requises pour qu'un homme puisse être prophète: clarté et lucidité de l'intelligence, perfection de la vertu imaginative, pouvoir de se faire obéir de la matière extérieure'. And in the note: '*De An.*, IV, 4, f. 20, r. b. et ss. (I, p. 343–5)'.

431. Van Riet, ed. *De anima*, IV–V, p. 153, n. 17; Verbeke, 'Le "De anima" d'Avicenne', p. 71\*, n. 260.

432. Thomas, *De veritate*, 12.3, p. 374, line 82. It is not clear whether Thomas's term *requiruntur* implies what Gardet made of it. In his reply to the Avicennian statement (12.3, pp. 378–9) Thomas argues that the last of the three does not exist and that the other two bring about ('causatur') natural prophecy, but not divine prophecy. He himself thus conceives of them as conditions in the sense of causes which do not necessarily have to come together. In the further discussion, he uses the distinction between *visio intellectualis* and *visio imaginaria* (see 12.12, p. 404, lines 1–4).

433. Elamrani-Jamal, 'De la multiplicité', p. 127, gives the relevant passages in French translation (*De anima*, IV,2, ed. Rahman, p. 169, line 9; IV,2, p. 173, line 21; IV,4, p. 201, line 6; V,6, p. 250, line 3).

It is not unlikely that some of these acts pertaining to the sacred spirit because of their powerful and overwhelming nature deluge the imaginative faculty which then reproduces them in terms of perceptible and audible linguistic images in the way in which we have previously indicated.<sup>434</sup>

Note that Avicenna says 'some of these acts': The insight gained via the third, intuitive kind of prophethood *may* be accompanied by some reproduction of it by the imaginative faculty, but the two do not go together in all cases. It seems improbable that a prophet could at the same time have visions through a strong imaginative faculty, produce rain through his strong will, and hit easily upon middle terms of syllogisms through his strong intellect. One might still say that they were thought to be necessary properties of prophets who would produce actions at different times, but this does not seem to be what Avicenna thought. For the only example he gives of someone with a very powerful soul is himself – not only in his autobiography, but also in the *Dānešnāme* – because of his skill in hitting on middle terms.<sup>435</sup> He does not report, however, that he had visions or that he provoked rain or a fertile season. It is much more likely that any combination of strong or weak imaginative, motive and intellectual powers is possible according to Avicenna, and it seems to be the strength of this theory of prophecy that it is flexible enough to account for many different combinations of prophetic properties.

A particular problem of the first kind of prophethood is its basis in the hierarchy of faculties. Some accounts of Avicenna's theory draw a connection to the faculty of imagination: 'activity of the imagination', 'the prophet's imagination', 'an exceptionally strong imagination'<sup>436</sup> or 'la prophétie par l'imagination'.<sup>437</sup> In these surveys the terms 'imagination' and 'imaginative faculty' are not sufficiently distinguished. For it is not accurate to say that the first kind of prophethood is due to an exceptionally strong imagination. Avicenna carefully distinguishes between the two faculties *hayāl* and *qūwa mutahayyila*, which were translated into Latin as *imaginatio* and *virtus imaginativa*. The internal faculty of *hayāl* (*imaginatio*) in fact does not imagine. Its proper action is to store the sense data which it receives from the common sense, as Avicenna explains in chapters I,5 and IV,1 of *De anima*. In contrast, the imaginative faculty (which is called cogitative faculty, *mufakkira*, in human beings) is concerned with the combination and separation of sense data and connotational attributes. This faculty is also called *tahayyul*, 'imagining' (not 'imagination', as it is sometimes translated), by Avicenna. With this term – which morphologically is a verbal noun of the fifth form, *mutahayyila* being the active

434. *De anima*, V,6, ed. Rahman, p. 248, line 19 to p. 249, line 3. The translation is from Gutas, *Avicenna*, pp. 161–2. I have changed 'imagination' to 'imaginative faculty'.

435. *Dānešnāme*, tr. Achena/Massé, p. 89. Gutas, *Avicenna*, p. 163 (L10).

436. Rahman, *Prophecy in Islam*, pp. 38–9, and Rahman, 'Ibn Sina', p. 500.

437. Elamrani-Jamal, 'Multiplicité', pp. 131 and 139.

participle corresponding to it – Avicenna emphasizes the active function (combining and separating) of this faculty, which contrasts with the passive function (storing) of the faculty of imagination.<sup>438</sup> Again we see the advantage of Avicenna's almost pedantic differentiation between numerous faculties. It enables him to be more precise about which properties of the human or animal soul are responsible for specific phenomena. The vocabulary in the relevant chapter (IV,2) is unambiguous, if one takes into account that *taḥayyul* (imagining) is the action of the imaginative faculty and not of imagination.<sup>439</sup> It is the imaginative faculty which can be as strong in some people as to give them prophetic qualities. Prophethood, or more precisely, this kind of prophethood, does not rely on a strong ability of storing data, but a strong ability of combining and separating them.<sup>440</sup>

The role of the imaginative faculty in prophecy is ambiguous. Its primary task is to present visible and audible apparitions:

Sometimes, what is presented to <such people> is an apparition: they imagine that what they perceive is a speech from this apparition with audible words which <can be> remembered and recited, this being <the kind of> prophethood specific to the imaginative faculty.<sup>441</sup>

In order to function in this way, the imaginative faculty needs to be powerful enough to be able to retrieve stored images from the faculty of imagination and to present them via imagination to the common sense – which is a difficult task since in waking life these internal senses are normally occupied with incoming sense data.<sup>442</sup> But when the prophetic vision – which, incidentally, needs to be distinguished from visions in dreams which Avicenna does not call prophetic<sup>443</sup> – is completed, the powerful imaginative faculty becomes a hindrance: it immediately turns to other related and unrelated images and makes the soul forget what it had seen.<sup>444</sup> The rational soul therefore needs to stabilize the visionary images in the faculty of memory. This can only happen if the imaginative faculty is defeated and kept at rest for a certain time,<sup>445</sup> otherwise what remains in the storing places of the brain is not the visionary images but something vaguely similar produced by the

imaginative faculty.<sup>446</sup> Hence, the two different states of the imaginative faculty, one powerful and one at rest, pertain to different phases of the prophetic process, i.e. during and after the visionary experience. Avicenna's theory is not in contradiction with itself.<sup>447</sup>

A final point to elucidate about imaginative prophecy is the connection to the divine realm. If this kind of prophethood is due to a highly developed imaginative faculty, i.e. the excellent combination and separation of data, how could contact be made with the divine world which is intellectual? It has been maintained that in Avicenna's system the imaginative faculty 'may enter conjunction with the <separate> active intellect and receive the emanation of the active intellect directly'.<sup>448</sup> If this were correct – it is not – animals could become prophets as well. As we have seen, the rational soul – the terms 'soul' (*nafs*) and 'rational cogitation' (*al-fikr an-nuṭqī*) are used interchangeably in this context – is needed to restrain the imaginative faculty after the vision is over. And it also plays a necessary part in the actual connection with the realm above:

... the imaginative faculty exists in <such people> in a very strong and overpowering way, so that the senses do not dominate over it and the form-bearing faculty (*al-muṣawwira* = *ḥayāl/imagination*) does not resist it. Moreover, <their> soul is powerful as well; its turning towards the intellect and towards what is before the intellect does not paralyse the soul's application to the senses.<sup>449</sup>

The human, rational soul plays an active role in imaginative prophecy. It needs to be powerful enough to apply itself both to the senses, or rather to the unreal sense data produced by the imaginative faculty, and to the intellect. A certain contact to the intellect is needed because the content of visions is 'before the intellect' and received by it from above. But the intellect's own activity is not conducive to imaginative prophecy. Avicenna points out that both the external senses and the intellect may divert the attention of the soul and thus impede its ability to connect to the divine realm.<sup>450</sup> He proceeds:

... If one of the two <i.e. the occupation with the senses and the intellect> ceases, then the necessary connection between the hidden realm on the one hand and the soul and the imaginative faculty on the other hand immediately comes about, and also the connection between the soul and the imaginative faculty,<sup>451</sup> so that in it

438. Without doubt for instance in *De anima*, IV,2, ed. Rahman, p. 172, line 17, where Avicenna distinguishes it from 'the form-bearing faculty' (which is the faculty of imagination) and common sense.

439. The Latin often has *imaginatio* for *taḥayyul*, where a more fitting translation would be *imaginari*. See Van Riet's *Lexique Arabe-Latin* in *De anima* edition, IV–V, p. 232.

440. Gätje ('Philosophische Traumlehren', p. 269) and Davidson (*Alfarabi, Avicenna, and Averroes*, p. 118) correctly connect the first kind of prophecy with *qūwa mutahayyila*, calling it 'kombinierende Phantasie' and 'compositive imagination' respectively. The problem is that in English and French 'imagination' is closer in its connotation to *qūwa mutahayyila* than to *ḥayāl*.

441. *De anima*, IV,2, ed. Rahman, p. 173, lines 18–21.

442. *De anima*, IV,2, ed. Rahman, p. 173, lines 9–10.

443. See the summary of chapter IV,2 on p. 154 above.

444. *De anima*, IV,2, ed. Rahman, p. 174, lines 8–10 and p. 175, lines 9–12.

445. Ibid., p. 175, line 14 – p. 176, line 1.

446. Ibid., p. 176, lines 8–10. This paragraph still treats prophecy and veridical dreams together, whereas the next paragraph (line 11) entirely switches to the topic of dreams.

447. As Rahman says, *Prophecy in Islam*, p. 76 (n. 35).

448. Davidson, *Alfarabi, Avicenna, and Averroes*, p. 123. He suggests that according to Avicenna the imaginative faculty could receive (and represent) 'intelligible thoughts from a supernal thought, without the participation of the human intellect' (p. 121).

449. *De anima*, IV,2, ed. Rahman, p. 173, lines 9–12.

450. *De anima*, IV,2, ed. Rahman, p. 178, lines 3 and 8.

451. The Latin translation (ed. Van Riet, p. 28, line 77) leaves out 'and between the soul and the

<i.e. the imaginative faculty> the appearance will appear ...<sup>452</sup>

The passage shows that the imaginative faculty does not make contact with the realm above directly, as Alfarabi had maintained,<sup>453</sup> since the soul – which is not identical with the intellect, but possibly employs the intellect – performs an intermediary role.

This does not preclude the possibility that intellectual prophecy of the third kind sometimes also has an effect on the imaginative faculty, as Avicenna says in the passage quoted above (p. 157) about the sacred human intellect deluging the imaginative faculty. However, this passage describes a particular case, namely when prophets of the intellectual kind also have accompanying visionary moments. The core idea about imaginative prophethood is that sense data are perceived as if they were real, whereas in fact they are produced by the imaginative faculty. Such persons connect with the realm above by means of their intellect, as has been shown, but how exactly this happens is left unexplained. It is not certain at all that such prophets would be capable of intuitive prophethood and of receiving intelligibles in syllogistic order. Note that the separate active intellect is not mentioned once in the discussion of imaginative prophecy in book IV, but that it is central for the theory of intellectual prophecy laid out in V,6: intuitive prophets 'make contact (*ittasala*) with the active intellect' so that the 'forms of all things contained in the active intellect are imprinted' on the soul of these people.<sup>454</sup> Avicenna's approach in book IV is to explain phenomena – visions and wonders – by means of his faculty psychology, just as physicians explain symptoms; this seems to be the reason why he does not elaborate on the intellectual side of the phenomena.

When we turn to prophecy by will-power, the connection to the realm above is much less obvious. Avicenna does not mention the divine realm once, and there is no indication that a prophet of this kind needs divine assistance to act as a prophet and to produce rain or a fertile season. The main idea of prophethood by will-power is that the soul is immaterial and is – in principle – able to act not only on its own matter, i.e. its body, which happens every day, but also on matter outside the body – which is only possible for people with a very strong soul.<sup>455</sup> But then the problem arises that according to this theory a prophet such as Muhammad and a person with the Evil Eye belong to the same category. If we do not need divine help

imaginative faculty', as do the *Mašriqiyūn*, f. 676r, line 10, which however add a *baina* ('between') before *al-qūwa al-mutaḥayyila* ('the imaginative faculty'). Hence there are again three (and not two) members in this connection, of which the soul is the middle one.

452. *De anima*, IV,2, ed. Rahman, p. 178, lines 8–10.

453. See Walzer, *Al-Farabi on the Perfect State*, pp. 220–27, and Rahman, *Prophecy*, pp. 37–8.

454. *De anima*, V,6, ed. Rahman, p. 248, line 14 and p. 249, lines 20–21. The translation is taken from Gutas, *Avicenna*, pp. 161–2.

455. *De anima*, IV,4, ed. Rahman, p. 200, lines 11–21.

in order to produce miracles, how do we decide who is a real prophet and who is a sorcerer? The clue to this problem lies with Avicenna's doctrine of the noble soul. He does not explain, at least not in *De anima*, the cause of a sorcerer's power, but he does for the person who is able to influence the matter of the whole world: 'when a soul is powerful, noble and resembles the higher principles (*ṣābiḥa bi-l-mabādi*)' and 'when the soul's immersion in its inclination to <its own> body is not strong and powerful, while at the same time <the body> is lofty in its nature and powerful in its *habitus*'.<sup>456</sup> The concept involved here is that of purification. The nobler the soul is, the closer it comes to the intellectual principles, which are the separate intelligences and include the active intellect.<sup>457</sup>

Avicenna's theory of purification is in fact more complex than is apparent from *De anima*. It rests on the idea that the unusual power of the soul is due to an extraordinary temperament of the body, which is either inborn or developed through purifying acts. This is what is meant by the statement 'the body is lofty in its nature and powerful in its *habitus*'. To understand this tenet of Avicenna's philosophy more fully, it is worth digressing to another book of his. At the end of his late *magnum opus*, the *Īṣārāt*, he provides a long discussion of prophecy by will-power. The text is relatively close to *De anima*, book IV, but differs in some interesting respects. Avicenna first explains why it is probable that the soul may influence the body and gives the well-known example of the tree-trunk, which can also be found in *De anima*:<sup>458</sup> a person is perfectly capable of walking on a trunk lying on the ground, but if the trunk bridges a gorge, the man will fall down because of the influence of the (frightened) soul on the body. Avicenna proceeds to maintain that some souls may also influence other bodies than their own and says:<sup>459</sup>

Sometimes a soul may have this power in accordance with the <body's> original temperament: the reason is that <the temperament> imparts <to the soul> a certain psychic configuration which becomes for the individual soul <the cause of> its individuation. Sometimes this power comes about on account of a temperament that develops <by itself>, and sometimes it comes about through some sort of acquisition <of the proper temperament> that makes the soul resemble one that has <already> been abstracted <from its body> on account of its extreme purity, as it occurs to the pious friends of God <i.e. saints>.

456. *De anima*, IV,4, ed. Rahman, p. 200, lines 12–13 and lines 18–19. I read: *wa-kāna ma'a dālika āliyan fi ṭabī'ati-bi qawīyan fi malakati-bi ḡiddan*. Rahman has feminine endings, which are not in the MSS. *ṭabī'a* for *ṭabaqa* is the reading of the Latin translation (*natura*: ed. Van Riet, p. 65, line 47) and of the *Mašriqiyūn*, MS Ahmet, f. 681r.

457. Cf. Goichon's *Lexique*, s.v. *mabda'*, p. 17.

458. *De anima*, IV,4, ed. Rahman, p. 200, line 1.

459. This is a rather tentative translation of a very difficult passage for which there does not exist a reliable Arabic edition. I have worked with the texts as given by Mehren, *Traité mystique d'Avicenne*, *IIème fascicule*, pp. 38–40, and by Dunyā in his edition of the *Īṣārāt*, v. 4, pp. 897–901; Goichon has translated the passage into French (*Directives et remarques*, pp. 522–4).

The <person> to whom this occurs in the soul's nature and who also is virtuous, following the right way and purifying his soul, is capable of a miracle (*mu'jiza*), being one of the prophets, or of a wonder (*karāma*), being one of the saints. His purification of the soul in this sense increases it <i.e. this power> beyond the qualities of nature, so that he reaches the highest degree. The <person> to whom this occurs, but who is evil and employs it for evil ends, is a malicious sorcerer; the power of his soul in this sense is not sufficient <for him> to reach his goals and he does not attain the rank of the pure.

Affliction through the <Evil> Eye is possibly of this kind. The cause in him <i.e. a person of this kind> is a psychological state which fascinates <other persons> and produces by means of its special nature physical weakening in the person who is fascinated by him. However, this will appear unlikely to someone who postulates that something which influences <other> bodies either is in contact <with them> or sends out some part <of itself> or conveys a quality in a medium. <But> he who recalls what we have said before, will consider this condition as abolished.

Extraordinary events occur to the natural world because of three causes: firstly the aforementioned <powerful> disposition of the soul, secondly properties of the elemental bodies such as the attraction of iron by a magnet through the particular power of the latter, thirdly celestial forces: between them and the mixtures of earthly bodies which are specified through certain positional configurations, or between them and the powers of earthly souls which are specified through certain celestial active or passive properties, there is a correspondance (*munāsaba*) which engenders the coming about of these extraordinary effects. Sorcery belongs to the first category, or rather miracles and wonders; natural magic belongs to the second category; and talismanic art belongs to the third category.

The distinction between prophets and sorcerers is much clearer here than in *De anima*. The key concept is that of purification. The soul of the prophet is purified, that of the sorcerer is not. Whereas the prophet's soul resembles a soul after the death of the body because of virtuous acts that have increased his purity to an utmost degree, the soul of the sorcerer has a much lower rank in terms of purity, since it is evil. In fact, his power only relies upon his very particular, inborn nature. His body has a special temperament which makes his soul powerful, but he cannot go beyond this temperament. The prophet also has the gift of this extraordinary bodily temperament from birth ('to whom this occurs in the soul's nature'), but on account of the purity of his soul he can acquire a temperament that differs from his inborn nature and enables him to do wonders or miracles, which are beyond the reach of the sorcerer, who in turn afflicts other people only through the Evil Eye. This sheds light on *De anima*, IV,4: the aforementioned passage on purification applies to the true prophet, whereas the passage on the Evil Eye applies to the

sorcerer. The latter in fact is able to influence *only* other people's bodies, but not the matter of the earth.<sup>460</sup>

But what about the contact with the divine realm? In contrast to *De anima*, Avicenna in the *Isārāt* indicates that the prophets' souls, through their purification, come closer to God. Also, he employs religious vocabulary ('pure', 'following the rightway', 'miracle', 'wonder', 'saints', 'the rank of the pure').<sup>461</sup> But he does not say that the power emanates from above, either in *De anima*, or in the *Isārāt*. On these points, his accounts of the imaginative and intuitive kinds of prophethood differ from the one based on will-power. In fact, *De anima* puts the emphasis on the prophet's power to produce these extraordinary effects simply at his will.<sup>462</sup> Even the *Isārāt* sum up the explanation of prophetic phenomena by saying that they are due to 'the aforementioned <powerful> disposition of the soul', which is due to an extraordinarily developed bodily temperament. The religious vocabulary seems only employed for the sake of a naturalistic theory of prophecy.

Note Avicenna's explicit defence of the principle of non-material causation as the basis for both true prophecy and malicious sorcery. Extraordinary effects like miracles and the Evil Eye do not rely on the usual chain of cause and effect, which implies contact or transmission or mediation. Avicenna's argument is an induction: there are several obvious cases of a non-material cause and a material effect (the man falling from the tree-trunk, the sick person who is cured only because he believes that he is cured<sup>463</sup> etc.), the inference being that non-material influence exists in general. Avicenna then applies this generalized rule to explain phenomena that cannot be explained by the usual scheme of cause and effect, such as the Evil Eye. This theory, which breaks with the Aristotelian principle that causation rests on contact, found numerous opponents in East and West, as we shall see.<sup>464</sup>

Finally, let us briefly turn to the third, intuitive kind of prophecy. What distinguishes the prophet of this sort from ordinary people is a powerful predisposition (*isti'dād*) to make contact with the active intellect. The concept of preparedness or predisposition is distinctly Avicennian and also plays a role in his theories of the creation of souls and of the elements' reception of forms.<sup>465</sup> A person

460. The reader of this passage in *De anima*, IV,4 therefore has to pay attention to the *bal* ('but, rather') on p. 200, line 12, which divides the section on sorcerers from the section on true prophets who are able to act upon the world's matter. The Latin translates correctly with *immo* (ed. Van Riet, p. 65, line 38).

461. The terms *mu'jizāt* and *karāmāt* are reserved for prophets and saints respectively in Islamic theology.

462. *De anima*, IV,4, ed. Rahman, p. 201, lines 2,3 and 5.

463. This example is also in *De anima*, IV,4, ed. Rahman, p. 199, line 18.

464. Gazālī treats the issue in his *Tabāfut*, and Averroes answers in his *Tabāfut al-Tabāfut*. See Van den Bergh, *Averroes' Tabāfut al-Tabāfut*, I, pp. 311–16.

465. On the creation of souls see *De anima*, V,4, ed. Rahman, p. 233, line 6, ed. Van Riet, p. 124, line 96; here the Arabic equivalent of *aptitudo* is *tabayyū*. On the elements' reception of forms see *De anima*, V,7, ed. Rahman, pp. 261–2, ed. Van Riet, pp. 172–3, in particular line 23. Cf. Goichon, *Lexique*, pp. 211–12.

with a predisposition for intellectual knowledge appears to know everything by himself:

In this state <of the highest predisposition> the material intellect ought to be called 'sacred intellect', since it partakes of the genus of intellect *in habitu*, except that it is so lofty that it is not something shared by all people.<sup>466</sup>

The material intellect (as will be explained later)<sup>467</sup> is the primitive state of the intellect which exists in all human beings after birth. Therefore, prophets of the third kind have an inborn intellectual power which at birth is already in the state of an intellect which has attained knowledge (an intellect *in habitu*). This predisposition is called intuition (*hads*).<sup>468</sup> People discover knowledge via intuition by attaining the middle terms of syllogisms. It is possible to improve this capacity after birth:

Thus there might be a person whose soul has been rendered so powerful through extreme purity and intense contact with intellectual principles that he blazes with intuition, i.e., with the ability to receive the inspiration in all matters from the active intellect ... This is a kind of prophethood – indeed its highest faculty – and the most appropriate thing is to call this faculty 'sacred faculty'.<sup>469</sup>

Other ways to enhance one's intuition are hinted at in Avicenna's autobiography: prayers, visits to the mosque, dreams, wine-drinking etc.<sup>470</sup> Again, he gives a new meaning to traditional religious practices and vocabulary in order to formulate a naturalistic theory, which focuses on human predispositions for prophecy.

We can conclude that the second kind of prophecy differs from the two others in that it is less dependent upon divine influence. A powerful person of the first kind who has an extremely vivid imaginative faculty but does not have any contact to the realm above, is incapable of prophecy: such a person will not be able to predict anything and may even appear mad. In fact, Avicenna's theory of the imaginative faculty also covers mad, shocked or dreaming people.<sup>471</sup> A prophet of the third and highest kind *per definitionem* joins with the active intellect and thus with the realm above. This faculty cannot be misused. In contrast, Avicenna's explanation of prophets that perform miracles through their will-power almost dispenses with the notion of divine influence, but only mentions the pure nature of the soul and the special temperament of the body. The emphasis is on the prophet's will-power and on a naturalistic explanation of the phenomena: a non-material cause of a material

effect. It is only in the *Isārāt* that Avicenna describes the purification of the soul in religious terms and more clearly distinguishes between true prophets and sorcerers. But this addition was unknown to the Latin readers, who, with a few exceptions, were very critical of Avicenna's theory of prophecy.

#### *The Latin Reception*

The Latin reception of Avicenna's theory of prophecy is of special interest not only because the scholastic writers differed in their judgement about it, but also because the topic is foreign enough to Aristotle's philosophy to be treated as an Arabic contribution to intellectual history. This is said without denying that Aristotle's treatises *De insomniis* and *De divinatione per somnum* formed the ultimate basis for the philosophical discussions of veridical dreams, divination and prophecy in the Arabic language. There are obvious connections between the *Parva naturalia* and the Arabic tradition,<sup>472</sup> but also important differences: Aristotle was highly sceptical of the possibility of prophetic dreams and in particular of their divine origin, whereas for the main Arabic philosophers prophethood was a source of knowledge.<sup>473</sup> The two aforementioned treatises by Aristotle are very short and tentative and thus did not form a serious obstacle to the development of independent theories in the Peripatetic tradition which grew in Islamic culture and were at least partly prompted by it.<sup>474</sup> The Christian tradition, of course, also accepted prophecy. Consequently Latin readers could not argue against Avicenna's theory by simply quoting Aristotle. It is therefore in this part of the broad field of psychology that the reception of Avicenna's *De anima* came close to becoming a philosophical and theological dialogue between Avicenna and his readers.

These readers were few, however, since it took a careful reader to realize that the diverse passages about the imaginative faculty, will-power and intuition contain a fully-fledged theory of prophecy. By far the most popular and well-known passage was the one about the Evil Eye and the connected teachings about non-material causes. It is quoted or referred to by Robert Grosseteste, Roland of Cremona,

466. Avicenna, *De anima*, V,6, ed. Rahman, p. 248, lines 16–19 (transl. Gutas, *Avicenna*, p. 161).

467. See p. 178 below.

468. Avicenna, *De anima*, V,6, p. 248, lines 12–13.

469. *De anima*, V,6, ed. Rahman, p. 249, lines 18–20 (transl. Gutas, *Avicenna*, p. 162).

470. As shown by Gutas, *ibid.*, pp. 149–98.

471. *De anima*, IV,2, ed. Rahman, p. 173, line 4.

472. They are explored by Gätje, 'Philosophische Traumlehren', pp. 258–85. Rahman's attempt to interpret Avicenna's theory of miracles and the Evil Eye as an 'interpretation of the Stoic-neo-Platonic doctrine of Sympathy' (*Prophecy*, pp. 45–52), is problematic for two reasons. Firstly, the question of Avicenna's textual (Stoic or Neoplatonic) sources seems to be unsolvable. Secondly, Avicenna's concept of non-material causation is radically different from antique concepts of Sympathy, as Rahman himself admits (p. 48: '... substitutes the soul itself for the theurgic magic of later Hellenism'). Given Avicenna's special interest in problems of causation (e.g. in *Metaphysics*, book VI, see Wisnovsky, *Avicenna on Final Causality*) which were discussed by many Peripatetic philosophers, it may be more promising to look for his sources in this area.

473. Gätje, 'Philosophische Traumlehren', p. 272. On Aristotle see the recent study by van der Eijk, *Aristoteles. De insomniis. De divinatione per somnum*, pp. 52–62.

474. The interesting question of the influence of Islamic theology and belief on the theory of prophecy in general shall not be tackled in this study. Rahman has discussed some aspects of it in his *Prophecy*, pp. 52–64, 92–108.



Petrus Hispanus, Albertus Magnus, Thomas Aquinas and Roger Bacon. But Grosseteste, Roland and Petrus do not discuss Avicenna's theory of prophetic properties, and Bacon only once remarks that Avicenna 'thought that the prophets and the wise men of antiquity changed the world's matter into rain and dryness and other changes of the air'.<sup>475</sup> He does not acknowledge that Avicenna distinguished between different kinds of prophethood.

Albertus and Thomas Aquinas are in fact the only writers among those examined who have understood that the Avicennian theory is threefold. Albertus describes the three kinds in *De somno et vigilia*,<sup>476</sup> but is surprisingly silent about it in his main psychological works, *De homine* and *De anima*.<sup>477</sup> I have already referred to Thomas's remarkable sentence which summarizes the entire Avicennian doctrine (and which was pillaged by Gardet):

Only three <things> are required for prophecy, namely clarity of the intellect, perfection of the imaginative faculty and the soul's power to make external matter obedient to it.<sup>478</sup>

Another reason for the limited success of Avicenna's overall theory is the existence of a strong Western tradition on the same subject. Following Augustine, twelfth-century theologians distinguish three kinds of visions, one corporeal, i.e. sight; one spiritual, which is a perception of images; and one intellectual, which is a perception of immaterial forms. Revelation comes about when intellectual interpretation is applied to spiritual vision.<sup>479</sup> The distinction between *visio corporalis*, *visio spiritualis* / *imaginativa* and *visio intellectualis* remains standard until the time of Thomas Aquinas.<sup>480</sup>

475. Roger Bacon, *Opus tertium*, 26, p. 98: '... et per hanc viam verborum aestimavit Avicenna in sexto naturalium quod prophetae et sapientes antiqui alterabant materiam mundi ad pluvias et siccitates et alias alterationes aeris'.

476. Albertus, *De somno et vigilia*, 3.1.6, pp. 184b–186a.

477. See Index locorum, IV.2.e and IV.4.k–o. In *De anima* he occasionally mentions prophetic properties, using Avicennian vocabulary (3.1.1, p. 167a, 3.1.3, p. 169a, 3.3.11, p. 223a), but he does not treat prophecy as a subject of its own.

478. Thomas, *De veritate*, 12.3, p. 374, line 82: 'Praeterea ad prophetiam non requiruntur nisi tria scilicet claritas intelligentiae et perfectio virtutis imaginativae et potestas animae ut ei materia exterior oboediat, ut Avicenna ponit in vi de naturalibus'. See pp. 156–7 above.

479. See e.g. Pseudo-Augustine, *Liber de spiritu et anima*, 24, p. 797: 'Ista tria genera visionum manifesta sunt. Primum corporale, quo per corporis sensus corpora sentiuntur. Secundum spirituale, quo corporum similitudines spiritu, non mente cernuntur. Tertium intellectuale, quo illae res quae nec corpora nec corporum formas habent conspiciuntur. ... Sed ipsa <scil. anima> mente divinitus adiuta vel aliquo ipsa visa exponente, ... magna revelatio est'. Cf. Augustine, *De Genesi ad litteram*, 1.12 c.6–9. An introduction to the sources of medieval theories of prophecy is given by Decker, *Die Entwicklung der Lehre von der prophetischen Offenbarung* (1940), pp. 5–13.

480. See e.g. Albertus Magnus, *Quaestio de prophetia*, 2.4.1, pp. 65–71, and Decker, *Die Entwicklung der Lehre*, p. 214. For further information on 13th-century theories of prophecy see Decker, 'Die Analyse des Offenbarungsvorganges' (1939), pp. 195–244, and Torrell, *Recherches sur la théorie de la prophétie* (1992).

Avicenna's theory of different kinds of prophethood thus met with a Western counterpart which rested on the high authority of Augustine. Avicenna's doctrine of imaginative prophecy, to start with the first kind of prophethood, interested very few readers. The translation displays a certain negligence: neither Gundissalinus (who quotes the passage in his *Liber de anima*) nor Avendauth recognized the connection between *qūwa mutahayyila* (imaginative faculty) and *tahayyul* (imagining), and often translated the latter with *imaginatio*, which is their term for the faculty storing sense data.<sup>481</sup> Hence, Latin readers had no means of discerning that this kind of prophecy is rooted in the *virtus imaginativa* (*qūwa mutahayyila* or *tahayyul*) and not in *imaginatio* (*hayāl*). Nevertheless, some authors seem to be influenced by Avicenna's doctrine, as has long been pointed out.<sup>482</sup> Albertus Magnus, followed by Thomas Aquinas,<sup>483</sup> interprets the Augustinian *visio imaginativa* in the following way: 'It should be said that it is likely that forms are arranged and composed in the imagination, rather than that new forms are imprinted'.<sup>484</sup> This may well be a reflection of Avicenna's thesis that imaginative prophecy rests on a strong capacity to separate and connect sense data.

What the Latins were truly interested in, is Avicenna's explanation of the Evil Eye and miracles. It did not prove easy, however, to understand how this theory was linked to the Avicennian system of faculties. To my knowledge, Albertus is the only author who does not misrepresent Avicenna's theory of the Evil Eye in this respect, since he acknowledges that the 'potentia animae operativa' is its cause.<sup>485</sup> The misrepresentation found among the other authors is strange given that the Latin text is not ambiguous on this point:

Haec autem est proprietates pendens ex virtute sensibili motiva desiderativa, quae provenit ex anima prophetae dignioris prophetiae.<sup>486</sup>

Whereas the text of Avicenna Latinus stresses the influence of will-power (with phrases like 'pro voluntate eius' and 'secundum quod videtur eius voluntati'),<sup>487</sup> Thomas emphasizes the strong imagination of the prophet and his strong perception, Grosseteste speaks of a combination of perception, *affectus* and reasoning, and Roland of Cremona simply says 'through hatred or jealousy'.<sup>488</sup> The

481. *De anima*, IV–V, ed. Van Riet, Lexique Arabo-Latin, p. 232.

482. Decker, *Die Entwicklung der Lehre*, pp. 119, 133, 199, 213, und id., 'Die Analyse des Offenbarungsvorganges', pp. 238, 242.

483. Thomas, *De veritate*, q.12 a.7; id., *Summa theologiae*, II.II, q.173 a.2 c.

484. Albertus, *Quaestio de prophetia*, 4.1.2, p. 67, lines 52–4: 'Dicendum quod probabilius est quod species in imaginatione ordinantur et componantur quam novae imprimantur'.

485. Albertus, *De somno et vigilia*, 3.1.6, p. 185a.

486. *De anima*, IV,4, ed. Van Riet, p. 66, lines 62–4.

487. *De anima*, IV,4, ed. Van Riet, p. 66, lines 51 and 56.

488. Thomas, *Summa contra gentiles*, 3.103, p. 322; Thomas, *Prima pars summae theologiae*, 1.117.3.ad 2; Thomas, *De malo*, 16.9, p. 324; Grosseteste, *Expositio in epistolam s. Pauli ad Galatas*, iii.3, p. 73;



misrepresentation may be due to the fact that *voluntas* is not one of the faculties presented with an abbreviated definition in *De anima*, I,5, but appears only in an unpopular passage of book IV as the root faculty for the irascible and desiring powers.<sup>489</sup> Roger Bacon comes closer to Avicenna's theory when he says that through 'strong desire, firm intention and great confidence' external matter may be influenced.<sup>490</sup> Even Albertus, who usually points to the role of will-power with phrases such as 'per solum imperium' or 'imperii voluntas', once mentions that powerful people move matter 'only through reasoning and imagination'.<sup>491</sup>

Thus, one of the strengths of Avicenna's theory, namely that it is rooted in a refined hierarchy of faculties, was not appreciated by his Latin readers. This did not prevent a number of scholastics from understanding basic tenets of the theory. Robert Grosseteste is among the first to quote Avicenna's explanation of the Evil Eye. In fact, his quotation in the *Expositio in epistolam Sancti Pauli ad Galatas*, which dates about 1225, is the only direct quotation from Avicenna's *De anima* in Grosseteste's entire work.<sup>492</sup> St Paul's question to the Galatians: 'Who hath bewitched ('fascinavit') you that ye should not obey the truth?'<sup>493</sup> had prompted commentators since Basil and Jerome to discuss the phenomenon of the Evil Eye and the question of whether demons or the devil are involved in it.<sup>494</sup> Thus the *Glossa ordinaria* explains: 'Someone who harms children is commonly called a fascinator ('fascinus'). For the eyes of some people are called burning by sight <alone>'.<sup>495</sup> Grosseteste, in his commentary on Galatians, first relates Avicenna's theory and then adds the example of the camel from Algazel's *Metaphysica*.<sup>496</sup> The example is about a man who sees an excellent camel which is not his own, and driven by jealousy wishes ('aestimavit') its fall, which happens immediately and presumably ruins the camel.<sup>497</sup> The combination of Avicenna's explanation of the

Evil Eye and Algazel's example of the camel also appears in Roland of Cremona and Petrus Hispanus.<sup>498</sup> In contrast to Roland, who quotes Avicenna as an authority on the topic ('as Avicenna, who was a physician, says'),<sup>499</sup> Grosseteste does not want to decide whether Avicenna and Algazel arrived at the truth with their theory and simply says that Paul used the word *fascinatio* metaphorically.<sup>500</sup>

In his *Opus maius*, from about 1266, Roger Bacon accepts Avicenna's explanation of the Evil Eye and also his theory that an extraordinary soul with a strong desire may change external matter.<sup>501</sup> He adds, however, that God's grace plays a certain role in the production of miracles.<sup>502</sup>

Petrus Hispanus is more critical of Avicenna's theory, which is remarkable given that he usually follows the Arabic philosopher in his psychology. He repeats the Avicennian explanation of the Evil Eye and gives Algazel's example of the camel (without mentioning any names, as usual), and adds: 'But this does not seem to be in accordance with the truth'.<sup>503</sup> He slightly misrepresents Avicenna's theory by saying that a substance which is very similar to the superior substances may participate in their power ('virtutem participare'). Avicenna would agree that extraordinary souls resemble the higher principles, but he does not maintain that this power in fact comes from above. Petrus proceeds to discuss other phenomena of this kind of prophecy, namely the production of rain and wind, and then gives his own view on the subject: these effects are not caused by the person's own power ('ex sui industria'), but through the power of him who reigns over the whole world.<sup>504</sup>

Albertus Magnus, who follows Avicenna in so many respects, is sceptical about this theory from the start. Already in his commentary on the *Sentences*, which dates from the mid 1240s, he says explicitly that he does not approve of Avicenna's and Algazel's theory 'because I believe that *fascinatio* does not harm people with a firm belief in God'.<sup>505</sup> Stronger and more philosophical arguments are employed in his

Roland, *Summa theologica*, f. 62ra.

489. Cf. the very short Index locorum, IV.4.a-c.

490. Roger Bacon, *Opus maius*, 4, p. 396: '... et <anima rationalis> facit continue speciem suam et virtutem in corpus cuius est actus et in res extra. Et maxime cum ex forti desiderio et intentione certa et confidentia magna operatur, de quibus operibus Avicenna in sexto naturalium potenter eloquitur'.

491. Albertus, *De motibus animalium*, I.1.3, p. 262a: 'per solum intellectum et imaginationem'.

492. Grosseteste, *Expositio*, iii.3, p. 73.

493. *Ad Gal.* 3, 1: 'Quis vos fascinavit veritati non oboedire?'.

494. Meisen, 'Der böse Blick', pp. 157-9. The terms used to describe the phenomenon of the Evil Eye stem from antique times: *fascinare*, *defigere*, *invidere*; *oculus malignus*, *oculus obliquus*, *oculus irridiasus*, *fascinum*, *invidia*. See Meisen, *ibid.*, pp. 145-7. For a comprehensive collection of testimonies about the Evil Eye in different cultures see Seligmann, *Der böse Blick*, 2 vols (1910).

495. *Glossa ordinaria*, PL, 114, p. 574b: 'Dicitur etiam fascinus vulgo qui nocet infantibus. Dicuntur enim quorundam oculi visu urentes dum et hic eorum actus fascinatio dicitur'. The editio princeps by Adolph Rusch of Strassburg (1480/81, reprint 1992) has the same text.

496. It is Algazel's own addition, because it is not in Avicenna's *Dānešnāme*, which was Algazel's source. Cf. Avicenna, *Dānešnāme*, tr. Achena/Massé, II, pp. 86-7 (where only the Evil Eye is mentioned) and Algazel, *Metaphysica*, p. 194.

497. Algazel, *Metaphysica*, p. 194 (= *Maqāṣid*, ed. Dunyā, pp. 381-2).

498. See Index locorum, IV.4.k.

499. Roland of Cremona, *Summa theologica*, f. 62ra: '... quia anima venenosa per odium vel invidiam potest imprimere ex malo aspectu super corpus alterius infirmitatem de qua postea potest mori sicut dicit Avicenna qui fuit medicus'.

500. Grosseteste, *Expositio*, iii.3, p. 74: 'Sed quomodocumque se habeat circa hoc veritas, apostolus non intendit nisi assumere hoc nomen ab usu vulgi et uti eo metaphorice in designationem corporis infecti ex invidia tabescente sicut Iob ...'.

501. Roger Bacon, *Opus maius*, 4.4.7, p. 143, *ibid.*, 4, pp. 396 and 398. 'Si ... anima maligna ... vehementer consideret se posse nocere, non est dubium quin natura oboediet cogitationibus animae ut docet Avicenna octavo de animalibus et quarto de anima'. Bacon refers to a passage in *De natura animalium*, Liber VIII, cap. 7, f. 40va (in the 1508 edition) where Avicenna explains the bodily reactions of a hen after a victory over the cock.

502. Roger Bacon, *Opus maius*, 4, p. 403: 'Verum est autem quod gratia dei multum facit ...'.

503. Petrus Hispanus, *Scientia libri de anima*, 10.11, p. 476: 'Sed videtur hoc dissonum veritati'.

504. Petrus Hispanus, *Scientia libri de anima*, 10.11, p. 477: 'Verum ipsa non ex sui industria sed ex eius virtute producit, cui tota mundi machina est subiecta, qui eam regit et mundi totam constitutionem'.

505. Albertus, *Super secundum sententiarum*, 7.F.7, ed. Borgnet, p. 153a: 'Hoc autem non dico approbans dictum illud, quia bene credo quod fidem firmam in domino habenti non nocet fascinatio'.

later writings. In *De sensu et sensato* (c. 1258) Albertus distances himself from Avicenna's theory of non-material causation by saying that it does not agree with Aristotelian philosophy, according to which there is no causation between things separated without any mediation; it is, however, in accordance with what is said in necromancy, the art of spells and talismans.<sup>506</sup> The Aristotelian argument about the necessity of mediation is repeated in *De somno et vigilia*, but here Albertus adds another objection, which again is based on Aristotle. Avicenna had argued that the soul is not imprinted in the body, but resembles the higher principles in being able to influence matter. Albertus objects that the soul has to be in the body, otherwise it could not be said (as Aristotle says) to be the form of the body.<sup>507</sup>

Albertus goes beyond these Aristotelian arguments and defines his own standpoint in *De motibus animalium*, which contains the most comprehensive discussion of the problem. Here he explains that he agrees with what Avicenna has said about the influence of certain forms on matter ('hoc quidem Avicennae dictum est verissimum'). Among these forms are God and the intellectual substances which are close to him, i.e. angels, but also souls. Intellect and imagination influence the soul's body without any instruments but only by giving orders ('per solum imperium').<sup>508</sup> However, Albertus is strictly against the thesis that the soul may also move bodies other than its own and produce rain and fire. If human beings could change external matter without recourse to the movement of the world and the stars, he says, then the science of horoscopes ('nativitates'), developed by so many physicists, would not be possible. Moreover, one had to assume that the intellectual forms would disturb the normal movement of the stars so that they would abandon their orbit.<sup>509</sup> He proceeds to argue that the phenomenon of the Evil Eye relies on a different cause, namely a power produced by the movement of the stars. When there is a certain constellation of stars, this power is transmitted to persons born in that moment ('quae ... similem virtutem inducit in natum') and thus becomes their instrument. This does not happen without contact, because the power reaches the influenced object through a medium, as in the case of the magnet moving iron. The celestial bodies in general move the air through light and move the earth through fire and air.<sup>510</sup>

506. Albertus, *De sensu et sensato*, 1.10, pp. 27–8: '... haec sententia dictis Aristotelis non concordat, quia Aristoteles vult quod separata numquam agant in aliquid nisi per aliud coniungantur illi, et ideo magis intelligibile est dictum Aristotelis quam dictum Avicennae, sed cum necromantiis et incantationibus et arte imaginum magis concordat dictum Avicennae'.

507. Albertus, *De somno et vigilia*, 3.1.6, p. 186a: 'Si enim nullo modo sit in corpore, non esset aliquo modo corporis forma et hominis'.

508. Albertus, *De motibus animalium*, 1.1.2, p. 260–61.

509. Albertus, *De motibus animalium*, 1.1.3, p. 262b.

510. Albertus, *De motibus animalium*, 1.1.3, p. 263a: 'De fascinatione autem et praestigiis nos omnino aliam diximus esse causam. Dicimus enim ex virtute constellationis innasci virtutem his omnibus, quae motu caeli producuntur, quae cum constellatio prodigiosa est, similem virtutem inducit in natum. Quod

It is obvious that Albertus's main argument is neither theological nor straightforwardly Aristotelian. He argues against Avicenna in favour of a scientific world-view which is rooted in the concept of an undisturbed and undisturbable movement of the stars and their effects on the sublunar world. Powerful souls who have the power to interfere in this system cannot have a place in Albertus's theory. He nevertheless accepts Avicenna's theory of non-material causes for the soul's influence on its own body.<sup>511</sup>

It may not be surprising to find that Thomas used different arguments. In his early *Scriptum super sententiis* (around 1255), he still refers to an opinion close to that of Albertus.<sup>512</sup> He remarks that other philosophers than Avicenna argue that angels do not exert any influence on the earthly world except by means of the movement of the stars.<sup>513</sup> But Thomas's own line against Avicenna's theory is set out in detail in the *Summa contra gentiles* (around 1264) and later picked up again in the *Summa theologiae* and *De malo*.<sup>514</sup> The main argument is Aristotelian and is based on a passage in Aristotle's *De insomniis*.<sup>515</sup> The Greek philosopher relates that it happens to very clean mirrors that their surface becomes a blood-like fog when women look into the mirror during menstruation. The reason, according to Aristotle, is that the woman's eyes move and affect the air, which in turn affects the surface of the mirror.<sup>516</sup> Thomas adopts this as a model to explain the phenomenon of the Evil Eye, the existence of which he takes for granted: if someone is moved deeply by jealousy, anger or hatred, as happens often with old women, says Thomas, the spirits of the body get infected ('inficiuntur spiritus'). This infection reaches the eyes, which in turn infect the surrounding air and ultimately the body of some person, primarily children because of their weakness. Thomas thus prefers an explanation which implies the locomotion of some body between the eye and the object ('per motum localem alicuius corporis') and he rejects Avicenna's theory of non-material causation in the case of the soul's influence on its own body. Even in this case, he says, some kind of locomotion of a medium takes place – which is in

autem haec aliquando ad imperium talium natorum fiunt, non habet aliam causam, quia tunc conatus est ad hoc faciendum et virtus coniuncti efficitur instrumentum animae ut hoc perficiat. Nec fit hoc sine contactu quia virtus illa, quae mutat materiam ad formam praestigii vel fascinationis, per medium venit ad hoc ut tangat id quod mutat, sicut venit virtus magnetis ad ferrum quod trahit'.

511. For further information on Albertus's theory of prophecy, see Torrell, *Recherches sur la théorie de la prophétie*, pp. 169–204.

512. Thomas's commentary on the *Sentences* was written in the mid 1250s, thus some years before Albertus set down his theory about the influence of the stars in his *Parva naturalia* treatises. However, Thomas may have heard this theory directly from his teacher Albertus.

513. Thomas, *Scriptum super sententiis*, ii.7.3.1.c, p. 194 and iii.16.1.3.ad 3, pp. 515–16.

514. See Index locorum, IV.4.k.

515. Aristotle, *De insomniis*, 459b23–460a23.

516. See van der Eijk, *Aristoteles. De insomniis, De divinatione per somnum*, pp. 169–93, for a recent interpretation of the passage and a discussion of its authenticity.

sharp contrast to Albertus's standpoint.<sup>517</sup> Thomas nevertheless accepts Avicenna's theory that extraordinary effects like the Evil Eye are produced by the person's own power ('*propria virtute*') and thus distances himself from the explanation of the philosophers like Albertus, who connect these effects with the power of the celestial bodies, a position which Thomas himself had preferred in his earlier commentary on the *Sentences*.

If Thomas is in partial agreement with Avicenna regarding the theory of *fascinatio*, he is strictly against an application of this theory to true prophetic miracles. Thomas distinguishes between deeds which only appear miraculous, but which are performed *propria virtute* through physical contact (like *fascinatio*), and deeds which are true miracles, because they are performed *in virtute divina*, also through physical contact (like angelic miracles).<sup>518</sup> Avicenna, one must recall, explained both cases as effects performed by will-power and without physical contact. The Avicennian distinction mentioned above<sup>519</sup> between the deeds of purified persons and those of malicious sorcerers was not known to Thomas, because the *Īṣārāt* were not translated into Latin. It is unlikely that Thomas would have accepted Avicenna's more secular doctrine which says that prophetic miracles are performed by the power of a purified person and not by divine power.

Turning to the third kind of prophecy in Avicenna's system, we find that the relevance of the doctrine of intuition to the theory of prophecy was realized by almost no one except Thomas Aquinas.<sup>520</sup> Admittedly, Albertus Magnus knows the doctrines of the varying ability to acquire knowledge, of intuition and of the sacred intellect – in fact, he adopts these Avicennian doctrines, but only in the context of his intellect theory.<sup>521</sup> Thomas, on the other hand, delves into the matter because he is highly sceptical of Avicenna's naturalistic approach to prophecy. In *De veritate* (dating from c. 1259), Thomas delivers his finest piece of Avicennian exegesis by singling out a core concept of the Arabic philosopher: *isti'dād* – preparedness, aptitude – *aptitudo*.<sup>522</sup> He uses the terms *dispositio* and *habilitas* instead.<sup>523</sup> With similar insight, he later finds that the theory of non-material causes agrees very well with other tenets of Avicenna's philosophy, since the doctrine of matter which is prepared to receive the influence of the soul (as with the Evil Eye) corresponds to the doctrine that the emanation of intellectual forms depends upon the aptitude or

receptibility of the human intellect.<sup>524</sup>

Thomas's main attack on Avicenna's position is in question 12 of *De veritate*, which is one of the two treatises he devotes to prophecy (the other being *Summa theologiae*, II–II, qu. 171–4). He differentiates between divine prophecy and natural prophecy, the former being a gift of the Holy Spirit which is received by the prophet's mind without any mediation of natural causes. Natural prophecy, on the other hand, relies on the contact of the imaginative and intellectual faculties with the celestial bodies and separate intellects (i.e. angels) – not with the divine power directly.<sup>525</sup> Thomas argues that Avicenna's theory of prophecy covers only natural prophecy.<sup>526</sup> This is not strictly correct. We have seen in the first part of this chapter that Avicenna hints at the fact that imaginative prophets establish contact to the divine realm. Also, the sacred intellect, the highest power of the human soul, surely goes beyond Thomas's description of natural prophetic properties. What Thomas dislikes and refutes is Avicenna's approach from below, which indeed is very different from his own: according to Avicenna, prophecy (at least imaginative and intuitive prophecy) does not depend only on an emanation from the higher principles, but – to a high degree – on the preparedness (*isti'dād*) of the prophet. In other writings than *De anima*, Avicenna recognizes a number of means to enhance this preparedness by increasing one's purity, using his own life as an example.<sup>527</sup> Thomas would certainly have disapproved. In *De veritate*, 12, 1, he takes an explicit stand against theories which describe prophecy as a *habitus* of the prophet: prophecy happens in a passive way, Thomas maintains, 'just as the light of the sun is in the air'.<sup>528</sup> He admits that prophets through repeated inspirations will more easily receive inspirations than others, and he compares this *habilitas* with Avicenna's theory of the preparedness or aptitude of the prophet to join with the active intellect.<sup>529</sup> But this reception is natural, says Thomas; whenever such a person

524. Thomas, *Summa contra gentiles*, 3.103, p. 322: 'Haec autem positio satis consona est aliis suis positionibus. Ponit enim quod omnes formae substantiales effluunt in haec inferiora a substantia separata et quod corporalia agentia non sunt nisi disponentia materiam ad suscipiendam impressionem agentis separati'.

525. Thomas, *De veritate*, 12.3, p. 376, lines 262–82.

526. Thomas, *De veritate*, 12.3, p. 379, lines 451–61. To be precise, Thomas speaks only about imaginative and intellectual prophecy. He denies the possibility of the soul's influence on matter; a position which he will revise in the *Summa contra gentiles*, as we have seen: 'Ad nonum dicendum quod illorum trium (of the three 'Avicennian' conditions of prophecy, see n. 478 above) unum non potest naturaliter animae competere ut scilicet sit tantae virtutis quod ei materia exterior subdatur ...; et sic in hoc non est sustinendum dictum Avicennae vel cuiuslibet alterius philosophi. Ex aliis vero duobus quae tangit obiectio, secundum quod naturaliter homini proveniunt, causatur prophetia naturalis, non illa de qua loquimur <scil. prophetia divina>'.

527. See p. 164 above.

528. Thomas, *De veritate*, 12.1, p. 368, line 212: 'Unde oportet quod lumen propheticum non sit habitus sed magis sit in anima prophetae per modum cuiusdam passionis, ut lumen solis in aere'.

529. Thomas, *De veritate*, 12.1, p. 368, lines 242–52: 'Unde et mens prophetae postquam fuerit semel vel pluries divinitus inspirata, etiam actuali inspiratione cessante remanet habilior ut iterum inspiretur;

517. Thomas, *Summa contra gentiles*, 3.103, p. 323: '... non ... nisi mediante motu locali'.

518. Thomas, *Summa contra gentiles*, 3.103, p. 323.

519. See p. 162 above.

520. See Index locorum, V.6.v.

521. See Albertus, *De anima*, 3.3.11, p. 223a, and Hasse, 'Das Lehrstück von den vier Intellekten', pp. 62–75.

522. Thomas, *De veritate*, 12.1, p. 368, lines 247–52 and lines 261–8. For Avicenna's notion see pp. 163–4 above.

523. Schuetz, *Thomas-Lexikon*, p. 241: 'disponere ... = ... vorbereiten, veranlagern, geeignetmachen', p. 348: 'habilitas = Tauglichkeit, Gewandtheit, Fertigkeit'.

wishes, he may join with the intellect. And he adds: 'But the prophetic influence depends upon divine will alone. Therefore, how great the preparedness (*habilitas*) in the prophet's mind may be, it is not in his power to employ prophecy'.<sup>530</sup>

Here we are at the heart of the disagreement between the central concepts of Avicenna and his Latin reader, which is, in the final analysis, characteristic for the reception of the theory of prophecy.<sup>531</sup> The explanation of the Evil Eye as based on non-material causation prompted various reactions: Roger Bacon accepts the doctrine, Albertus Magnus finds it in conflict with his own theory about the stars, and Thomas Aquinas adopts an Aristotelian position. Roger Bacon, Petrus Hispanus and Thomas safeguard the divine origin of prophetic miracles against Avicenna's naturalistic interpretation. And finally, Thomas rejects the theory of intuitive prophecy on the basis of Christian belief, which reserves a more prominent role to God. In view of these clashes between core beliefs, it is no surprise that the theory of prophecy is among the very few doctrines from *De anima* included in Giles of Rome's list of Avicenna's errors. He erred, says Giles, in believing that the effect of the Evil Eye exists and in giving a naturalizing explanation of prophecy.<sup>532</sup>

## 6. THE INTELLECT

The influence of Avicenna's theory of the intellect in the West is one of those topics which have perhaps received too much attention from scholars. As has repeatedly emerged in the course of this study, the result of such a predilection for the topic of the intellect is a historically unbalanced picture of why the scholastics read Avicenna, and of what the theory of the soul comprised up to the time of Thomas Aquinas. Roland of Cremona, Jean de la Rochelle, Vincent of Beauvais,

et haec habilitas potest habitus prophetiae dici, sicut etiam Avicenna dicit in vi de naturalibus quod habitus scientiarum in nobis nihil aliud sunt quam habilitates quaedam animae nostrae ad hoc quod recipiat illustrationem intelligentiae agentis et species intelligibiles ab ea in se effluentes'.

530. Thomas, *De veritate*, 12.1, p. 368, line 268: 'Sed influentia prophetiae dependet ex sola divina voluntate; unde quantacumque sit habilitas in mente prophetae, non est in eius potestate ut prophetia utatur'. A similar view is expressed in Thomas, *Secunda secundae*, 172.1.c, p. 799. Further literature on the problem: Anawati, 'Saint Thomas d'Aquin et la Métaphysique d'Avicenne', p. 463; Gardet, 'Saint Thomas et ses prédécesseurs arabes', pp. 444–5. On Thomas's theory in general: Torrell, *Recherches sur la théorie de la prophétie*, pp. 205–29.

531. That Avicenna and Averroes as Muslim authors challenged Western theories of prophecy with the doctrine that universal natural prophecy has found its final form in the prophet Muhammad (Laarmann, 'Prophetie als erkenntnistheoretisches Problem', p. 255), does not agree with my findings. See Zambelli, 'L'Immaginazione e il suo potere', pp. 188–206, for a discussion of Avicenna's influence on Renaissance authors.

532. Giles of Rome, *Errores philosophorum*, 6.11, p. 30: '... credens fascinationem veram esse et quod anima non solum operatur in corpore proprio sed etiam in alieno'; and 6.16, pp. 32 and 34: 'Uterius erravit circa prophetiam ... male dixit quia visus est velle prophetiam esse naturalem, et voluit quod secundum ordinem quem habet anima nostra ad animas supercaelestes et ad intelligentiam ultimam derivatur ad nos prophetia'. This draws also on Avicenna's *Liber de prima philosophia*, X, 1, p. 523, lines 21–34. The other psychological theory listed by Giles is that bliss consists in the contemplation of the active intellect (16.18, p. 34). See Hasse, 'Aristotle versus Progress', pp. 872–4.

Petrus Hispanus and the young Albertus Magnus were intrigued not only by the theory of the active intellect but also e.g. by the argument of the shellfish and connected doctrines about touch.

This preliminary *cautela* should not, of course, obscure the importance of Avicenna's intellect theory both systematically, as a key to his entire philosophy, and historically, as the predominant theory of the intellect for centuries in Islamic culture, and as the source of major reverberations in Western and Jewish thought. Any interpretation of Avicenna's theory of the intellect depends upon the understanding of a number of main doctrines and upon the way in which they are brought into relation with each other. Among them are: first, the doctrine of the four intellects (material intellect, intellect *in habitu*, intellect *in effectu*, acquired intellect); second, the theory of the different grades of abstraction which ascend from sense perception via the internal senses to the intellect; third, the theory of the human intellect's contact with the separate active intellect; and fourth, the theory of intuition.

It seems sensible to start with an outline of the basic tenets of Avicenna's theory as presented in *De anima*, book V and chapter I,5.

There is in human beings a substance which grasps the intelligibles,<sup>533</sup> which is called the theoretical (*nazari*) intellect, in distinction to the practical intellect (*'amali*) which relies on the body.<sup>534</sup> This substance is not a body, nor does it subsist in a body.<sup>535</sup> The bodily (or animal) faculties like imagination and estimation assist the intellectual soul (also called the human soul) to a certain degree, but after the acquisition of the universals, these faculties distract rather than assist.<sup>536</sup> The human soul does not exist before the body,<sup>537</sup> but rather has a beginning in time together with its particular body.<sup>538</sup> It is individuated by certain dispositions or attributes (*hay'at*),<sup>539</sup> which ensure that the souls will not become one soul after the death of the body;<sup>540</sup> for the human soul does not die with the death of the body – it is immortal.<sup>541</sup>

The cause of the appearance of abstracted universal forms in the soul is the active intellect (*al-'aql al-fa'āl*)<sup>542</sup> – which in other works of Avicenna is identified with the

533. *De anima*, V,2, ed. Rahman, p. 209, line 16.

534. *De anima*, V,1, ed. Rahman, p. 208, line 8.

535. *De anima*, V,2, ed. Rahman, p. 210, line 1.

536. *De anima*, V,3, ed. Rahman, p. 222, line 3 and line 17.

537. *De anima*, V,3, ed. Rahman, p. 223, line 11.

538. *De anima*, V,3, ed. Rahman, p. 225, line 1.

539. *De anima*, V,3, ed. Rahman, p. 225, line 2.

540. *De anima*, V,3, ed. Rahman, p. 225, line 14.

541. *De anima*, V,4, ed. Rahman, p. 227, line 13.

542. *De anima*, V,5, ed. Rahman, p. 234, line 17. The term 'an intellect in actuality' (*'aql bi-l-fi'*) mentioned in this sentence surely refers to 'the active intellect' (*al-'aql al-fa'āl*) mentioned a few lines later for the first time in the book (p. 235, line 8).

last of the incorporeal intelligences of the universe.<sup>543</sup> Through contact or conjunction (*ittiṣāl*) with the active intellect the human intellect is turned from potentiality, of which there are three different kinds (material, *in habitu*, *in effectū*),<sup>544</sup> to actuality;<sup>545</sup> the latter status is called the 'acquired intellect' (*al-'aql al-mustafād*).<sup>546</sup> However, the intelligibles do not remain in the human intellect, because there is no storing-place for intelligibles in the soul.<sup>547</sup> The intelligible form is present only as long as the human soul wishes to perceive it.<sup>548</sup> That does not mean that a universal form once acquired has to be learnt again from the very beginning, for the soul develops a certain skill or predisposition (*isti'dād*) to receive this form. Learning, therefore, consists of developing this skill.<sup>549</sup> People differ a great deal in their ability to acquire knowledge,<sup>550</sup> that is, to make contact with the active intellect. In general, the ability to acquire an intelligible form depends upon whether the middle term of the corresponding syllogism is obtained.<sup>551</sup> Some people need much training and instruction until they hit upon a middle term, others obtain it directly through intuition (*hads*).<sup>552</sup> Those who possess a very high degree of intuition are able to receive all forms (including the middle terms) from the active intellect in almost no time.<sup>553</sup> This faculty is called the 'sacred faculty' (*qūwa qudsiyya*) and is a kind of prophethood.<sup>554</sup>

Some maintain that there are different souls in one living being.<sup>555</sup> But this is wrong, for the vegetative and animal faculties are two different faculties related to a single, immaterial, conjoining essence.<sup>556</sup> The soul reigns over the body by means of the heart,<sup>557</sup> from which the faculties flow (*fāda*) into the organs.<sup>558</sup>

543. *Metaphysics*, IX, 3, ed. Anawati/Zayed, p. 401, line 14 (= *Nağāt*, p. 273, line 14); *ibid.*, IX, 4, p. 407, line 4 (= *Nağāt*, p. 278, line 2); *Dānešnāme*, tr. Achena/Massé, p. 78, line 7. For a description of Avicenna's universe and its scheme of emanation see Davidson, *Alfarabi, Avicenna, and Averroes*, pp. 74–83.

544. *De anima*, I,5, ed. Rahman, p. 48, line 18 – p. 50, line 12: material intellect (*'aql bayūlānī*, p. 49, line 2), intellect *in habitu* (*'aql bi-l-malaka*, p. 49, line 13) and intellect *in effectū* (*'aql bi-l-fi'l*, p. 50, line 1).

545. *De anima*, V,5, ed. Rahman, p. 234, line 15. Cf. Van Riet's *Lexiques*, s.v. *ittiṣāl*.

546. *De anima*, I,5, ed. Rahman, p. 50, line 5 and V,6, p. 248, line 2.

547. *De anima*, V,6, ed. Rahman, p. 246, line 6.

548. *De anima*, V,6, ed. Rahman, p. 245, line 18. This passage describes the last of a number of alternatives. A few lines further down (p. 246, line 3) Avicenna declares his approval of it.

549. *De anima*, V,6, ed. Rahman, p. 247, line 3.

550. *De anima*, V,6, ed. Rahman, p. 248, line 9.

551. *De anima*, V,6, ed. Rahman, p. 249, line 4.

552. *De anima*, V,6, ed. Rahman, p. 249, line 6.

553. *De anima*, V,6, ed. Rahman, p. 249, line 13.

554. *De anima*, V,6, ed. Rahman, p. 250, lines 2–4.

555. *De anima*, V,7, ed. Rahman, p. 252, line 2.

556. *De anima*, V,7, ed. Rahman, p. 253, line 2 (a common link – *ribāt*), p. 254, line 1 (it cannot be the body) and p. 261, line 7.

557. *De anima*, V,8, ed. Rahman, p. 263, line 20 – p. 264, line 3.

558. *De anima*, V,8, ed. Rahman, p. 266, line 19.

Modern scholarship would probably agree with this brief description.<sup>559</sup> We leave this common ground when we enter the discussion of more particular points. Two seem particularly important: the meaning of Avicenna's doctrine of the four intellects, and the role of the separate active intellect in human intellection. Both topics proved to be very popular in the Latin West.

To start with the first of these two topics: it was said that through contact with the active intellect the human intellect is turned from potentiality, of which there are three different categories, to actuality. The three different categories of intellect in potentiality are called 'material intellect', 'intellect *in habitu*' and 'intellect *in effectū*', whereas the actualized intellect is named 'acquired intellect'.<sup>560</sup> What is the ontological status of these intellects? Modern scholars differ in their answer: some call them 'stages of development', 'powers', 'different intellectual levels', others say 'parts or stages of the rational soul', or 'levels' and 'degrees of human intellect'.<sup>561</sup> The Arabic for 'power' or 'faculty' would be *qūwa*, for 'stage, level or degree' *darağā* or *martaba*, for 'part' *ğuz*. Let us see how Avicenna first introduces the theoretical faculty of the intellect in *De anima*, I,5, when he has just completed his description of the practical intellect:

As regards the theoretical faculty, it is a faculty of the sort that it receives an impression of universal forms which are abstracted from matter. If <these forms> are abstract in themselves, the faculty's grasping of their form in itself is easier. If they are not, they become abstracted by force of the faculty's action of abstracting them so that no attachments of matter are left in them; we will explain how <this happens> later on.

This theoretical faculty has different relations (*nisab*) to these forms, because something which is of the sort that it receives something else, sometimes is receiving it in potentiality and sometimes in actuality. Potentiality has three different meanings ...

(48.18) Therefore the relation (*nisba*) of the theoretical faculty to the abstracted forms, which we mentioned, sometimes is a relation in absolute potentiality ...;

559. Presentday knowledge of Avicenna's intellect theory owes most to the studies of Rahman, Gutas and Davidson. Rahman was the first to base his philosophical reading of it on philological expertise (see his *Prophecy in Islam* (1958), pp. 14–20, 30–36, and 'Ibn Sīnā' (1963), pp. 492–501). From Gutas we have a similarly careful analysis of the notion of intuition (*hads*), a cornerstone of the theory of the intellect (*Avicenna and the Aristotelian Tradition* (1988), pp. 159–76), which was described in its entirety recently by Davidson, again in a fruitfully close reading of the Arabic text (*Alfarabi, Avicenna, and Averroes* (1992), pp. 74–126). Whereas Gutas emphasizes the development in Avicenna's thought on the subject, Davidson singles out the common features in the Arabic philosopher's many different works. An earlier and now for the most part outdated interpretation was given by Gardet, *La Pensée religieuse d'Avicenne* (1951), pp. 150–57.

560. See n. 544 above for the Arabic terms.

561. Rahman, *Prophecy*, pp. 15 and 20 (stages, powers, levels); Gutas, *Avicenna*, p. 172 (parts, stages); Davidson, *Alfarabi* ..., pp. 85, 86, 87 (stages, degrees, levels).

(49.5) sometimes a relation in possible potentiality ...;

(49.16) sometimes a relation in perfect potentiality ...;

(50.2) sometimes a relation in absolute actuality ...<sup>562</sup>

The last part of this quotation contains Avicenna's description of the four categories of intellects we are talking about. Note that Avicenna introduces them as different relations (*nisab*) of the theoretical faculty to the universal forms. He does not use the words for level, part or faculty. There is another passage in *De anima* which uses a similar vocabulary:

All intellectual perception is some relation (*nisba*) to forms separated from matter and its material accidents in the way mentioned. This is possible for the soul<sup>563</sup> in virtue of it being a substance which receives and accepts the impression of something else. It is possible for the <separate> intellect in virtue of it being a substance, a principle, acting and creating.<sup>564</sup>

According to these passages, therefore, the four intellects are four different categories of intellectual perception, that is four different categories of relating to the universal forms. It is, however, not without cause that scholars labelled them 'degrees' and 'powers', because Avicenna sometimes also uses the terms *qūwāt* ('faculties') or *marātib* ('levels', 'degrees'), for instance in the *Isārāt*,<sup>565</sup> but in *De anima* too: 'These are also the levels (*marātib*) of the faculties that are called the theoretical intellects'.<sup>566</sup>

Avicenna's doctrine of the four intellects (and its ambiguous vocabulary) is best understood if taken as presenting a theory about syllogistic intellection in the first place, and a theory about the gradual development of the intellect in the second place.<sup>567</sup> In the *locus classicus* on the issue in *De anima*, I,5, Avicenna defines the four categories as follows:<sup>568</sup>

(1) The first intellect, called the 'material intellect', has not yet received any object, but is only predisposed to reception. This primitive state of the intellect exists in all human beings after birth.

(2) The intellect *in habitu* is characterized by having primary intelligibles (*al-ma'qūlāt al-ūlā*) present. Such intelligibles, for which Avicenna gives the example 'The whole is bigger than the part' and 'Whatever things are equal to the same

thing, are equal to each other', are the premises of a syllogism from which one can proceed to secondary intelligibles.

(3) The intellect *in effectu* has acquired secondary intelligibles but does not consider them at the moment.<sup>569</sup>

(4) The acquired intellect comes about when the intelligible forms are actually present in the soul, which happens when the potential intellect (identical with the third intellect) connects with the separately existing active intellect.

An original feature of Avicenna's doctrine is that all four intellects are categories of the human intellect. In this he differs from his predecessors. The separate active intellect is the fourth intellect in the theories of John Philoponus, Alkindi and Alfarabi,<sup>570</sup> whereas Isaac Israeli and Avencebrol count three intellects, among them the 'intelligentia quae semper est actu'.<sup>571</sup> This alteration makes it possible for Avicenna to distinguish in greater detail between the various phases of the human intellect. Hence he not only names an entirely potential first intellect and a fully actualized fourth intellect, but also two further intellects, one *in habitu* and one *in effectu*. What is their function? Here the key terms are the primary and secondary intelligibles.<sup>572</sup> As to the primary intelligibles or axioms, about which we are not told very much by Avicenna, it is unlikely that they are implanted by the separate active intellect,<sup>573</sup> for three reasons: first, Avicenna usually maintains that intellectual forms granted by the active intellect are perceived only if the human intellect is actualized, but the intellect *in habitu* by definition is a status of potentiality; second, Avicenna emphasizes that primary intelligibles are not 'acquired' (*istafāda*), whereas he regularly uses this term for intellectual forms that come from the active intellect; third, the intelligibles mentioned in the chapters on the active intellect all seem to be secondary intelligibles and not axioms.

569. Avicenna does not say anything about the number of secondary intelligibles present in the intellect *in effectu*: 'In this case there are in <the soul> also the secondary intelligibles which are acquired after the primary intelligibles, without however being considered <at the moment>' (*De anima*, I,5, p. 49, lines 16–18). He does not maintain that the intellect *in effectu* is 'the level where <man> has a full repertoire of concepts and derivative scientific propositions' (as Davidson says, *Alfarabi* ..., p. 94).

570. John Philoponus, *In De anima III*, ed. Verbeke, pp. 3–4; Alkindi, *Risāla fī l-'aql*, ed. Jolivet, p. 158 ff.; Alfarabi, *Risāla fī l-'aql*, ed. Bouyges, p. 12 ff. On Philoponus's influence on Alkindi see Jolivet, *L'Intellect selon Kindī*, p. 58ff; on his influence on Ibn al-Bitriq and Alkindi see Endress, 'Buchbesprechung: Jean Jolivet', pp. 429–32, and Arnzen, *Aristoteles' De anima*, pp. 440–45. On Alfarabi see Finnegan, 'Al-Fārābī et le περὶ νοῦ', pp. 133–52, and Davidson, *Alfarabi* ..., pp. 44–73.

571. Isaac Israeli, *De definitionibus*, pp. 311–12. Avencebrol, *Fons vitae*, pp. 319–20. See Altmann and Stern, *Isaac Israeli*, pp. 35–9 and 159 ff.

572. As to the Greek and Arabic tradition on primary intelligibles before Avicenna, see Walzer, *Al-Farabi on the Perfect State*, pp. 406–7.

573. For the thesis that in Avicenna's epistemology primary intelligibles are infused by the active intellect, see Marmura, 'Plotting the Course', p. 337; Davidson, *Alfarabi*, pp. 86–7. For the thesis that (in Avicenna's major works) primary intelligibles come about through 'the spontaneous and instinctive activity of the material intellect', see Gutas, *Avicenna*, p. 171.

562. *De anima*, I,5, ed. Rahman, p. 48, line 1.

563. Or: 'this happens to the soul ...' *'li-n-nafs dālīka bi-anna-bā'*.

564. *De anima*, V,6, ed. Rahman, p. 244, line 4.

565. *Isārāt*, ed. Dunyā, v. 2, pp. 387–92 (English translation by Gutas, *Avicenna* ..., pp. 164–5).

566. *De anima*, I,5, ed. Rahman, p. 50, line 9.

567. Hasse, 'Das Lehrstück von den vier Intellekten', pp. 28–40.

568. See Avicenna, *De anima*, I,5, ed. Rahman, p. 48, line 18 top. 50, line 9 (with German translation in Hasse, 'Das Lehrstück von den vier Intellekten', pp. 29–31).



It appears that Avicenna has not further elaborated upon a problem which he had once tackled in his youth, in the *Compendium on the Soul*. There he mentions that axiomatic intelligibles (*al-ma'qūlāt al-badīhiya*) such as 'The whole is bigger than the part', come about in the soul through divine inspiration (*ilhām ilāhī*).<sup>574</sup> That some kind of inspiration is at the origin of primary intelligibles, is underlined by a passage in the *Analytica posteriora* part of *aš-Šifā'*. When Avicenna comes to speak about the necessary rational premises of a syllogism, he associates axioms such as 'The whole is bigger than the part' with another class of premises that are known by nature (*ḡarīziyyan*) such as 'Every four is an even number'. Knowledge of this kind relies on a syllogism whose middle term is known through natural intelligence (*fiṭra*)<sup>575</sup> and does not need to be acquired (*kasb*).<sup>576</sup> In Avicenna's main psychological works, however, the origin of primary intelligibles remains vague.<sup>577</sup> Therefore, since the emanation of these intelligibles from the active intellect would not be compatible with Avicenna's overall epistemology, it seems that they are thought to be present through some kind of natural inspiration.

As to the secondary intelligibles, they are acquired by the third intellect, the intellect *in effect*. In Avicenna's philosophy, they are the object not only of logic – as the Latins knew from a much quoted sentence in the *Metaphysics*<sup>578</sup> – but of all acquired knowledge. In his *De anima*, Avicenna does not explain how such intelligibles are attained, but he does so clearly in other works, the *Dānešnāme*, *al-Īārāt wa-t-tanbihāt* and *Fī n-naḥs an-nāṭiqā*: secondary intelligibles are reached by means of intuition (*ḥads*) or reflection (*fikra*), that is, by directly grasping the middle

574. Avicenna, *Compendium on the Soul*, ed. Landauer, p. 361, line 11 (transl. Gutas, *Avicenna*, p. 161). Cf. Avicenna, *ibid.*, p. 363, lines 9–10: 'of the necessary intelligible axioms that are inborn', and p. 371, line 2: 'through divine emanation'.

575. The term *fiṭra* has a long tradition in Islamic theology; see van Ess, *Zwischen Hadīṭ und Theologie*, pp. 101–114, and Gutas, *Avicenna*, p. 170. The distinction between the notion of *fiṭra* (natural intelligence), which is left unspecified by Avicenna, and the notion of *ḥads* (intuition), which he makes the cornerstone of an epistemological theory, does not seem problematic to me (as it does to Marmura, 'Plotting the Course', p. 337) and does not present an objection to Gutas's analysis of the theory of intuition.

576. Avicenna, *aš-Šifā'*, *al-Manṭiq, al-Burhān*, ed. Affifi/Madkour, p. 64. The theory of the natural syllogism is not the only addition to the doctrine of the primary intelligibles. In Avicenna's *Dānešnāme*, tr. Achena/Massé, p. 69, and *Fī ḡbāt an-nubūwāt*, ed. Marmura, p. 43, lines 7–8, the intellect *in habitu* also possesses commonly accepted opinions which pertain to practical life and to the practical intellect. This does not agree with Avicenna's doctrine in *De anima*. See Marmura, 'Avicenna's Psychological Proof', p. 51, n. 13.

577. See the ambiguous sentence in the *Īārāt*, v. 2, p. 392, lines 2–3; transl. Gutas, *Avicenna*, p. 165: 'That which brings <the intellect in> *habitu* into complete actuality, and the material <intellect> into <the state of intellect in> *habitu* is the active intellect'. Cf. Avicenna, *Fī n-naḥs an-nāṭiqā*, p. 195, line 16, transl. Gutas, *ibid.*, p. 73: '<the primary intelligibles> are called the starting points of intellects, general notions, and innate primary knowledge'.

578. Avicenna, *Liber de philosophia prima*, I.2, p. 10, lines 73–4: 'Subiectum vero logicae, sicut scisti, sunt intentiones intellectae secundo, quae apponuntur intentionibus primo'. On the term *intentio* see pp. 128–9 above. On primary and secondary intelligibles in logic see Sabra, 'Avicenna on the Subject Matter of Logic', pp. 753–64.

term of a syllogism, or by the more cumbersome way of searching for the right combination of concepts.<sup>579</sup> Thus, the intellect which moves from the phase *in habitu* to the phase *in effect* has gone through an act of syllogistic reasoning. An example, which comes from Aristotle's *Analytica posteriora*,<sup>580</sup> is given in the above-mentioned treatise on demonstration in Avicenna's *aš-Šifā'* (but unfortunately not in *De anima*):

Intuition is the accurate movement of this faculty <i.e. the mind> towards tracking down the middle term on one's own. For example: if a person sees the moon and <realizes> that it only shines, according to its phases, on the side which faces the sun, then his mind by means of intuition tracks down the middle term, which is: the cause for the shining of <the moon> is the sun.<sup>581</sup>

The syllogism Avicenna is thinking of can be reconstructed as follows: Everything whose cause of light is the sun, shines only on the side facing the sun. The moon has the sun as the cause of its light. Ergo: the moon shines only on the side facing the sun. This is a scientific syllogism in the Aristotelian sense, i.e. a syllogism in which the middle term gives the real cause of the phenomenon described in the conclusion.<sup>582</sup> In this example, the middle term is 'having the sun as the cause of light', the secondary intelligible is the proposition 'the moon shines only on the side facing the sun' – which is not an observation but knowledge resting upon understanding the cause. For Avicenna, true knowledge relies on the intellection of intelligibles in syllogistic order, this order reflecting the structure of reality.<sup>583</sup>

Since the premises in the example of the moon are not axioms, it is unclear whether Avicenna would count them among the primary intelligibles. Instead, the example's starting point for the formation of secondary intelligibles is sense perception, namely the observation of the moon. The way in which forms deriving from sense data come about is the topic of Avicenna's doctrine of intellectual abstraction as laid out in *De anima*, II,2 and in the *Naḡāt*:

The faculty in which the fixed forms are either the forms of existents which are not at all material and do not occur in matter by accident, or the forms of material existents but purified in all respects from material attachments – such a faculty obviously perceives the forms by grasping them in the way of abstraction from matter in all respects. This is evident in the case of existents which are in

579. Avicenna, *Dānešnāme*, tr. Achena/Massé, p. 69. For the passages in *al-Īārāt wa-t-tanbihāt* and *Fī n-naḥs an-nāṭiqā* see Gutas, *Avicenna*, pp. 164 and 166.

580. Aristotle, *Analytica posteriora*, I.34, 89b11.

581. Avicenna, *aš-Šifā'*, *al-Manṭiq, al-Burhān*, p. 259. Cf. Marmura, 'The Fortuna of the *Posterior Analytics*', p. 97.

582. On Avicenna's opinion on causality in natural things see Marmura, *ibid.*, pp. 92–8.

583. On Avicenna's concept of the syllogistic structure of reality see Gutas, *Avicenna*, p. 174 (followed by Marmura, 'Plotting the Course', p. 337).



themselves free from matter. As to those existents which are present in matter, either because their existence is material or because they are by accident material, this faculty completely abstracts them both from matter and from their material attachments and perceives them in the way of abstraction; hence in the case of 'man' which is predicated of many, this faculty takes the unitary nature of the many, divests it of all material quantity, quality, place, and position. If <the faculty> did not abstract it from all these, it could not be truly predicated of all.<sup>584</sup>

Avicenna does not give examples for forms that do not need to be abstracted, but it may well be that the concepts of the whole and the part in his example 'The whole is greater than the part' are such forms. Much more frequently Avicenna speaks about forms that have to be abstracted, and in fact abstraction is a prominent topic of his psychology, as will appear later.<sup>585</sup>

To return to the example of the moon and the doctrine of the four intellects: the intellectual state of the person who observes the moon is that of the intellect *in habitu*. Due to some natural inspiration he knows the primary intelligibles, but he can also work with the various sense data, which he may combine and separate with the help of the internal faculty of cognition.<sup>586</sup> In this phase, the soul can acquire an intelligible form 'if it actually begins to search for it'.<sup>587</sup> Perhaps the observer of the moon has already attained a number of secondary intelligibles, which he may retrieve and consider again at will through contact with the active intellect; in this case, his intellect would be in the phase *in effect*. He now observes the moon and sees that it shines only on the side facing the sun. Then follows an act of intellection: the person abstracts universal forms from matter, i.e. he attains the concepts 'being a moon', 'shining on one side' etc., he finds the middle term 'having the sun

584. Avicenna, *De anima*, II,2, ed. Rahman, p. 61, lines 5–14. Cf. Avicenna, *Nağāt*, p. 170, line 20 – p. 171, line 6, and the English translation by Rahman, *Avicenna's Psychology*, p. 40, which I have adopted with modifications.

585. See the passages in *De anima*, I,4 (p. 36, line 17 ff.), I,5 (p. 48, line 1 ff.), II,2 (p. 61, just quoted), V,3 (p. 221, line 19 ff.), V,5 (p. 235, line 2 ff., analysed below) and V,6 (p. 239, line 3 ff.). To quote the last passage: 'We say that the soul knows by means of perceiving in itself the form of the intelligibles which is abstract from matter. That the form is abstract is either <because> it is abstracted by the intellect or because this form in itself is abstract from matter, so that the soul is saved the trouble of abstraction'.

586. See *De anima*, V,3, ed. Rahman, p. 221, line 19 ff. The theory of the cogitative faculty has received special attention by Davidson (*Alfarabi* ..., pp. 95–102), who overemphasizes its role and misinterprets the term *fikr* ('intellectual reasoning') as referring to the activity of the cogitative faculty (*al-mufakkira*). This faculty by definition deals only with forms and connotational attributes ('intentions') that are not completely abstracted from matter and are therefore not universal. Davidson's analysis is partly conditioned by his understanding of a passage in *De anima*, V,6 where it is said that 'acquiring knowledge' (*ta'allum* = acquiring an intelligible form) is seeking for the perfect disposition to make contact with the active intellect (p. 247, line 3), where Davidson replaces the term *ta'allum* with *fikr* (with *Mubāḥaṭāt*, p. 199, line 12) and misleadingly translates with 'cogitation' instead of 'acquiring knowledge' (*Alfarabi* ..., p. 96).

587. Avicenna, *De anima*, I,5, ed. Rahman, p. 49, line 15.

as the source of light' and finally establishes the above mentioned syllogism in which the intelligibles are put in the syllogistic order that corresponds to reality. The moment of this intellection is called 'acquired intellect'.

One can conclude that the four intellects certainly are not 'powers' or 'parts of the soul'<sup>588</sup> in the same way as the other human faculties, such as the internal senses. These exist independently of each other, they have their own organ, their own action and often also their own object. This does not hold for the four intellects: they are different relations (*nisab*) of one faculty, the theoretical faculty, to the intelligibles, characterized by different states of actualization. Each time a new relation is reached, the older intellect is transformed into or replaced by a new intellect. If Avicenna calls them *qūwā* ('faculties', 'powers'),<sup>589</sup> then he does that only to indicate that the different intellects have increasingly higher powers of intellection. If he calls them *marātib* ('levels'),<sup>590</sup> he indicates that the first three intellects (material, *in habitu*, *in effect*) are different grades of the development of the primitive intellect after birth towards an intellect capable of acquiring true knowledge. Avicenna's doctrine, however, is not only about the intellect's development but also about syllogistic intellection: the second and third intellects (*in habitu* and *in effect*) are described as knowing different parts of the syllogism, the actual thinking of which is the fourth intellect (called 'acquired').

To turn to the second major issue of Avicenna's intellect theory, the role of the separate active intellect in human intellection. It is a standard doctrine of Avicenna's psychology that the intelligible forms flow or emanate (*fāda*) from the active intellect upon the human intellect.<sup>591</sup> Alternative formulations are that the active intellect gives (*aṭā*) these forms to the human soul,<sup>592</sup> or that they are imprinted (*inṭaba'a*) in it.<sup>593</sup> How does this fit with the theory of abstraction discussed above? In the dominant interpretation of Avicenna's psychology, abstraction is 'only a *façon de parler*'<sup>594</sup> for emanation of intelligibles, it is 'not to be taken literally':<sup>595</sup> 'intelligible thoughts ... flow directly from the active intellect and

588. Cf. n. 561 above.

589. See n. 565 above and *De anima*, V,6, ed. Rahman, p. 247, line 20 – p. 248, line 3, where the third and fourth intellects (*in effect* and 'acquired') are called *qūwā*. A particular problem of interpretation is posed by the passage on the hierarchy of faculties (end of I,5) where the four intellects are said to serve the next higher intellect, just as they are served by animal faculties which in turn are served by the vegetative faculties. I can only propose taking this passage as a convenient but certainly not consistent way (some faculties are parts of the soul, some are not) to summarize the rather dense chapter I,5.

590. See n. 566 above.

591. See e.g. *De anima*, V,6, ed. Rahman, p. 247, lines 4–5, and p. 248, line 1.

592. *De anima*, V,5, ed. Rahman, p. 234, line 17.

593. *De anima*, I,5, ed. Rahman, p. 50, line 8. Cf. *Nağāt*, p. 192, line 22 (transl. Rahman, *Avicenna's Psychology*, p. 68: '... imprints on the soul the intelligible forms').

594. Rahman, *Prophecy* (1958), p. 15; cf. Black, 'Avicenna on ... Fictional Beings' (1997), p. 445: '... he denies the reality of abstraction as a cognitive process'.

595. Davidson, *Alfarabi, Avicenna, and Averroes* (1992), p. 94.

are not abstracted at all';<sup>596</sup> Avicenna 'was unable to explain intellectual abstraction in knowledge'; the activity of the human intellect 'can only dispose the mind to be receptive of new concepts'.<sup>597</sup>

One obvious problem with this interpretation is that Avicenna's lengthy chapter on abstraction (*De anima*, II,2), and the passages which describe the intellect as abstracting have to be explained away as conventional lore of the Peripatetic tradition, as not being truly Avicennian. But are they a mere concession to tradition? The crucial passage in this regard is the beginning of *De anima* V,5 where Avicenna introduces the active intellect. He says that the active intellect is needed as the cause which makes our souls switch from potential to actual knowledge of the intelligibles. He then compares the active intellect to the sun,<sup>598</sup> the human intellect to the faculty of vision and the intelligibles to the things in the world.<sup>599</sup> And he proceeds:

(1) When the intellectual faculty considers the particulars which are <stored> in the imagination and the light of the above-mentioned active intellect shines upon them in us, then the <particulars> are transformed (*istahāla*) into something abstracted from matter and from the <material> attachments and get imprinted in the rational soul, (2) but not in the sense that the particulars themselves are transferred from imagination to our intellect, nor in the sense that the concept buried in <material> attachments – which in itself and with regard to its essence is abstract – produces a copy of itself, but in the sense that looking at the particulars disposes the soul for an abstraction (*al-muḡarrad*) from the active intellect to flow upon it. (3) For thoughts and considerations (*al-afkār wa-ta'ammulāt*) are movements which dispose the soul to the reception of the emanation, just as the middle terms in a more certain way dispose <it> to the reception of the conclusion (although the two happen in different ways, as you will understand later). (4) When some relation towards this form occurs to the rational soul through the mediation of illumination (*bi-tawassuṭi iṣrāq*) by the active intellect, then from <the form> something comes about in the soul, <something> of <the form's> kind in some way and not of its kind in another way – just as when light falls upon coloured things, it produces in vision an effect

596. Ibid., p. 93.

597. Weisheipl, 'Aristotle's Concept of Nature' (1982), p. 150. The viewpoint is old; cf. Brentano, 'Die Psychologie des Aristoteles' (1867), p. 14: 'Jeder, der sich nur einigermaßen mit den Lehren des Aristoteles vertraut gemacht hat, sieht deutlich, eine wie seltsame Umbildung sie hier erfahren haben; das Sinnliche hört auf die Quelle des geistigen Erkennens zu sein, in einer offenbar sich Plato annähernden Weise soll die sinnliche Vorstellung nur noch für eine Veranlassung unserer geistigen Erkenntnis gelten'. It may be that Thomas Aquinas has influenced this line of interpretation. See pp. 72–3 above.

598. In Aristotle's *Peri psychēs*, III,5, the activating intellect is compared to light (φῶς) not to the sun. See Walzer, 'Aristotle's Active Intellect', pp. 432–3, on the Greek and Arabic tradition – Alexander of Aphrodisias, Marinus, Stephen of Alexandria and Alfarabi – that led to a transformation of the analogy.

599. Avicenna, *De anima*, V,5, ed. Rahman, p. 234, line 14 – p. 235, line 2.

which is not of its nature<sup>600</sup> in all aspects. The imaginable things, which are intelligible in poten-tiality, become intelligible in actuality, though not themselves, but that which is collected (*ilṭaqāṭa*) from them. Or rather: just as the effect, which is transmitted through the medium of light from the sense perceptible forms is not identical with these forms but something different, related to them, <something> which is generated through the mediation of light in the corresponding receiver, likewise when the rational soul looks at these imaginable forms and <when> the light of the active intellect makes contact with them in some way, <the rational soul> is dis-posed to have appear in it, due to the light of the active intellect, uncontaminated abstractions from these forms.<sup>601</sup>

In this passage Avicenna explains how the particular, imaginable forms which exist in the soul become universal and intelligible – in other words, he explains the process of abstraction. The first sentence states the basic thesis, i.e. that through the influence of the active intellect the particulars stored in the imagination are transformed into something immaterial which is imprinted in the rational soul. The second sentence adds an explanation of this process: neither does the particular imaginable form travel itself from the imagination to the intellect, nor is there a copy produced of its immaterial core, but there comes an abstraction of it from the active intellect, for which the soul is disposed through its consideration of the particulars. The entire fourth section is meant to explain this abstraction. Its main thesis is that the intelligible form emanating from the active intellect is 'related' to the imaginable form which is at its origin: the intellectual form is 'of its kind in some way and not of its kind in another way'. Avicenna even says that the intellectual forms are 'collected' from the forms in imagination. Note that the analogy of light is not only used to compare the active intellect to the sun, but also to compare abstraction to vision: just as the visual image resembles the object it reproduces, likewise the abstracted form resembles the particular form stored in imagination.

It is, therefore, not correct to say that for Avicenna 'human intelligible thought comes directly from the active intellect', or that 'intelligible thoughts ... flow directly from the active intellect and are not abstracted at all'.<sup>602</sup> Avicenna insists that intelligible forms ultimately come from the particulars in the imagination and still resemble them. Moreover, 'thoughts' (*al-afkār*) are movements of the human intellect produced before the reception of abstract forms, as stated by Avicenna in section three.

600. *Ḡumla* here means 'gist', 'nature', not 'all', 'whole' (the Latin has 'similis').

601. Avicenna, *De anima*, V,5, ed. Rahman, p. 235, line 2 – p. 236, line 2. Cf. *Naḡāt*, p. 192, line 19 – p. 193, last line, where Avicenna briefly touches the doctrine of objects in imagination becoming actual intelligibles (transl. by Rahman, *Avicenna's Psychology*, pp. 68–9). For a developmental explanation of the doctrine from Avicenna's earliest to his latest works see Hasse, 'Avicenna on Abstraction', in press.

602. Davidson, *Alfarabi* ..., pp. 102 and 93.

In the traditional reading of these passages, the human intellect's attention to particulars *only* disposes (*a'adda*) the soul to be receptive of an emanation from above. This puts the emphasis on the activity of the active intellect rather than on that of the human intellect.<sup>603</sup> This, however, is not Avicenna's point. There is no 'only' in the text.<sup>604</sup> What Avicenna wants to explain in section two is the process of the transformation of the imaginable form: no transmission, no copying, but an abstraction mediated by the active intellect – and Avicenna adds that the role played by the active intellect truly is that of a medium: the form occurs to the soul 'through the mediation of illumination by the active intellect'. The function of the active intellect is to illuminate the objects of abstraction and let the abstracted forms occur to the human soul. In comparison, the function of the human intellect is described in more active terms: it looks at the imaginable forms, and produces 'thoughts and considerations' which Avicenna calls 'movements'. The aptitude<sup>605</sup> reached by this activity is similar to the aptitude to move from a middle term to a conclusion – which is a very strong disposition: what is difficult is to obtain the middle term, not the conclusion.

If, therefore, Avicenna himself does not conceive of the soul's power in abstraction as something limited, it may be said to be limited only in comparison with other theories of abstraction. It has been argued that Avicenna's theory differs from others, such as Alfarabi's, in that the separate active intellect does not *enable* the soul to abstract.<sup>606</sup> But that does not necessarily entail a limitation of the human power of abstraction. In Avicenna's theory, the human intellect does not need to be enabled from outside to produce thoughts and considerations. It is only at the very end of the process of abstraction that the active intellect comes in.

So far for the role of the active intellect in the abstraction of an intelligible form. A related issue is Avicenna's doctrine of intellectual memory, or rather his denial of it (*De anima*, V,6), which encountered severe criticism in the West.<sup>607</sup> After the first acquisition of a form, the soul's disposition to acquire this form is perfect. Whenever it wishes, it can make contact with the active intellect and let the form be present in the mind. But this presence lasts only as long as the soul actually

perceives the form; there is no intellectual memory. Avicenna again uses the analogy of sight:

The first acquisition <of a specific intelligible form> (*at-ta'allum al-awwal*)<sup>608</sup> is like the cure of an eye. When the eye is cured, it <may> look at the object, from which it grasps an image as long as it wishes; and if it turns away from this object, <the object> becomes potential<ly visible in a way> that is very close to actuality.<sup>609</sup>

The distinction between the first acquisition of a form and its later consideration at will is fundamental for Avicenna and also appears in his doctrine of the four intellects: the intellect *in effect* has already acquired intelligible forms, which the person does not consider at the moment but which are retrievable through contact with the active intellect. The distinction explains why in some passages about the active intellect one reads about abstraction and emanation (e.g. *De anima*, V,5, quoted above) whereas others deal with emanation only (e.g. *De anima*, V,6).<sup>610</sup> The latter are about the re-acquisition of already perceived forms, for which abstraction is not needed. It seems that Avicenna makes fuller use of emanation terminology (*fayḍ*, *fāḍa*) in passages about retrieving an already known concept than in passages about first acquisition.<sup>611</sup>

A final question concerns the kind of entity the active intellect is. For Avicenna, this is a metaphysical question, since it regards existents separate from matter.<sup>612</sup> In *De anima*, he alludes to the fact that after the body's death the souls are allowed to connect perfectly with the active intellect and that they thus encounter intellectual beauty and eternal happiness.<sup>613</sup> In works other than *De anima*, Avicenna identifies the active intellect with the last of the incorporeal intelligences, which is the lowest sphere of the universe. In this role, the active intellect participates in the hierarchical emanation of natural forms and matter.<sup>614</sup>

In this context, it is necessary to clarify a term which appears in many modern descriptions of Avicenna's theory of the intellect, but which is not always applied

603. Cf. Weisheipl, 'Aristotle's Concept of Nature', p. 150: 'According to Avicenna, human teachers and books can only dispose the mind to be receptive of new concepts from the *dator formarum*, the "agent intellect"' (for the term *dator formarum* see pp. 188–9 below); and Davidson, *Alfarabi* ..., p. 93: 'Activity leading up to the ostensible act of abstraction thus does not come to fruition in a true act of abstraction. It rather prepares the way for the reception of abstract concepts from the emanation of the active intellect'.

604. Pace Rahman, who translates (*Prophecy*, p. 15): '... but *only* in the sense that its consideration prepares the soul so that the abstract form should emanate upon it from the Active Intelligence' (my emphasis).

605. For Avicenna's concept of *isti'dād* ('disposition', 'preparedness') see pp. 163–4 above.

606. Davidson, *Alfarabi* ..., p. 93.

607. Especially by Thomas Aquinas. See p. 190 below.

608. Davidson (*Alfarabi* ..., p. 94) misunderstands this phrase as referring to the moment when a person's intellect reaches 'one of the stages of advanced potentiality, in which it can reestablish "conjunction" with the active intellect at will', i.e. the intellect *in effect*. But this passage clearly is not about the gradual development of the intellect in general, but about the first acquisition of a *specific* form, as is the entire passage (cf. the phrases 'desired intelligible form' and 'a form in potentiality', p. 247, lines 7 and 10).

609. Avicenna, *De anima*, V,6, ed. Rahman, p. 247, lines 11–13.

610. With the exception of *De anima*, V,6, p. 247, lines 8–9 ('hence there emanates from it the power of the abstract intellect'), where the topic is the first acquisition of 'the desired intelligible form'.

611. Cf. the references to *De anima*, I,5, V,5 and V,6 in nn. 591–3 above.

612. Cf. his references to the *Metaphysics* in *De anima*, V,5, ed. Rahman, p. 238, line 6, and V,6, p. 248, line 8.

613. Avicenna, *De anima*, V,6, p. 248, lines 6–8.

614. See the references in n. 543 above.

in the correct way: *wāhib aṣ-ṣuwar*, 'the giver of forms', *dator formarum*. This is a technical term of Avicenna's philosophy, which he uses only in particular passages, namely when speaking about forms that emanate from above and are received by properly disposed portions of matter. When matter is predisposed in a perfect way and is similar to the substance of the celestial bodies, it may receive a human soul. The giver of forms (or: the 'principles giving the form' – Avicenna once uses the plural) is one of the celestial intelligences.<sup>615</sup> It is sensible to identify the giver of forms with the last of these intelligences – the active intellect – from which flow the particular natural forms so that they are inscribed in particular matter.<sup>616</sup> It is important to note, however, that Avicenna himself never seems to explicitly identify the giver of forms and the active intellect.<sup>617</sup> Certainly, he does not use the term to describe the active intellect's activity of sending out intelligible, universal forms (also called *ṣuwar*), the objects of human intellection. The term *dator formarum* thus belongs to Avicenna's theory of creation, but not to his epistemology. It may be due to Algazel that the phrase gained a certain popularity in the West, because in his *Maqāṣid* (the Latin *Metaphysica*, a reworking of Avicenna's Persian *Dānešnāme*) he inserts the phrase at least four times in passages where Avicenna had not used it, for instance in passages about the transmission of sense-perceptible forms.<sup>618</sup> Averroes writes that Avicenna identifies the active intellect and the giver of forms, but he clearly refers to substantial and not to intelligible forms.<sup>619</sup> The scholastics hardly ever employ the term when discussing Avicenna's epistemology. Albertus, for

615. The giver of forms is mentioned in the following passages: (1) *Metaphysics* IX, 5, ed. Anawati/Zayed, p. 411, line 9 (this is the plural: '*al-awā'il al-wāhibā li-ṣ-ṣuwar*'; identical with: *Nağāt*, 281, line 21; Latin: *Philosophia prima*, p. 490, line 35). (2) *ibid.*, p. 413, line 11 (identical with: *Nağāt*, p. 283, line 10; Latin: *Philosophia prima*, p. 493, line 95). (3) *Fi l-kawn wa-l-fasād*, ed. Qassem, p. 190, lines 13–16 (Latin: *De generatione*, p. 139, lines 47–9). (4) *Fi l-aṣāl wa-l-infiālāt*, ed. Qassem, p. 256, line 10 (Latin: *De actionibus*, p. 79, line 80). The corresponding passages in *De anima* and *al-Īrārāt* do not mention the giver of forms or the active intellect, but only celestial intelligences: cf. *De anima*, V,7, ed. Rahman, p. 261, line 8 ff. (Latin: p. 172, line 98 ff.), and *Īrārāt*, ed. Dunyā, v. 3, pp. 231–240 (= tr. Goichon, pp. 431–3).

616. On the last intelligence see *Metaphysics*, IX, 5, p. 410, line 14 – p. 411, line 4 (= *Nağāt*, p. 281, lines 10–17; *Prima philosophia*, p. 489, lines 16–28).

617. As claimed by Davidson, *Alfarabi ...*, pp. 78 (and 124): 'Avicenna therefore calls the active intellect the "giver of forms"'.

618. Algazel, *Maqāṣid*, ed. Dunyā, p. 350, line 17, on odour (= *Metaphysica*, ed. Muckle p. 165, line 22; cf. Avicenna, *Dānešnāme*, tr. Achena/Massé, II, p. 57); p. 352, line 14, on visual forms (= *Metaphysica*, p. 167, line 9; cf. Avicenna, *ibid.*, p. 60); p. 359, line 5, on souls (= *Metaphysica*, p. 172, line 8; cf. Avicenna, *ibid.*, p. 65); p. 369, line 12, on souls (= *Metaphysica*, p. 181, line 16; cf. Avicenna, *ibid.*, p. 77). On the relation between *Dānešnāme* and *Maqāṣid* see Janssens, 'Le Dāneš-Nāme', pp. 174–5. But even Algazel does not explicitly identify the giver of forms with the active intellect.

619. Averroes, *Tafsīr mā ba'd al-aṭ-ṭabī'ā* (long commentary on *Metaphysics*), ed. Bouyges, p. 882, lines 18–19 (= *Commentarium in libros Metaphysicorum*, in *Aristotelis opera*, VIII, f. 181ra), p. 1496, lines 2–4 (= *Commentarium*, f. 304ra) and p. 1498, line 15 (= *Commentarium*, f. 304va). Cf. the Latin text, f. 181ra: 'Et ideo quia Avicenna oboedit istis propositionibus, credidit omnes formas esse ab intelligentia agente, quam vocat datorem formarum, and f. 304ra: 'Unde quidam dicunt quod omnes formae substantiales fiunt a forma abstracta extrinseca, quae dicitur a quibusdam dator formarum, et dicunt quod haec est intelligentia agens'; f. 304va: '... et Avicenna est de illis'.

example, identifies the *dator formarum* with God in his commentary on the *Sentences*, but speaks about equipping everything with an *esse substantiale* and not with an intelligible form.<sup>620</sup> The mistake of using the term in an epistemological sense is more common in modern literature.<sup>621</sup>

### *The Latin Reception*

When Avicenna's theory of the intellect was translated into Latin, it met with a strong indigenous tradition. Early medieval thinkers debated many questions relating to the rational soul: its definition, its immateriality, its localization in the body, its immortality, its origin, and its relation to the other faculties. They employed the vocabulary coined by Augustine, for instance the distinction between *ratio*, *voluntas* and *memoria*, or by Boethius, such as *sensus*, *imaginatio*, *ratio*, *intellectus/intelligentia*. From medical sources translated in the later eleventh century they derived the division between *imaginatio*, *ratio* and *memoria*. The theories that grew on this soil are numerous and of very different kinds: they range from the localization of the faculties in the three ventricles of the brain to the soul's intellectual ascension via the faculties to knowledge of the divine.

The advent of the psychological works of Aristotle and his Arabic followers confronted the West with a different approach to intellect theory, based on the distinction between active and possible intellect, and with a highly complex terminology: in translation literature, the terms *intellectus* and *intelligentia* (both translations of *ἡγλ* or *νοῦς*) appear in over thirty set phrases with attributes such as *materialis*, *in habitu*, *speculativus*, *sanctus* etc. Of course, one should not assume that translations were the sole cause for the Peripatetic turn of Western psychology; much was due to the internal dynamics of Western theological, philosophical and scientific thinking. But the new texts certainly presented a formidable challenge, which the scholastics took up successfully.<sup>622</sup>

620. Albertus, *Super primum sententiarum*, 44.B.2, p. 392: 'Et sic est etiam de datore formarum Deo quod omnia implet esse substantiali secundum eorum capacitatem ...'. Albertus draws on Avicenna's *De anima*, V,7, ed. Van Riet, pp. 172–4. Other passages with the *dator formarum* in Albertus are *De homine*, 17.3, p. 152a; Albertus, *De anima*, 3.2.4, p. 183, line 35. Cf. Philip the Chancellor, *Summa de bono*, IV.6, p. 264; Thomas, *Scriptum super sententiis*, iii.33.1.2.sol 2, p. 1028; Thomas, *De potentia*, 3.8, p. 73; *ibid.*, 5.1.5, p. 169; *ibid.*, 6.3, p. 218; Matthew of Aquasparta, *Quaestiones disputatae de anima*, 4, p. 68. Examples of wrong understanding among the scholastics are: Thomas, *De veritate*, 11.1.c, p. 349, line 198; Anonymous (Van Steenberghen), *Quaestiones de anima*, 2.19, p. 228, line 47: '... et datricem formarum intelligibilium et naturalium quam dixit <Avicenna> motricem decimi orbis'. Cf. also John Blund, *Tractatus*, 25.2, p. 94, line 10.

621. Examples of wrong usage: Schneider, 'Die Psychologie Alberts des Großen', p. 298; Paulus, *Henri de Gand*, p. 5; Pegis, *St Thomas*, p. 190; Gardet, *La Pensée religieuse d'Avicenne*, pp. 150 and 151; Bertola, 'È esistito' (1971), p. 303; Eckert, 'Augustinismus', p. 651; Van Steenberghen, *Die Philosophie im 13. Jahrhundert*, pp. 24 and 154; Weisheipl, 'Aristotle's Concept of Nature', p. 150; Dales, *The Problem of the Rational Soul*, p. 8.

622. For studies emphasizing the importance of internal Western developments see Wieland, 'Plato or Aristotle', p. 66, and Speer, *Die entdeckte Natur*, pp. 300–302. The over thirty set phrases of the semantic field

The reception of Peripatetic intellect theory covers many areas, of which three are singled out in the present study, following the above analysis of Avicenna's theory of the intellect: the doctrine of the four intellects, the theory of the active intellect's participation in abstraction, and the doctrine of Avicennized Augustinianism, which identifies the active intellect with God. Of these three, the last deserves special attention, since it is one of the most significant medieval fusions of philosophical and theological doctrine.

Not examined here are Avicenna's theories of the creation of the soul and individuation. It may be briefly noted that Avicenna's proper argument, which shows that the soul does not exist before the body,<sup>623</sup> is quoted only twice, by Dominicus Gundissalinus, and by Albertus Magnus in *De homine*. Gundissalinus, incidentally, considers the arguments to be weak ('debiles').<sup>624</sup> Nevertheless, Avicenna's theory of individuation as a whole – which says that the soul has a beginning in time together with its particular body and that it is individuated by certain dispositions or attributes, which ensure that the souls will not become one soul after the death of the body<sup>625</sup> – was embraced by Thomas Aquinas in his *Scriptum super sententiis*.<sup>626</sup> A second doctrine that would deserve closer study is the denial of a human storing-place for intelligible forms, i.e. the denial of intellectual memory, which is the Avicennian doctrine most strongly objected to by Thomas Aquinas. The criticism appears in Thomas's major works (which probably prompted similar reactions in subsequent writers like Simon of Faversham), but also in his early commentary on the *Sentences*, where the objective is to sustain the thesis that the intelligibles remain in the soul even after death.<sup>627</sup> On this delicate problem Albertus Magnus takes an intermediate position in *De homine*: he explicitly agrees with Avicenna that there is no intellectual memory, since the faculty of *memoria* is reserved for sense data, but he argues against him that the intelligibles remain in the possible intellect. Gundissalinus and Petrus Hispanus adopt the Avicennian standpoint.<sup>628</sup>

'intellectus/intelligentia' and their sources are listed in Hasse, 'Das Lehrstück von den vier Intellekten', pp. 23–6.

623. Avicenna, *De anima*, V,3, ed. Van Riet, pp. 105–6.

624. Gundissalinus, *De anima*, 5, p. 48, line 6 ff.: 'Rationes autem, quamvis debiles, quibus philosophi sententiam hanc destruere conati sunt, apponere non recusam'. See Albertus, *De homine*, 5,3, pp. 76–8. See Index locorum, V,3.d.

625. Avicenna, *De anima*, V,3, ed. Van Riet, pp. 107–11.

626. Thomas, *Scriptum super sententiis*, II.17.2.1.c, p. 424: 'Unde quantum ad intellectum possibilem, eius <vid. Avicennae> opinio est quam tenemus secundum fidem catholicam, quamvis erret cum aliis de intellectu agente'. Thomas ceases to quote Avicenna on the topic in his other writings, apart from *De ente et essentia*, 5.68, p. 379. On matter as the principle of individuation, see Anawati, 'Saint Thomas d'Aquin et la Métaphysique d'Avicenne', pp. 457–8. For further authors quoting Avicenna on individuation see Index locorum, V,3.f–l.

627. Thomas Aquinas, *Scriptum super sententiis*, IV.50.1.2.c. For the other passages see Index locorum, V,6.j–k.

628. See Index locorum, V,6.j–k.

### *The Doctrine of the Four Intellects*

Divisions of the intellect were presented in many sources translated in the twelfth and early thirteenth century, in works by Aristotle, Alexander of Aphrodisias, Alkindi, Alfarabi, Isaac Israeli, Avencebrol, Avicenna, Algazel, Averroes and Averroes Junior. But none of them – with the possible exception of Aristotle's – was so successful as Avicenna's doctrine of the four intellects (*intellectus materialis; in habitu; in effectu; adeptus/accomodatus*).<sup>629</sup> The success was based less on quotations of his terminology – the scholastic terminology of intellects follows its own paths – but on the criteria given by Avicenna for the distinction between the intellects (in terms of principles and conclusions, and potentiality and actuality). These criteria and the functions they define ensured that the theory survived for a long time as a coherent doctrine.

The first steps of the reception, however, were cumbersome, partly because one of the strengths of Avicenna's doctrine, its basis in a theory of syllogistic intellection, was not realized. Dominicus Gundissalinus's version, the earliest in the West, is remarkable for something else, namely the combination of passages from very different chapters of *De anima* (I,5, V,1 and V,5). This combination amounts to a personal exegesis of the Avicennian theory, for it omits all phrases describing the four intellects as *comparationes (nisab)* to the intellectual forms, but contains repeated references to the different degrees of actualization of the practical intellect – a theory drawn from Avicenna but known to few.<sup>630</sup> If Gundissalinus's account is a collage of extracts from Avicenna, John Blund takes a much more independent, if hardly Avicennian approach. He leaves out all passages that pertain to the theory of syllogistic intellection; and he reduces the four Avicennian phases to two, called 'intellectus materialis' and 'in effectu', by describing the 'intellectus adeptus' as the intelligible and essential form of the material intellect and by relegating the 'intellectus agens' to an abstracting *power* of the soul, a 'vis animae' hardly related to the two phases of the intellect.<sup>631</sup>

The turning point in the history of the doctrine is the anonymous treatise *De anima et de potentiis eius*, written by a Parisian master of arts around 1225. In this text, which influenced later authors such as Jean de la Rochelle and Albertus Magnus, Avicenna's idea falls on fertile ground for the first time. The unknown author presents the doctrine as a theory about syllogistic intellection:

629. For a detailed analysis of the history of this doctrine see Hasse, 'Das Lehrstück von den vier Intellekten', pp. 21–77.

630. This includes modern interpreters. See Gundissalinus, *Liber de anima*, p. 87, line 15, to p. 88, line 13. Cf. Avicenna, *De anima*, V,1, ed. Van Riet, p. 81, lines 76–83.

631. John Blund, *Tractatus de anima*, 25.2, pp. 92–4. Blund also mentions an *intellectus in habitu*, meaning the form which is understood and stored in the soul (*intellectus* as the participle perfect passive), not a phase of the intellect.

<The Intellectus possibilis> receives different names according to the different levels through which it proceeds,<sup>632</sup> so that it is called *intellectus actu*, *intellectus in habitu* and *intellectus adeptus*.<sup>633</sup> When it first receives the quiddities of the things, it is called *intellectus actu*, because it is already able to act:<sup>634</sup> it can form connections out of the quiddities <in the format> of primary propositions; hence by knowing what is a part and what is a whole, it can <form> the connection 'Every whole is bigger than its part'.<sup>635</sup> Then <the intellect> is called *intellectus in habitu*, because with it are the principles of truth in the genus of truth.<sup>636</sup> When it proceeds again from arranging these principles to knowledge of the conclusion, then it is called *intellectus adeptus* with respect to this knowledge derived from the principles.<sup>637</sup>

Much of this is reminiscent of Avicenna: for both philosophers, the first intellect is pure potentiality, the second intellect knows first propositions such as the Euclidian axiom 'Omne totum maius est sua parte', the third intellect proceeds to 'conclusiones'. Of course, there are also differences: Avicenna's first intellect does not know the quiddities of things, his second intellect knows axioms through natural inspiration and not by composition,<sup>638</sup> and his fourth intellect, the acquired intellect, is missing altogether – probably because the anonymous master attributes intellectual memory to the potential intellect, so that there is no need for a fourth stage designating the presence of intelligibles in the soul.

The vocabulary employed by the unknown author, for instance the term *complexum* which does not derive from Avicenna,<sup>639</sup> indicates that in this text two traditions are crossing: the intellect theory of Arabic Peripateticism and the theory of the axiomatic method of Western logic and theology, which draws on Boethius and the *Organon*. How did the Parisian master hit upon this extraordinary

connection (supposing we do not find an earlier source which he copied)? He encountered two features in Avicenna's doctrine of the four intellects which sounded very familiar: first, the example 'Every whole is bigger than its part' for sentences which are known *per se* and from which one proceeds to other sentences; and second, the thesis that knowledge of such propositions is identical with a certain status of the intellect. As to the *propositiones per se notae*, the principles or axioms of human knowledge had become the subject of a lively discussion in the twelfth century. In logical treatises of the time one can find the axiom 'Omne totum maius est sua parte' as an example for a maxim which holds true for all sciences.<sup>640</sup> The Western discussion relies partly on Boethius, who in *De differentiis topicis* had defined *maximae propositiones* as *per se* known, not demonstrable and principal, adding a different axiom as an example.<sup>641</sup> In *De hebdomadibus* Boethius uses the influential term *communis animi conceptio* for axioms ('common notion of the mind').<sup>642</sup> It has been shown that Boethius and many authors of the twelfth and thirteenth century mix the two Aristotelian theories of axioms from the *Analytica posteriora* and of maxims from the *Topics*. That means, maxims are defined as axioms, but often the examples used for maxims do not meet the criteria for axioms – they are not always true, for example.<sup>643</sup> Apart from Boethius and Aristotle, other treatises also enriched the discussion about the axiomatic method, notably the translations of Euclid's *Elements* – one of which translates axioms as 'communes conceptiones animi' – and of the Pseudo-Aristotelian *Liber de causis*.<sup>644</sup> Influenced by these philosophical and mathematical texts, a number of twelfth-century theologians (first, and tentatively, Gilbert Porreta, later Alan of Lille and Nicolaus of Amiens) attempted to give an axiomatic foundation to theology.<sup>645</sup> In Paris in the 1220s, at the same time and place as the unknown author of *De anima et de potentiis eius*, William of Auxerre proposed to treat the articles of faith as the axioms of theology – comparing them to sentences such as 'Omne totum maius est sua

632. Cf. Algazel, *Metaphysica*, p. 175, lines 1–2.

633. Cf. Avicenna, *De anima*, I,5, ed. Van Riet, pp. 96–7.

634. From Aristotle, *Peri psychēs*, Greek-Latin version, 429b5–7.

635. Cf. Avicenna, *De anima*, I,5, ed. Van Riet, p. 97, lines 49–50.

636. Cf. Aristotle, *Analytica posteriora* II, 19, 100b5–17.

637. Anonymous (ed. Gauthier), *De anima et de potentiis eius*, p. 53: 'Hic, secundum diversos gradus quibus proficit, recipit diversa vocabula, ut dicatur intellectus actu, intellectus in habitu, intellectus adeptus. Cum enim primo receperit quidditates rerum, tunc dicitur intellectus actu, quia iam potest agere: potest enim ex quidditatibus incomplexorum formare complexiones etiam primarum propositionum, unde cognito quid est pars et quid est totum, iam potest hoc complexum <formare>: Omne totum est maius sua parte. Et tunc dicitur intellectus in habitu, eo quod habet penes se principia veritatis in genere veri. Cum autem iterum ex ordinatione illorum principiorum venerit in scientiam conclusionis, tunc quantum ad illam scientiam adquisitum ex principiis dicitur intellectus adeptus'.

638. Nevertheless, there is a striking resemblance between the anonymous author's doctrine that primary propositions are composed by the intellect and the Avicennian passage in the *Analytica posteriora* part of *as-Sifa* 'on naturally known premises such as 'Every four is an even number', which are known through an innate syllogism. Cf. p. 180 above.

639. It comes, rather, from the Boethius tradition; on *complexio* see Boethius, *In Categorias Aristotelis*, PL 64, pp. 168D–169A.

640. Anonymous, *Dialectica Monacensis*, ed. de Rijk, p. 528: 'Est autem maxima propositio quae non habet fidem aliunde, sed per se est nota, et sumitur pro principio in illa facultate ubi ipsa est maxima. Non enim sunt eadem specialia principia omnibus scientiis, sed alia in grammatica, alia in dialectica, alia in rhetorica; et sic de aliis – quamvis ita sit quod omnes scientiae communicent in quibusdam communibus principiis. Ut sunt haec: ... omne totum maius est sua parte'. Cf. Peter Abaelard, *Dialectica*, ed. de Rijk, pp. 309–310, and Petrus Hispanus, *Summule*, ed. de Rijk, p. 59.

641. Boethius, *De differentiis topicis*, PL 64, p. 1176C–D.

642. Boethius, *De hebdomadibus*, PL 64, p. 1311B.

643. See Green-Pedersen, *The Tradition of the Topics in the Middle Ages*, pp. 60–64, 211–14 and 240.

644. See Burnett, 'Scientific Speculations', pp. 155–66, id., 'The Latin and Arabic Influence on the Vocabulary Concerning Demonstrative Argument', p. 125, and Lohr, 'The Pseudo-Aristotelian *Liber de causis* and Latin Theories of Science', pp. 53–62.

645. See as an introduction Lohr, 'Theologie und als Wissenschaft im frühen 13. Jahrhundert', pp. 316–30; and the fundamental study by Lang, *Die theologische Prinzipienlehre der mittelalterlichen Scholastik*, pp. 41–93. Cf. recently Dreyer, *More mathematicorum*, pp. 82–170.



parte'.<sup>646</sup>

The second feature that sounded familiar is Avicenna's doctrine of a status of the intellect in which the primary intelligibles are present. For the anonymous master knew a passage at the end of Aristotle's *Posterior Analytics* where it is said that the principles and axioms of all knowledge are within the intellect. In the translation from Greek by James of Venice: 'Si igitur nichil aliud secundum scientiam genus habemus verum, intellectus utique erit scientiae principium, et principium principii'.<sup>647</sup> The unknown Parisian master testifies to the knowledge of this passage when he picks up phrases such as 'genus verum' or 'principium' and when he uses the term *scientia* for knowledge derived from principles. In addition, it is likely that the master's doctrine of the composition of axioms also goes back to the *Posterior Analytics*,<sup>648</sup> for later in the century the scholastics quote a key sentence from *Analytica posteriora*, I,3 on the issue: 'Principia cognoscimus in quantum terminos cognoscimus' – 'We know the principles insofar as we know (their) terms (for subject and predicate)'.<sup>649</sup> Albertus Magnus, Bonaventura and Thomas Aquinas even quote this sentence in explicit connection with the Parisian master's example of the composition of the *Omne totum* axiom.<sup>650</sup>

It is remarkable that the anonymous magister established the fusion of two traditions at a moment when both of them were *in statu nascendi*: the reception of the *Analytica posteriora* had not yet gathered pace,<sup>651</sup> and the high tide of Avicenna's psychology was still to come. One should also note that the author goes further than simply quoting Aristotle: he adapts Aristotelian doctrines to Avicennian

intellect theory. In doing this, he goes to the heart of the matter: Avicenna's doctrine of the four intellects is indeed inspired by Aristotle's theory of the intuition of the middle term<sup>652</sup> – a connection which our author may have sensed. In sum, his doctrine of the three potential intellects is not simply a perturbation of the Avicennian sequence of intellects, but a very purposeful adaptation.<sup>653</sup>

Because of the scarcity of surviving sources, we do not know whether this treatise influenced other masters of arts, but we can trace its impact on theological works, for instance on the anonymous *De potentiis animae et obiectis*,<sup>654</sup> which in turn influenced the Franciscan theologian Jean de la Rochelle. The latter author combines the approach of the Parisian master with a fresh reading of Avicenna.<sup>655</sup> The result is on the one hand a triple sequence of Avicennian intellect names (from versions A and B of Avicenna's *De anima* and from the distinction of potentialities in the same work), in which the fourth intellect appears again, and on the other hand an interpretation of the doctrine as concerning syllogistic intellection, an interpretation indirectly influenced by the Parisian master of arts: the second intellect is *intellectus principiorum*, the third intellect *intellectus conclusionum*.<sup>656</sup> Jean de la Rochelle even uses the Boethian term *communes animi conceptiones* for axioms known by the second intellect, which shows that he has understood the connection between Arabic intellect theory and Western discussion of the axiomatic method. Hence one can say that with Jean de la Rochelle the appropriation of Avicenna's doctrine is fully achieved.

In fact, the doctrine appears a second time in Jean's *Tractatus*, although this is hardly apparent. Jean here transforms the doctrine as transmitted by the anonymous theologian into a piece entirely about the intellectual function of the potential intellect. All other intellect names disappear. After quoting Avicenna on the intellect's activity of abstraction, Jean writes:

Then follows the activity of the <already formed> possible intellect, with respect to, first, the quiddities, second, the first pieces of knowledge which are the principles of the sciences, third, the conclusions. For example: first <the intellect>

652. See pp. 180–81 above.

653. Cf. Gauthier's remark on Anonymous, *De anima et de potentiis eius*, p. 53, lines 469–70: 'cf. Avicenna, *Lib. de anima*, I,5 (p. 94–100, u. 15–89), cuius tamen ordinem perturbavit et doctrinam alteravit magister'. Rather, the names of the three intellects follow the functions given to them by the anonymous author: the first intellect has the potentiality to act and is called *intellectus actu*, the second intellect is in the state in which it has the principles present and is called *intellectus in habitu* (or *habitus principiorum*, as Albertus will say), the third intellect has acquired knowledge of the conclusions and is called *intellectus adeptus*.

654. Anonymous (ed. Callus), *De potentiis animae et obiectis*, pp. 157–8.

655. In his *Tractatus de divisione multiplici* as well as in his later *Summa de anima* (c. 1235–6) which repeats the two key passages. See Jean de la Rochelle, *Summa de anima*, ed. Bougerol, c. 115 and 117, pp. 276 and 280–81.

656. Jean de la Rochelle, *Tractatus de divisione multiplici*, 2.18, p. 88.

646. William of Auxerre, *Summa aurea*, III tr.12 c.1, p. 199: 'Dicitur fides argumentum non apparenium propter articulos fidei qui sunt principia fidei per se nota. Unde fides sive fidelis respuit eorum probationes; fides enim quia soli veritati innititur, in ipsis articulis invenit causam quare credat eis, scilicet Deum sicut in alia facultate intellectus in hoc principio: Omne totum est maius sua parte, causam invenit per quam cognoscit illud'. William's texts on the issue are conveniently collected by Lang, *Die theologische Prinzipienlehre*, pp. 113–14.

647. Aristotle, *Analytica posteriora*, II.19, 100b12–17, ed. Minio-Paluello/Dod, p. 107.

648. Already in the 12th century one can find the thesis that maxims are composed out of plausible (*credibiles*) words; see Green-Pedersen, *The Tradition of the Topics*, p. 211.

649. Aristotle, *ibid.*, I.3, 72b24–25 (in the exact wording of James of Venice): '... non solum scientiam, sed et principium scientiae quoddam dicimus, in quantum terminos cognoscimus'. See Schmücker, *Propositio per se nota*, pp. 47–53.

650. Albertus, *De homine*, 54, p. 452a (see also 55, p. 459a); Bonaventura, *Collationes de septem donis spiritus sancti* (*Opera omnia*, v.5), p. 496, line 13: 'Anima autem nostra habet supra se quoddam lumen naturae signatum, per quod habilis est ad cognoscenda prima principia, sed illud solum non sufficit, quia, secundum Philosophum, principia cognoscimus, in quantum terminos cognoscimus. Quando enim scio, quid totum, quid pars, statim scio, quod omne totum maius est sua parte' (see Schmücker, *Propositio per se nota*, p. 66); Thomas, *Scriptum super sententiis*, I.3.1.2, p. 94. Aristotle's sentence is quoted without the example by Anonymous (Gauthier 1985), *Lectura in librum de anima*, pp. 11–12.

651. On the early tradition of the *Posterior Analytics*, see Burnett, 'Scientific speculations', pp. 155–6; Dod, 'Aristoteles Latinus', p. 69; Serene, 'Demonstrative Science', p. 498. On the later tradition, see de Rijk, 'The Posterior Analytics in the Latin West', pp. 104–27 (on Grosseteste, Thomas Aquinas, Ockham).



knows what is a whole, what is a part; then it knows the sentence (which is a principle known *per se*) that 'Every whole is bigger than its part', and likewise in other cases; third, it knows the conclusion which follows, namely that every continuous <thing> is bigger than its part, and likewise in other cases. Hence, it is in the way of induction that the form abstracted from particulars is collected, through which the possible intellect is formed; it is in the way of a syllogism that the already formed possible intellect proceeds.<sup>657</sup>

Although the passage still owes much to Avicenna, it is obvious that there has developed a scholastic doctrine with a character of its own. In Jean's theory, the formation of the possible intellect through abstraction precedes the act of syllogistic intellection which is described in the quoted text, whereas for Avicenna the primary intelligibles are innate knowledge, while the conclusions, i.e. the secondary intelligibles, have to be reached through contact with active intellect, which involves abstraction.

Another achievement of Jean de la Rochelle's is the care he invests in differentiating between traditions and in labeling them with reliable references. This is a first step towards mastering a seemingly boundless mass of intellect theories. It is Albertus Magnus who goes a step further. In his early *De homine* he enters the discussion with a magisterial cascade of distinctions of the intellect which derive from a wide range of sources that have never been distinguished before: Alexander of Aphrodisias, Alkindi, Avicenna, Algazel, Aristotle, Averroes.<sup>658</sup> In contrast to his predecessors, Albertus is aware of the contradictions that exist among the Peripatetic philosophers.<sup>659</sup> Many details witness to his understanding of the tradition: for instance, when he explains in passing that certain intellect names are alternative expressions of the same intellect in Algazel and Avicenna,<sup>660</sup> or when he remarks that Avicenna's theory of intuition is related to Aristotle's

657. Jean de la Rochelle, *Tractatus*, 2.22, p. 94: 'Et tunc subsequitur operatio intellectus possibilis, prima circa quidditates, secunda circa comprehensiones primas, quae sunt principia scientiarum, tertia circa conclusiones. Verbi gratia: Primo cognoscit quid totum, quid pars; secundo propositionem, quae est principium per se notum: omne totum maius est sua parte, et sic in ceteris; tertio conclusionem, quae consequitur, scilicet quod omne totum continuum est maius sua parte, et sic in ceteris. Per viam ergo inductionis colligitur ipsa forma abstracta a singularibus, qua formatur intellectus possibilis; per viam vero syllogismi proficit operatio intellectus possibilis iam formata'.

658. Albertus, *De homine*, 54, p. 449a: 'Dicit Alexander philosophus in libro De intellectu et intelligibili quod tres sunt intellectus, scilicet ... Ex hoc accipitur quod intellectus non sunt nisi tres differentiae. Cuius contrarium videtur dicere Alkindius in suo libro De intellectu et intelligibili qui dicit quatuor species intellectus. Quarum prima ... Secundum Avicennam autem et Algazelem quatuor sunt differentiae intellectus, aliae a praedictis in parte, scilicet ... Secundum Aristotelem autem videntur esse duae species intellectus ... Averroes vero videtur ponere tres species intellectus ...'.

659. That means, he continues to develop Peripatetic philosophy, but on a different level of understanding. It would be wrong to see the intellect theory of *De homine* as turning from Platonizing and mystic Arabic theories to logical Aristotelian theories, as maintained by Michaud-Quantin, 'Albert le Grand et les puissances', p. 73.

660. Albertus, *ibid.*, p. 451b.

doctrine of *sollertia* (ἀγρίνοια) from the *Posterior Analytics*,<sup>661</sup> or when he gives detailed references to sources.<sup>662</sup> As to the doctrine of the four intellects: the point is that it still has a place in the psychology of *De homine*. This is remarkable because Albertus seems to give Aristotle the lead when admitting only two intellects, the active and the possible intellect, plus a third intellect drawn from Averroes, the *intellectus speculativus*, which he interprets as the possible intellect at a high level of potentiality. It is quite clear, however, from various passages in *De homine* that Albertus conceives of the speculative intellect as being identical with Avicenna's third intellect (the intellect *in effectu*) and with the *intellectus adeptus* of the scholastic tradition initiated by the Parisian master.<sup>663</sup> As a result, the door is open again for the doctrine of the four intellects, which he adopts in the scholastic version: he omits the fourth intellect, and names three different stages of the possible intellect, one which composes intelligibles, one which is the *habitus principiorum*, and one which has attained knowledge.<sup>664</sup> The theory of syllogistic intellection appears – just as in Jean de la Rochelle – in a separate passage:

The intellect *in habitu* is the possession of those principles which the pupil does not acquire from a teacher. For we know the principles insofar as we know the terms, as Aristotle says. For, knowing what is a part and what is a whole, one knows that the whole is bigger than its part, ... Therefore the *intellectus adeptus* and <the intellect *in habitu*> are not identical, since the former is the possession of those principles which we acquire from a teacher through teaching or through finding <them on one's own>.<sup>665</sup>

Much in this text is traditional: the quotation from Aristotle, the *Omne totum* example, the use of the term *intellectus adeptus* for the intellect of the conclusions, and in general the connection of Avicennian intellect theory with the theory of

661. Albertus, *ibid.*, 60, p. 518a–b. Cf. Aristotle, *Analytica posteriora*, I.34, 89b10–20.

662. Albertus, *ibid.*, p. 518a–b: 'sicut autem habetur in fine primi Posteriorum'.

663. Albertus, *De homine*, 54, p. 451a (*solutio*), 452b and 451b: '... et ille est speculativus sub quo comprehenduntur intellectus in habitu et adeptus et demonstrans'.

664. Albertus, *De homine*, 56, 3, pp. 481b–482a: 'Dicendum quod tres sunt gradus intellectus possibilis ad scientiam, sed ad intelligibile non sunt nisi duo. Scientia enim est habitus constitutus ex compositione intelligibilium et propter hoc primus gradus potentiae ad ipsam est intellectus humanus hylealis, qui de sua natura est talis ut sit sciens. Secundus autem est habitus principiorum, quae sunt quasi instrumenta ad acquirendam scientiam. Tertius autem gradus habet scientiam et potest considerare quando vult. Ad intelligibile autem non sunt nisi duo gradus, scilicet ante intelligere et sub ipso, eo quod intelligibile non habet dispositionem praecedentem se in intellectu possibili'.

665. Albertus, *De homine*, 54, ad 1, p. 452a: 'Ad aliud dicendum quod intellectus in habitu est habitus principiorum quae discipulus non accipit a magistro. Principia enim cognoscimus in quantum terminos scimus, ut dicit Aristoteles. Scito enim quid est pars et quid est totum, scitur quod totum est maius sua parte, et scito quid affirmatio et quid negatio, scitur quod de quolibet est affirmatio vel negatio vera et de nullo simul, et ideo non incidit in idem cum intellectu adepto, quia ille est habitus eorum quae accipimus a magistro per doctrinam vel inventionem'.

axioms.<sup>666</sup> The distinction between *doctrina* and *inventio* may well come from Avicenna's *De anima*, V,6 – where the topic is finding the middle term – which testifies to Albertus's awareness of the Avicennian character of the doctrine.

Nevertheless, Albertus's reluctance to employ the many intellect names he has found in the sources and his insistence on the two Aristotelian intellects indicates that he is slowly turning against the Peripatetic tradition. Many years later this tendency was to find full expression in his *De anima* and *De intellectu et intelligibili*. If in the early *De homine* he had offered his readers a Peripatetic version of the doctrine of the four intellects, he now presents two very different readings: one being a reduction of the doctrine to its Aristotelian roots, the other a transformation into something surprisingly new. The first appears in the treatise *De anima* when Albertus comments upon a passage in Aristotle on different kinds of potentialities (417a21 ff.).<sup>667</sup> He quotes bits and pieces from the Avicennian and the scholastic doctrine of the four intellects, such as the *Omne totum* example, the principles which are at the origin of knowledge, and the distinction between learning and finding. In addition, he juxtaposes Aristotelian and Avicennian examples for the degrees of potentiality. He thus successfully links Avicenna's doctrine to its roots, with the effect that it loses its independent existence and its coherence. The reason, of course, is that there is no proper place for the doctrine in a commentary on Aristotle, who acknowledges only two theoretical intellects. Regardless of whether it is a theory about gradual development or a theory of syllogistic intellection, the doctrine of the four intellects can only be inserted if one is ready to include something distinctly non-Aristotelian in one's commentary. Thomas Aquinas, for example, will not include it. Following Albertus, he contents himself with quoting parts of the doctrine when commenting upon Aristotle's passage on potentiality, omitting the intellect names.<sup>668</sup>

Albertus himself, however, opens a back door to the theory of the four intellects. In his commentary he once mentions a sequence of four intellects: *possibilis*, *universaliter agens*, *speculativus*, and *adeptus*, and speaks of an ascension to the *intellectus adeptus*.<sup>669</sup> In a related passage, he spins out this theory of ascension: the speculative intellect is the formation of the possible intellect through forms which are acquired with the help of the active intellect. The increasing formation of the possible intellect through the active intellect (both being parts of the soul) due to these acts of intellection eventually leads to a status in which *possibilis* and *agens* are connected like matter and form. The different degrees of this formation are the

666. The passage is therefore an echo of a longer tradition rather than of Averroes (*Commentarium magnum*, 3.36, p. 496, lines 490–93, as de Libera proposes in *Albert le Grand*, p. 262).

667. Albertus, *De anima*, 2.3.2, p. 98, line 48 ff.

668. Thomas Aquinas, *Sententia libri de anima*, p. 113, lines 225–42.

669. Albertus, *De anima*, 3.3.12, p. 225, lines 6–14.

different stages of the speculative intellect. The last stage is the *intellectus adeptus*, that is, the total connection between *possibilis* and *agens* and the perfect and God-like knowledge of immaterial forms.<sup>670</sup>

An ascension of the soul to a divine state – this is a surprising turn in the history of the doctrine of the four intellects. The two main sources for Albertus's theory are, first, a rather obscure passage in Averroes's long commentary on *Peri psychēs*, in which the degree of conjunction between *agens* and *possibilis* as form and matter is described as constantly increasing; it ends with a quotation from Themistius about the marvellous and God-like state of the soul.<sup>671</sup> The second source is Avicenna's doctrine of the *intellectus sanctus*, which is a prophetic intellect capable of intuiting all middle terms at once and in no time – a theory often quoted in Albertus's œuvre.<sup>672</sup> But neither of the two authors understands the various intellects as stages in a process of intellectual ascension to God-like knowledge. This is Albertus's transformation, which rests on early medieval traditions.<sup>673</sup> In Avicenna's philosophy, the doctrine of the four intellects is held together by the above-mentioned criteria, that is, potentiality/actuality and principles/conclusions. This will change with the doctrine's alteration into a theory of ascension: there can be many steps in an *accessus* to divine knowledge.

How many becomes clear when Albertus returns, soon after *De anima*, to his new theory in *De intellectu et intelligibili*:

Note that in all these intellects the possible intellect is, as it were, the foundation and starting-point. The light of the active intellect in it is the disposition and, as it were, the base for the intellect of the principles, and the intellect of the principles is the base for the intellect which is called *in effectu*, and the intellect *in effectu* is the base for the acquired intellect, especially insofar as the soul acquires knowledge of itself, and this acquired intellect is <the base> for the assimilated intellect, which through the degrees of the application of inferior light ascends to the superior light until the light of the divine intellect, and in it it stops as in <its> end.<sup>674</sup>

670. Albertus, *De anima*, 3.3.11, p. 221, line 89, to p. 222, line 84. For a definition of the speculative intellect, see *ibid.*, 3.2.19, p. 205, lines 76–81.

671. Averroes, *Commentarium magnum*, III.36, pp. 496–501. On this passage see Davidson, *Alfarabi, Avicenna, and Averroes*, pp. 334–5. Averroes does not offer a proper doctrine of the four intellects (as does Avicenna); he acknowledges many intellect names and favours in particular a tripartition in *intellectus agens*, *possibilis* and *speculativus/in habitu*, employing these terms throughout, but not in a specific doctrinal account. It is, therefore, not correct to speak of an Averroistic scheme of the four intellects, as does Craemer-Ruegenberg, 'Alberts Seelen- und Intellektlehre', p. 108.

672. See Albertus, *ibid.*, 3.3.11, p. 223, lines 19–38, and the Index locorum, V.6.r for further passages. For Avicenna's doctrine, see pp. 163–4 above.

673. Cf. for example Pseudo-Augustine, *Liber de spiritu et anima*, 38, p. 808 (which describes an ascension via *sensus*, *imaginatio*, *cogitatio*, *meditatio*, *ingenium*, *ratio*, *intellectus* to *intelligentia*; cf. *ibid.*, 11, p. 786). For a different interpretation see de Libera, *Albert le Grand*, p. 262: 'Aucune doctrine d'Albert n'est plus "péripatéticienne" que sa doctrine de la divinisation par l'intellect'.

674. Albertus, *De intellectu et intelligibili*, 2.9, p. 517a–b: 'Et attende, quod in omnibus his intellectibus

Albertus's treatise is full of reminiscences of the Arabic and Latin Peripatetic tradition. It integrates, for instance, the theory of syllogistic intellection and the Avicennian doctrine of the *intellectus sanctus*.<sup>675</sup> But essentially it is a development of the idea proposed in *De anima* to transform the doctrine of the four intellects into a scheme of ascension. Albertus now employs a rich set of intellect names to designate the many stages of the ascending soul. The bounds which once ensured the coherence of the doctrine are transgressed: what was Peripatetic has become Christian.

This, of course, is not the end of the doctrine's history. It remained popular and even entered Vincent of Beauvais's encyclopedia twice, as quotations from Jean de la Rochelle's *Summa de anima* and from Albertus's *De homine*.<sup>676</sup> One encounters all three kinds of reception that had been displayed in Albertus Magnus's writings: as a Peripatetic doctrine, for example in Petrus Hispanus and John Pecham,<sup>677</sup> as part of the exegesis of a passage in Aristotle, for example in Thomas Aquinas,<sup>678</sup> and as a scheme of intellectual ascension, for example in Ulrich of Strassburg.<sup>679</sup> The theory of naturally known axioms survives in the theological doctrine of principles, for instance in the works of Bonaventura, Thomas Aquinas and Petrus Aureoli.<sup>680</sup>

Comparing the fate of this Avicennian doctrine with that of others, notably theories of the external and internal senses, one finds that it was transformed rather than accepted, even as a piece of Peripatetic teaching. The same holds true for the doctrine of the separate active intellect, with which we shall soon be concerned.

### *The Active Intellect's Participation in Abstraction*

Before we turn to the superior realm, a few words may be said against the prejudice that Avicenna's theory of intellection is primarily concerned with emanation and illumination and that it influenced Western thought in this Neoplatonic fashion.<sup>681</sup>

possibilis est quasi fundamentum et primus: lumen autem agentis in ipso est dispositio et quasi stramentum ad intellectum principiorum, et intellectus principiorum est stramentum ad intellectum qui dicitur in effectu, et intellectus in effectu est stramentum ad intellectum adeptum, praecipue in quo adipiscitur anima notitiam suiipsius, et iste intellectus adeptus ad intellectum assimilativum, qui per gradus applicationis luminis inferioris ad lumen superius ascendit usque ad lumen intellectus divini, et in illo stat sicut in fine'.

675. Albertus, *ibid.*, I.3.3, p. 501a and b.

676. Vincent of Beauvais, *Speculum naturale*, 27.39, p. 1945, and 27.46, p. 1950.

677. Petrus Hispanus, *Scientia libri de anima*, 2.7, p. 110, and 10.10, pp. 466–7; John Pecham, *Tractatus de anima*, 11, pp. 38–9. See also Alexander of Hales et alii, *Summa theologica*, 2.4.1.2.3.1.4.3, pp. 458–9.

678. See n. 668 above.

679. See Ulrich of Strassburg, *De summo bono*, I.1.7, pp. 18–19. On the influence of Albertus's theory of the intellect see Hoenen, 'Heymeric van de Velde', pp. 303–331, esp. 319–20.

680. Thomas Aquinas, *Scriptum super sententiis*, I.3.1.2.c, p. 94; Bonaventura, *Collationes de septem donis* (Opera omnia, v.5), p. 496, line 13 (see n. 650 above); Petrus Aureoli, *Scriptum super I Sententiarum*, II.10.5–6, pp. 557–70. See Schmücker, *Propositio per se nota*, pp. 66, 142 (n. 3), 155 and 194–5.

681. Cf. Brentano and Weisheipl in n. 597 above, and Michaud-Quantin in n. 659 above. A laudable

In fact, the Avicennian idea analysed above – that the active intellect plays an intermediary role in abstraction – found many readers in the West. One of the first was John Blund:

The soul has to turn its attention to the body which it has to rule, to <the body's> dispositions and to the similes of the images stored in memory, and <then> the *intellectus formalis* will be imprinted in the soul through the mediation of the first giver of forms.<sup>682</sup>

This is a free rendering of Avicenna's *De anima*, V,5 (pp. 127–8), the key passage on the issue. Notable changes are the introduction of the *dator formarum* in an epistemological context<sup>683</sup> and the term *intellectus formalis*, which may well be John Blund's creation and which denotes both an intelligible and a natural form.<sup>684</sup> There follow some sentences about angels, which bear a similarity with the following testimony from Roland of Cremona, which presents an Avicennian theory of abstraction:

Therefore the philosophers said that knowledge of abstraction comes about in the human being through the mediation of the active intelligence. The philosophers call those angels 'active intelligences' which we say are responsible for the protection of the souls.<sup>685</sup>

Given that both authors mention the identification of intelligences with angels and also the Avicennian phrase 'mediante luce intelligentiae agentis', it is likely that they belong to the same tradition.<sup>686</sup>

Other authors locate the active intellect inside the human soul but still quote the Avicennian doctrine of the active intellect's intermediary role in abstraction. This is the case with the anonymous author of *De anima et de potentiis eius* (whom we witnessed above combining Avicenna with Western logical traditions).<sup>687</sup> What is

exception is Rohmer, 'La Théorie de l'abstraction', pp. 105–84, esp. p. 174.

682. John Blund, *Tractatus*, 25.2, p. 94: '... anima habet convertere se ad corpus quod ipsa regere habet, et ad eius dispositiones, et ad similitudinem imaginum inventarum in memoria, et imprimatur in anima intellectus formalis mediante primo datore formarum'.

683. Against Avicenna; see pp. 188–9 above.

684. In analogy to *intellectus materialis*; cf. John Blund, *ibid.*, p. 93, lines 10–12. On this term, see Hasse, 'Das Lehrstück von den vier Intellekten', p. 56.

685. Roland of Cremona, *Summa*, f. 84vb, line 34: 'Unde dixerunt philosophi quod scientia abstractionis fit in homine mediante intelligentia agente et vocant [pro] philosophi intelligentias agentes illos angelos quos nos dicimus deputatos ad custodiam animarum. (De hac re satis diximus in secundo libro)'.

686. Cf. Gundissalinus on angels, *Liber de anima*, p. 51, which is quoted above, p. 28, n. 58.

687. Anonymous (Gauthier), *De anima et de potentiis eius*, p. 51, line 447: 'Sicut enim lux facit resultare speciem coloris de ipso colorato in oculum, ita intellectus agens abstrahit species a phantasmatis, quas praeparavit ei intellectus materialis, et facit eas quodam modo resultare in intellectu possibili. Unde duo sunt actus intellectus agentis: unus est abstrahere species a phantasmatis, alius est species abstrahere ordinare in intellectu possibili'.

significant is that the Parisian master adds a qualification, saying that only some forms are abstracted through the active intellect; other forms, such as justice and prudence, are acquired through correct behaviour, still others are acquired through illumination from above, such as forms that concern God and divine things.<sup>688</sup> The distinction between forms abstracted and forms illuminated was to travel through the anonymous *De potentiis animae et obiectis* (ed. Callus)<sup>689</sup> to Jean de la Rochelle and the *Summa fratris Alexandri*.

Jean de la Rochelle uses the distinction to differentiate between what is above, next to, and below the soul. With respect to the first, God is called the active intellect (we shall come back to this); with respect to the second, it is angels which receive this name; with regard to the third, it is an internal light.<sup>690</sup> Jean quotes Avicenna on this last function of the active intellect:

It should be noted, following Avicenna, that the function of the active intellect is to illuminate – or to shed the light of the intelligence upon – the sense-perceptible forms which exist in imagination or estimation, and by illuminating to abstract them from all material appendages and to conjoin the abstract <forms> with or place <them> in the possible intellect, just as through the action of light the form of colour is somehow abstracted and joined to the pupil of the eye.<sup>691</sup>

If one compares the analysis of Avicenna's doctrine given above,<sup>692</sup> one will see that this is a faithful interpretation, which surpasses much of what has been said on Avicenna's theory of abstraction in modern times.

Albertus Magnus's theory of the active intellect's role in abstraction is indebted to Avicenna, both in *De homine*<sup>693</sup> and in *De anima*,<sup>694</sup> although he does not

688. Anonymous, *ibid.*, p. 53, line 481 ff.: 'Sed quia diximus supra quod intellectus agens abstrahit species a phantasmatibus et ordinat eas in intellectu possibili, hic notandum est quod aliquae formae sunt in intellectu possibili quas non abstrahit intellectus agens a phantasmatibus, sed anima acquirit eas per rectam operationem, sicut sunt iustitia, prudentia; et aliquae sunt quas acquirit per superiorem illuminationem, ut quaedam quae intelliguntur de Deo et divino modo'.

689. Anonymous (Callus), *De potentiis animae et obiectis*, p. 157, line 11 ff. See Gauthier, 'Le Cours sur l'*Ethica nova*', p. 81.

690. Jean de la Rochelle, *Tractatus*, 2.20, pp. 90–91.

691. Jean de la Rochelle, *Tractatus*, 2.1.22, p. 93: 'Notandum ergo secundum Avicennam quod operatio intellectus agentis est illuminare sive lumen intelligentiae diffundere super formas sensibiles existentes in imaginatione sive aestimatione et illuminando abstrahere ab omnibus circumstantiis materialibus et abstractas copulare sive ordinare in intellectu possibili quemadmodum per operationem lucis species coloris abstrahitur quodammodo et pupillae copulatur'.

692. See pp. 183–6 above.

693. The Peripatetic passage is framed by quotations from Augustine, which shows that Albertus is less affirmative than Jean de la Rochelle on the issue; see Albertus, *De homine*, 58, p. 511b: 'Et est species mentis et sic semper sunt in anima; sed haec species est in potentia, ut supra dictum est, donec adveniat phantasma quod abstrahatur ad speciem intellectus agentis, tunc enim efficitur in actu et coniungitur intellectui possibili, et mediante ipsa discernitur hoc quod quaerebatur'.

694. Albertus, *De anima*, 3.2.19, p. 205: 'Ex his autem facile adverti potest quod duo sunt opera agentis, quorum unum est abstrahere formas intelligibiles, quod nihil aliud est nisi facere eas simplices

acknowledge his source.<sup>695</sup> And even Thomas Aquinas, who, like Albertus, places the active intellect in the soul and usually describes Avicenna's theory of intellection in illuminationist language, on one occasion betrays his knowledge of the Avicennian theory of abstraction.<sup>696</sup>

#### *Avicennized Augustinianism revisited*

Others adhere to the second opinion; they maintain that the active intellect has a substance different from the possible intellect, and that the possible intellectual substance is inside <the soul> whereas the substance of the active intellect is outside. Many theologians ('multi theologi') hold this opinion; they say that the active intellect in us is the intellect of the First <vid. God>. This intellect is light according to what is written: 'there was the true light which lighteth every man coming into the world'. <They say> that this light seems to be a light more intimate to our soul than the soul to itself.<sup>697</sup>

This statement from Adam of Buckfield's commentary on Aristotle's *Peri psychēs*<sup>698</sup> is one of the earliest references (dating to roughly 1245) to a group of theologians who identify God with the active intellect. There is further external evidence for this doctrine. Around 1250, Bonaventura writes in his commentary on the *Sentences*:

The other way of understanding this is that the active intellect would be God himself and that the possible intellect would be our soul. This way of speaking is based on the words of Augustine who in many passages said and showed that the light which illuminates us, the teacher who teaches us, the truth which directs us, is God.<sup>699</sup>

et universales, et secundum est illuminare possibilem intellectum, sicut lumen se habet ad diaphanum, quia oportet quod species universalis quamdiu est universalis semper sit in lumine agentis; et ideo quando recipitur in possibili intellectu, oportet quod in lumine agentis recipiatur, et ideo possibilem oportet illuminari lumine intellectus agentis'.

695. Of course, he knows the sources, cf. *De anima*, 3.3.9, p. 219, line 43 ff.: '... Avicenna et insecutor eius Algazel dicentes quod ... cum addiscit homo, acquirit formas intellectas per hoc quod agens denudat eas et coniungit eas intellectui possibili'.

696. Thomas, *Scriptum super sententiis*, IV.50.1.2.c. See the translation on p. 73 above.

697. Adam of Buckfield, *Sententia de anima*, MS Oxford Bodl. Canon. Misc. 322, f. 54ra: 'Alii autem concedunt secundum modum concedentes aliam esse substantiam intellectus agentis et possibilis, dicentes substantiam intelligibilem possibile esse intra, substantiam autem intellectus agentis extra. Et huius opinionis sunt multi theologi qui dicunt intellectum agentem in nobis esse intellectum primi, qui quidem intellectus est lux scilicet secundum quod dicitur "erat lux vera quae illuminat omnem hominem venientem in hunc mundum" (John 1:9) et quod lux ista lux videtur intimior animae nostrae quam sit ipsa sibi'.

698. It was Grabmann who first pointed to this sentence about the *multi theologi* ('Mittelalterliche Deutung und Umbildung', pp. 9–10), which seems to have not received much attention afterwards, apart from Salman's article 'Note sur la première influence', pp. 210–11.

699. Bonaventura, *In quatuor libros sententiarum*, II.24.1.2.4, p. 568b: 'Alius modus intelligendi est quod intellectus agens esset ipse Deus, intellectus vero possibilis esset noster animus. Et iste modus dicendi super verba Augustini est fundatus, qui in pluribus locis dicit et ostendit quod lux quae nos illuminat, magister qui nos docet, veritas quae nos dirigit, Deus est'. The *apparatus* of the Bonaventura

And he makes clear that this opinion is also based on the teachings of philosophers who hold that the rational soul is illuminated by the tenth intelligence and is perfected through conjunction with it.<sup>700</sup> A few years later Thomas Aquinas attributed the theory to 'quidam catholici doctores' and signals agreement – never repeated in his later works:

And therefore some catholic scholars, partly correcting this opinion and partly following it, with much plausibility maintained that God himself is the active intellect, because our soul reaches happiness through its application to God: this they corroborate with what is said in John 1,9: 'there was the true light which lighteth every man coming into the world'.<sup>701</sup>

Finally, in the early fourteenth century, an anonymous collector of opinions on the question of whether happiness is to be found in the active intellect refers to the theory with the phrase 'the doctrine of some theologizers', 'opinio quorundam theologizantium'.<sup>702</sup>

The doctrine attested by these external testimonies has received much scholarly attention. In 1926, Etienne Gilson, following earlier research by Otto Keicher,<sup>703</sup> pointed to the crucial role played by Avicenna and the Avicennian theory of the active intellect in the history of this doctrinal complex. It has since become a much-debated commonplace of the histories of thirteenth-century philosophy that a number of Western authors combined Augustinian and Avicennian ideas on intellection. The standard term for this, coined by Gilson, is Avicennized Augustinianism

edition leads to several passages in Augustine.

700. Bonaventura, *ibid.*, p. 568a: 'Et modus iste ponendi et dicendi fundatus est super multa verba philosophorum, qui posuerunt animam rationalem illustrari a decima intelligentia et perfici ex coniunctione sui ad illam'.

701. Thomas Aquinas, *Scriptum super sententiis*, II.17.2.1.c, p. 423: 'Et ideo quidam catholici doctores corrigentes hanc opinionem et partim sequentes, satis probabiliter posuerunt ipsum deum esse intellectum agentem quia per applicationem ad ipsum anima nostra beata est: et hoc confirmant per hoc quod dicitur Joan. 1, 9: Erat lux vera quae illuminat omnem hominem venientem in hunc mundum'. Cf. *ibid.*, II.18.2.3.sol ('theologi') and *id.*, *De potentia*, 3.8.c ('quidam moderni'). Cf. Matthew of Aquasparta, *Quaestiones disputatae de anima*, 7, p. 125: 'Et dicitur <intellectus agens> ab aliquibus lux divina ..., de qua luce Joan. I: Erat lux vera quae illuminat omnem hominem venientem in hunc mundum'.

702. Grabmann, 'Mittelalterliche Deutung und Umbildung', pp. 8–10 and 85: 'Secunda opinio est quorundam theologizantium dicens quod intellectus agens sit intellectus universalis conditor omnium, scilicet deus'. Gonsalvus de Vallebona (d. 1313) attributes the doctrine to Plato and Augustine and correctly maintains that for Avicenna the active intellect is a separate substance which is not God (*Quaestiones disputatae*, 13, p. 258): 'Tertia autem opinio, quae est media, quod intellectus possibilis est potentia naturalis animae nostrae et quod intellectus agens non sed est quaedam substantia separata, est Platonis opinio et Augustini et Avicennae, VI Naturalium, parte 5, ubi Avicenna ponit quod intellectus sit alia substantia separata citra Deum. Sed secundum Platonem et Augustinum, intellectus agens est Deus quamvis ipsi non utantur isto vocabulo "intellectus agens", sed nomine "lucis" vocando ipsum "lucem"'. Cf. the discussion in Grabmann, 'Mittelalterliche Deutung', pp. 56–9.

703. Keicher, 'Zur Lehre der ältesten Franziskanertheologen vom Intellectus agens' (1913), pp. 173–82; *id.*, 'Der Intellectus agens bei Roger Baco' (1913), pp. 297–308.

('augustinisme avicennisant').<sup>704</sup> The term is useful only if we understand it to signify a specific doctrine<sup>705</sup> rather than an entire school of thought, as Gilson had maintained.<sup>706</sup> Similarly, it is not convincing to speak of an independent or even heterodox 'Avicennist movement', as Roland de Vaux proposed.<sup>707</sup> Nevertheless, Gilson's criterion for the application of the phrase 'Avicennized Augustinianism' is still helpful: the term is appropriate if a medieval thinker (1) teaches that God is the active intellect, and (2) affirms that this can be proved by establishing the concordance of Augustine with Aristotle as interpreted by Avicenna.<sup>708</sup> This is a sensible double criterion for a modern label referring to a medieval doctrine: not only should the doctrine be held, but it should also be explicitly based on the authorities who give their name to it.<sup>709</sup>

704. The term is first introduced in Gilson, 'Pourquoi saint Thomas', p. 102, n. 3. Gilson studied the phenomenon in three articles between 1926 and 1933: 'Pourquoi saint Thomas a critiqué saint Augustin' (1926/27), pp. 5–127; 'Les Sources gréco-arabes de l'Augustinisme avicennisant' (1929), pp. 5–149; 'Roger Marston: un cas d'Augustinisme avicennisant' (1933), pp. 37–42. The most important article of the three is the first (although the term 'augustinisme avicennisant' does not appear in the title) because it discusses the traces of the doctrine in many thinkers of the 13th century. Gilson's article on Duns Scotus from 1928 does not concern Avicennized Augustinianism proper.

705. Cf. Van Steenberghen, *Die Philosophie im 13. Jahrhundert* (1977), p. 181, n. 164: 'Man könnte nicht klarer sagen <als Gilson selbst>, daß es sich um eine *einzelne* Lehre ... handelt'; cf. *ibid.*, p. 469; Eckert, 'Augustinismus' (1971), p. 651; Bertola, 'È esistito un avicennismo latino ...?' (1971), p. 320: 'La precisazione del Gilson giustifica questa denominazione ed essa corrisponde ad una realtà storica, anche se essa ... non esaurisce tutto l'influsso esercitato da Avicenna nel mondo latino'; Weisheipl, 'Albertus Magnus and Universal Hylomorphism' (1980), p. 240; Mahoney, 'Sense, intellect and imagination' (1982), p. 610: '... to borrow Gilson's useful term'; Van Riet, 'The Impact of Avicenna's Philosophical Works' (1989), p. 105: 'These terms are questioned by certain historians ... In any case, the doctrine identifying the active intellect ... with the Father of Light ... continued for decades to be attractive to many minds'.

706. Gilson, 'Les Sources gréco-arabes', p. 103: 'Nous avons montré d'ailleurs que la critique de l'augustinisme médiéval par saint Thomas supposait l'existence d'une école dont la doctrine combinait ... l'influence dominante de saint Augustin au néoplatonisme d'Avicenne'.

707. De Vaux, *Notes et textes sur l'avicennisme latin* (1934). Around 1970, the thesis was convincingly refuted by Bertola and Van Steenberghen, and hence largely disappeared from thirteenth-century intellectual historiography; see Bertola, 'È esistito un avicennismo latino nel medioevo?'; Van Steenberghen, *Die Philosophie im 13. Jahrhundert*, pp. 179–81. Bertola's article is divided into two parts (1967 and 1971), the first of which gives a useful account of the scholarship before 1967.

708. Gilson, 'Roger Marston' (1933), p. 42: 'Quel que soit le nom auquel on s'arrête, on peut dire que la chose existe lorsqu'un philosophe médiéval, 1° enseigne que Dieu est l'intellect agent; 2° affirme qu'on peut le prouver en établissant l'accord de saint Augustin avec Aristote tel qu'Avicenne l'interprète'.

709. Hence, Gauthier's 'First Averroism' is not an appropriate term for a doctrine or a doctrinal current: the doctrine – saying that the active intellect is a power of soul – is held, but it usually is not based on the explicit authority of Averroes (cf. Gauthier, 'Les Débuts', pp. 334–5). In fact, I find it hard to believe that anything else than Aristotle's text itself is the basis for this doctrine, especially since it is often expressed in Aristotelian terms: the active and possible intellects being two *differentiae* of the rational soul. Cf. Aristotle, *Peri psychês*, III, 5, 430a14 (both translations), with: Jean de la Rochelle, *Tractatus*, p. 91, line 747; Alexander of Hales *et al.*, *Summa theologica*, II.4.1.2.3.1, p. 452a; Bonaventura, *In quatuor libros sententiarum*, II.24.1.2.4, p. 570a; Adam of Buckfield, *Sententia*, ff. 53vb–54ra (see Salman 'Note', p. 210). The case is different with the well-known 'Averroism' of Parisian masters later in the

Who, then, are the adherents of the doctrine? Let us briefly review four indisputable cases which all date from after 1260: Roger Bacon, John Pecham, Roger Marston and Vital du Four.<sup>710</sup> Roger Bacon's position on the active intellect changed over the years, and it is only in his *Opus tertium* (late 1260s) that he identifies the active intellect with God;<sup>711</sup> earlier, in his *Opus maius* (early in the 1260s) he had only maintained that the active intellect is not a part of the soul, but a separate substance whose functions only God can perform.<sup>712</sup> Bacon teaches that Alfarabi and Avicenna had maintained that the active intellect is separate;<sup>713</sup> he does not refer to Augustine explicitly.

In contrast to Roger Bacon, who does not present the doctrine in the context of systematic psychology but in order to show that all philosophical wisdom ultimately derives from God, John Pecham writes proper *Quaestiones tractantes de anima* (dating from about 1269–77), and develops a theory which includes a created active intellect in the soul and a true active intellect which is identified with God.<sup>714</sup> Pecham explicitly prefers Avicenna to those who maintain that the active intellect is a part of the soul. He also states that Augustine's *lumen aeternum increatum* is identical with the separate active intellect, so that Gilson's second condition is fulfilled.<sup>715</sup>

Roger Marston's theory of the intellect has been shown to be influenced substantially by Roger Bacon's *Opus maius*.<sup>716</sup> He thus teaches, like Bacon, that

13th century: this modern label derives from the medieval term 'Averroista'.

710. These four already appear in Gilson's 1933 summary of his research (as in n. 708 above), 'Roger Marston', p. 42. Even harsh critics of Gilson agree with him that the doctrine can be found among these four writers: see Van Steenberghen, *Die Philosophie im 13. Jahrhundert*, pp. 400, 467, 469. For a recent account, see Dales, *The Problem of the Rational Soul*, pp. 77–8 (Roger Bacon), p. 129 (John Pecham).

711. Roger Bacon, *Opus tertium*, 13, p. 74: 'Deinde ostenditur hoc idem, quia sapientia philosophiae est tota revelata a Deo et data philosophis, et Ipse est qui illuminat animas hominum in omni sapientia; et quia illud quod illuminat mentes nostras vocatur nunc a theologis intellectus agens, quod est verbum philosophi in tertio De Anima, ubi distinguit quod duo sunt intellectus, scilicet agens et possibilis. Ideo propter propositum meum consequendum, scilicet quod a Deo est tota philosophorum illustratio, ostendo quod hic intellectus agens est Deus principaliter, et secundario Angeli qui illuminant nos. Nam Deus respectu animae est sicut sol respectu oculi corporalis, et Angeli sicut stellae'.

712. Roger Bacon, *Opus maius*, 2.5, p. 39. Cf. as representatives of secondary literature of different times and approaches (and for further bibliography): Keicher, 'Der Intellectus agens bei Roger Bacon', pp. 297–308; Gilson, 'Pourquoi saint Thomas', p. 104; Van Steenberghen, *Die Philosophie im 13. Jahrhundert*, pp. 147 and 400; Dales, *The Problem ...*, pp. 77–8.

713. Roger Bacon, *Opus maius*, 2.5, p. 39.

714. John Pecham, *Quaestiones tractantes de anima*, 6, p. 73: 'Intellectus siquidem agens, de quo Philosophus loquitur, non est usquequaque pars animae, sed Deus est, sicut credo, qui est lux omnium mentium, a quo est omne intelligere. Ipse enim solus est cui conveniunt omnes proprietates illae nobiles de quibus loquitur Philosophus. Quia est immixtus, impassibilis et semper omnia intelligens, cuius substantia est sua actio. Et pro tanto melius posuit Avicenna – qui posuit intellectum agentem esse intelligentiam separatam – quam illi ponant qui ponunt eum tantum partem animae'.

715. John Pecham, *Quaestiones tractantes de anima*, 6, p. 74, line 30. See Gilson, 'Pourquoi saint Thomas', pp. 102–4, id., *History of Christian Philosophy*, p. 360, and Dales, *The Problem ...*, p. 129, for further discussion.

716. Keicher, 'Der Intellectus Agens bei Roger Bacon', pp. 306–308.

Alfarabi, Avicenna and Aristotle himself maintained that the active intellect is a separate substance. According to Aristotle, he says, the active intellect knows everything at all times in actuality, which only applies to God. The thesis, therefore, is in agreement with the doctrine of Augustine and Catholic truth (on this point he is more explicit than Bacon).<sup>717</sup> He says straightforwardly that 'the doctrine of saint Augustine about the light common to everything and the doctrine of Aristotle about the active intellect are thus brought into agreement'. He also maintains that Augustine's doctrine accords with Avicenna's concept of the soul's conjunction with the separate active intellect.<sup>718</sup>

Vital du Four, like Roger Marston himself, does not develop his own position, but draws on the text by Roger Marston. He thus comes to the same conclusion: Augustine's theory of the divine light can be equated with the Aristotelian notion of the active intellect. Avicenna's theory of conjunction is in accordance with the epistemological tenets of Augustine. Vital explicitly identifies God with the active intellect: 'Et sic lux increata quae est Deus videtur agens intellectus, secundum quod Augustinus dicit ...'.<sup>719</sup>

It is a remarkable feature of the history of Avicennized Augustinianism that these four authors postdate the testimonies of Adam of Buckfield, Bonaventura and Thomas Aquinas from the 1240s and 1250s quoted at the beginning of the present section: who then are the 'multi theologii' and 'quidam catholici doctores' Adam, Bonaventura and Thomas refer to? They themselves do not adhere to the doctrine of Avicennized Augustinianism, nor does Albertus Magnus.<sup>720</sup> Henry of Ghent

717. Roger Marston, *Quaestiones disputatae*, III, pp. 258–9: '... necesse est dicere quod sit substantia separata per essentiam ab intellectu possibili, prout hoc sentiunt Alfarabius in libro de Intellectu et intellectu, et Avicenna in multis locis et alii expositores Philosophi quamplurimi. Necnon et ipse Philosophus videtur velle quod intellectus agens est separatus a possibili secundum esse et substantiam ... Dicitur quod intellectus agens scit omnia semper et in actu, quod nec animae rationali nec angelo convenit sed soli Deo. Cum igitur haec sententia sit doctrinae sancti Augustini et veritati catholicae multum consona ...'. Many of these sentences derive from Bacon's *Opus maius*, 2.5, p. 39; see Keicher, 'Der Intellectus Agens', pp. 306–307.

718. Roger Marston, *Quaestiones disputatae*, III, p. 262: '... sententia sancti Augustini de luce communi omnium et Philosophi de intellectu agente sic in concordiam redacta, ...'; p. 264: 'Et huic sententiae <Augustini> concordat dictum Avicennae docentis bonitatem ingenii provenire ex aptitudine coniungendi se et inhaerendi cum intellectu agente, quem posuit substantiam separatam, in hoc sequens Philosophum, sicut credo'. Cf. Van Steenberghen, *Die Philosophie im 13. Jahrhundert*, p. 467.

719. Vital du Four, *Quaestiones*, pp. 319, 321, 329. Cf. Gilson, 'Roger Marston', p. 41, n.1 and p. 42.

720. On Bonaventura: Keicher, 'Zur Lehre der ältesten Franziskanertheologen', pp. 180–82; Gilson, 'Pourquoi saint Thomas', p. 89; Van Steenberghen, *Die Philosophie des 13. Jahrhunderts*, pp. 222–3; Dales, *The Problem ...*, p. 105. On Albertus: Schneider, 'Die Psychologie', pp. 342–3; Gilson, *History of Christian Philosophy*, p. 285; Dales, *The Problem ...*, p. 96. On Thomas: Gilson, 'Pourquoi saint Thomas', p. 113, pp. 120–21; Grabmann, 'Mittelalterliche Deutung', p. 16; Dales, *The Problem ...*, p. 145. There are some passages in Albertus and Thomas which show that their position is not always straightforward: see Schneider, 'Die Psychologie', pp. 345–8, and Albertus, *Summa theologiae*, II.1.4.2.3, p. 86. On Thomas: Gilson, 'Pourquoi saint Thomas', p. 113, and p. 204 above.



(d. 1293)<sup>721</sup> and Hugolin of Orvieto (d. 1373),<sup>722</sup> are exponents only of the later tradition of the doctrine. But there is a number of early authors whose theory of the active intellect is promisingly close to both Augustine and Avicenna; they will now be examined in chronological order: Dominicus Gundissalinus, Anonymous (de Vaux), William of Auvergne, Robert Grosseteste, Jean de la Rochelle, Alexander of Hales (or, rather, the *Summa fratris Alexandri*), and Petrus Hispanus.

Whether or not one regards Dominicus Gundissalinus an exponent of Avicennized Augustinianism depends upon the interpretation of two passages from his *Liber de anima* (written in the 1160s or 1170s). The first passage is:

(1) Ipse enim <vid. intellectus in actu> est qui dat formam intelligibilem, cuius comparatio ad nostras animas est sicut comparatio solis ad visus nostros. (2) Sicut enim sine luce exteriori non fit visio, sic sine luce intelligentiae agentis in nos nulla fit veritatis rei comprehensio; (3) hoc enim est menti ratio quod est aspectus oculo.<sup>723</sup>

The first sentence is a quotation from Avicenna's *De anima*, V,5.<sup>724</sup> The second sentence is Gundissalinus's own rephrasing of the following line in Avicenna's chapter,<sup>725</sup> the phrase 'veritatis rei comprehensio' being his addition. The source for the third sentence is Augustine's *Soliloquia*, I, 6, 12: 'Deus autem est ipse qui illustrat. Ego <vid. Deus> autem ratio ita sum in mentibus, ut in oculis est aspectus'.<sup>726</sup> Obviously, then, Gundissalinus is not saying that the active intellect is God; but in his description of the active intellect he cites phrases that were employed by Augustine to describe God. The rest is left to speculation: one may say

721. He is counted among the adherents of Avicennized Augustinianism by Paulus (*Henri de Gand*, p. 6) and Van Steenberghen (*Die Philosophie im 13. Jahrhundert*, p. 469). Gilson leaves the matter undecided ('Avicenne en occident', p. 97, n. 9). There is one passage where Henry seems to acknowledge an active intellect as part of the soul, as well as an active intellect which is God. The first is needed for perceiving the universals in the phantasms, whereas the second is needed for perceiving the universals in the essence of the form abstract *per se* – a theory we know from Jean de la Rochelle: see Henry of Ghent, *Quodlibeta*, IX, 15, pp. 264–5. Brown has argued that the doctrine of Avicennized Augustinianism would be in conflict with other convictions of Henry ('Intellect and Knowledge', p. 710, n. 137). Moreover, the anonymous *Quaestio utrum beatitudo* ... (ed. Grabmann) credits Henry of Ghent with the opinion that the active intellect does not differ *realiter* from the soul (see Grabmann, 'Mittelalterliche Deutung', p. 92). There is no evidence that Henry matches Gilson's second condition by basing his theory on the authority of Augustine and Avicenna.

722. According to Gilson, Hugolin 'makes God the agent intellect which illumines ... our intellect'. This special illumination explains the fact that philosophers 'from time to time said things that were right'. 'Hugolin here follows Henry of Ghent' (*History of Christian Philosophy*, pp. 453–4).

723. Gundissalinus, *Liber de anima*, 10, p. 88, line 12.

724. *De anima*, V,5, ed. Van Riet, p. 127, lines 36–7: 'Cuius comparatio ad nostras animas est sicut comparatio solis ad visus nostros'.

725. Ibid., lines 37–9: '... quia sicut sol videtur per se in effectu, et videtur luce ipsius in effectu quod non videbatur in effectu, sic est dispositio huius intelligentiae quantum ad nostras animas'.

726. Augustine, *Soliloquiorum libri duo*, I.VI.12, p. 19, line 23.

that he implied that the active intellect is God<sup>727</sup> or that he suppressed the mention of God in order not to identify him with the active intellect.<sup>728</sup> The second passage reports Avicenna's oft-quoted theory of the *duae facies*:

Quae duae vires sive duo intellectus sunt animae rationali quasi duae facies; una quae (or qua) respiciat deorsum ad regendum suum inferius quod est corpus ... ; et aliam qua respiciat sursum ad contemplandum suum superius quod est Deus ...<sup>729</sup>

Gundissalinus draws on a passage in Avicenna's *De anima*, I,5.<sup>730</sup> The text of the seven manuscripts used by Simone Van Riet in her edition reads: 'et aliam faciem sursum, versus principia altissima' (*al-mabādi' al-'ālīya*).<sup>731</sup> It has been concluded that Gundissalinus changed the text of his own translation of *De anima* in order to fit it into his treatise and that he deliberately added the gloss 'quod est Deus'.<sup>732</sup> However, the oldest extant manuscript of *De anima*<sup>733</sup> also mentions God in this context ('... quod est supra eam, ut ... recipiat ex illo scilicet Deo'), so it is possible that the phrase 'quod est Deus' is part of Gundissalinus's exegesis of Avicenna rather than an attempt to harmonize Christian theology and Arabic philosophy. In any case, neither Avicenna nor Gundissalinus speak about the active intellect in this rather general passage, which in both works precedes the introduction of the idea of the separate active intellect. Gundissalinus therefore does not fulfil either of the two conditions for Avicennized Augustinianism: he does not say that the active intellect is God, and he does not claim Augustine and Avicenna (or Aristotle) as authorities for such a thesis.<sup>734</sup>

The second candidate is the anonymous author of the *Liber de causis primis et secundis*, edited by de Vaux (dating from the turn of the thirteenth century). It has been argued that in this treatise 'Avicenna's active intellect (*dator formarum*) is identified with St Augustine's illuminator-God'.<sup>735</sup> Others have interpreted the relevant passage, the tenth chapter, as only a modest attempt at conciliation with Augustine.<sup>736</sup>

727. Gilson, 'The Treatise De anima', p. 26.

728. Jolivet, 'The Arabic Inheritance', p. 144.

729. Gundissalinus, *Liber de anima*, 10, p. 86, lines 27–31.

730. *De anima*, I,5, ed. Van Riet, p. 94, lines 4–12.

731. *De anima*, I,5, ed. Rahman, p. 47, lines 15–16.

732. Gilson, 'The Treatise De anima', p. 26; Jolivet, 'The Arabic Inheritance', p. 144.

733. Paris, Bibliothèque Nationale, Lat. 8802, early 13th century. See Van Riet's apparatus to the passage.

734. I do not agree therefore with Dales, *The Problem* ..., p. 14: '... the *intellectus agens*, which Gundissalinus identifies with God'.

735. Van Riet, 'The Impact of Avicenna's Philosophical Works' (1989), p. 105. Cf. Gilson, *History of Christian Philosophy* (1955), p. 240: 'As in Gundissalinus, the God enlightener of Augustine's *Soliloquies* is here identified with Avicenna's agent Intelligence'.

736. Bertola, 'È esistito' (1971), p. 285: 'la fonte più importante è quasi certamente Avicenna, con



In this tenth chapter, after describing the system of emanating intelligences originating from the primary cause, the author sets out to show that the 'intellect of the human soul is illuminated only by the light of the primary cause'.<sup>737</sup> He mentions briefly the distinction between the intellect in potentiality and the intellect in actuality and the Avicennian *duae facies* theory. He then explains that when the human intellect conjoins with the active intelligence, it is illuminated and receives a form from it.<sup>738</sup> The author is clearly drawing on the opening of Avicenna's *De anima*, V,5, without, however, mentioning Avicenna by name. There follows a longer passage with a literal quotation from Augustine's *Soliloquia*, ending with the explanation that in analogy to the sun, 'there are three things in the most secret God: something which exists, something which knows and something which makes <everything else> know'.<sup>739</sup> This quotation from Augustine is introduced and concluded by the following sentences, which are crucial for the present investigation:

Let us express what we have said above about the relation of the intellect towards reason and about its preeminence over it, and what we have claimed also about the primary light, speaking with authoritative words ('*verbis autenticis dicentes*') ... These are the words of Augustine, through whom we absolve ourselves especially from that in which we were engaged (*or*: free ourselves from that by which we were imprisoned).

And at the end of the passage:

See, now our intentions above are apparent through the authority of Augustine, which we have applied.<sup>740</sup>

This is followed by a further explanation of the relation of the human intellect to the active intelligence, including a literal quotation from Avicenna's *De anima*, V,5 about the conjunction with the active intellect.<sup>741</sup> The unknown author therefore comes close to the doctrine of Avicennized Augustinianism, for he implies that the

theory of the illuminating active intellect can be expressed in Augustinian terms and can be justified in this way. The Augustinian theory is an unimpeachable authority for him and serves as the background to his thoroughly Avicennian treatise. It is difficult to see, however, how the author could have identified the trinitarian God of Augustine with the active intellect, which is only the last intelligence that emanates (indirectly) from the primary cause. In fact, he does not try to equate the two theories, and that is the reason why it would not be correct to attribute the doctrine of Avicennized Augustinianism to him.<sup>742</sup> Augustine is only quoted as a justification, and the author nowhere says that God is the active intellect. Nevertheless, the author of the *Liber de causis primis et secundis* should be regarded as a forerunner of Roger Bacon, John Pecham, Roger Marston and Vital du Four.

In many respects, William of Auvergne is a crucial figure in the history of doctrine. It was on his testimony that de Vaux based his thesis of the alleged, and now refuted, existence of a heterodox Avicennist movement.<sup>743</sup> What concerns us here is the question of whether William was an exponent of Avicennized Augustinianism. Gilson originally claimed that William taught a theory only equivalent to Avicennized Augustinianism;<sup>744</sup> later, he counted him among the exponents, but only on account of a testimony of Roger Bacon (discussed below), thus implying that William's own writings do not reflect such a position.<sup>745</sup> Many readers of Gilson's highly speculative interpretations ignored his reservations and read Gilson as including William among the indisputable adherents of Avicennized Augustinianism – usually implying that he was correct.<sup>746</sup>

742. Cf. n. 735 above.

743. See n. 205 above.

744. There is one passage in which Gilson seems to make William a partisan of the theory ('Pourquoi saint Thomas', p. 102, n. 3), but this positive statement is hedged around with a number of important reservations, such as that William never said that God was the active intellect (pp. 80 and 90).

745. Gilson, 'Roger Marston' (1933), p. 42. In his *History of Christian Philosophy* (1955), he distances himself from his earlier interpretations by interpreting the passages in Avicenna's *De anima* as 'getting back to Saint Augustine as to a safeguard and protection against the noetic of Avicenna' (p. 257). His late article on 'Avicenne en occident' (1969), however, returns to his earlier position.

746. Afnan, *Avicenna, His Life and Works*, p. 279; Eckert, 'Augustinismus', p. 651: 'Dabei setzt Wilhelm ... Gott in seinem Wirken mit dem intellectus agens ... gleich ... Gilson bezeichnet diese Verbindung als "Augustinismus avicennisant"'; Bertola, 'È esistito' (1971), p. 302: '... indicata dal Gilson come un caso tipico di agostinismo avicennizante ...', and p. 303: 'Per il Gilson, Guglielmo tenta un accordo tra la dottrina di Dio illuminatore ... con la teoria dell'intelletto agente separato di Avicenna'; Van Steenberghen, *Die Philosophie im 13. Jahrhundert*, p. 154: 'Wilhelm macht aus Gott den tätigen Intellekt der Menschheit ... Diese eigentümliche Verbindung nennt Gilson den avicennisierenden Augustinismus'; Mahoney, 'Sense, intellect', p. 610, n. 33: 'Gilson listed as adherents of this theory William of Auvergne, Roger Bacon, and John Peckham'; Weisheipl, 'Aristotle's Concept', pp. 150–51: 'Many Christians, including William of Auvergne ... identified this agent intellect with God. ... This is the kind of adaptation that Gilson has called an *Augustinismus avicennisant* in his various writings'; de Libera, *La philosophie médiévale*, p. 107: 'Guillaume d'Auvergne, principal tenant de l'"augustinisme avicennisant"'; Dales, *The Problem ...*, p. 35 'The function of the Peripatetic agent intellect is performed by God in giving the first principles of truth to the soul'.

un modesto tentativo di conciliazione con Agostino'.

737. Anonymous (de Vaux), *De causis primis et secundis*, p. 128: 'nec illuminatur intellectus animae humanae aliquis nisi a lumine causae primae'.

738. Anonymous (de Vaux), *ibid.*, p. 130.

739. Anonymous (de Vaux), *ibid.*, p. 133: '... ita in illo secretissimo deo tria quaedam sunt: quod est, quod intelligit et cetera facit intelligere'. The quotation is from Augustine, *Soliloquiorum libri duo*, I 8, 15, p. 24, line 3. It reappears in Jean de la Rochelle's discussion of the active intellect, *Tractatus*, 2.1.19, p. 89, line 669. Jean and Anonymous (de Vaux) read *intelligit* instead *intelligitur* in Augustine.

740. Anonymous (de Vaux), *ibid.*, pp. 132 and 133: 'Pronuntiemus ea quae superius diximus de comparatione intellectus et praeeminentia adversus rationem, et etiam quae de luce prima enuntiavimus, verbis autenticis dicentes ... Haec sunt verba Augustini quo absolvimus nos particulariter ab eo quo detenti fuimus. ... (p. 133) Ecce quoniam apertae sunt intentiones nostrae quae praecesserunt auctoritate Augustini qua usi sumus'.

741. Anonymous (de Vaux), *ibid.*, p. 134.

There are two long discussions of the *intelligentia agens* in William's treatises *De universo* (1233–5) and his later *De anima* (about 1240). The *De universo* passage devoted to the intelligences is substantial: it stretches from page 807 to page 844 in the Paris edition of 1674. William's standpoint is best understood if attention is paid to the author's overall intention in this part of the treatise.<sup>747</sup> In an introductory passage, William states that the following section is about abstract intelligences the existence of which had been maintained by Aristotle and his followers. He announces that he is going to argue against their errors: 'contra quorum errores in parte ipsa ... disputare intendo'. This introduction with its negative intention is in accordance with the concluding passages on p. 841: 'Suffice it for you to know for the time being that the reasons which prompted Aristotle to postulate the intelligences and their hierarchy and to postulate also a unique active intelligence were not sufficient'.<sup>748</sup> In the long discussion in between, William had refuted many different tenets of Aristotle's theory – which in fact are mostly Avicennian, as we have noted above:<sup>749</sup> the number of nine intelligences, the love or striving that can be found in them, the theory that all human souls become one soul after death, the location of the intelligences, the postulation of a separate active intellect, the unity of the active intellect for all human beings, the returning of the souls to the active intellect after death, the active intellect as the highest perfection of the soul, the active intellect as the creator of the souls. He proceeds to argue (p. 838) that, according to the 'lex, doctrina fidesque Christianorum', the exemplar of all beings is the wisdom called the son of God or God himself, and that illuminations and revelations occur by means of angels (p. 841).

We can deduce from this that William takes the theory of the separate active intellect much more seriously than his predecessors, but that it would be a misrepresentation of his position to say that he somehow implied that the active intellect was God. Rather, he confronts the Peripatetic doctrine, which in his opinion had not yet been developed sufficiently,<sup>750</sup> with Christian theological positions and clearly takes the side of the latter, denying the existence of an active intellect.

A similar procedure can be observed in William's later work *De anima*. The two main passages are pages 112–14 and 205–16, the first of which is a harsh refutation

of the theory that the active intelligence is the creator of the human souls, a theory which he attributes to Aristotle and his followers: 'Aristoteles et sequaces eius, videlicet Alfarabius, Algazel et Avicenna et plures alii'. William's disagreement is based on the conviction that the active intelligence would be a rival to God. As for the second passage, William first refutes the thesis (which he attributes to the followers of Aristotle) that the active intellect is a power, a part or even the essence of the soul itself.<sup>751</sup> Aristotle himself had maintained, says William, that the active intelligence is separate and that it shines upon the human intellect like an intelligible sun and thus produces knowledge in it. It can be observed that William attributes to Aristotle what is Avicennian and to the 'sequaces Aristotelis' what is Aristotelian. As in the previous passage, William stresses the 'infidelitas' of the standpoint postulating the creation of the human souls through the active intelligence. Then, he introduces the distinction between universals abstracted from particulars and principles which are eternally true. For the first, he says, we do not need the active intellect, whereas for the second the human intellect needs assistance.<sup>752</sup> Afterwards follows the crucial confrontation of Aristotle's theory – in which this task is performed by the active intelligence – with Christian teaching, 'which necessarily is most true in everything and is entirely free of any falsity and error'.<sup>753</sup> According to Christian belief, the universal forms are imprinted in the human intellect by the creator.

Avicenna's influence on William's description of the different Peripatetic positions is considerable, because both theories – the one that the active intellect is part of the soul and the one that it is separate – are described in Avicennian terms. But we have to bear in mind that it is the description of the refuted theory which is Avicennian and not William's own position. William is much less Avicennian than the contemporary theologians Jean de la Rochelle and Considerans, the author of book II of the *Summa fratris Alexandri*, who take a mediating standpoint by saying that the active intellect in one respect is a light innate in the soul, in another it is angelic revelation (only in Jean) and in a third respect it is God. William, on the other hand, does not accept *any* active intellect, but regards only the soul and God as involved in the process of intellection.<sup>754</sup>

751. William, *De anima*, 7.5, p. 210a: 'Iam igitur scire te feci per hoc, intellectum agentem non esse apud animam humanam vel vim vel partem animae ipsius vel ipsam essentiam eius ...'.

752. William, *De anima*, 7.6, p. 211a–b.

753. William, *De anima*, 7.6, p. 211b: '... hoc est quod Aristoteles posuit intelligentiam agentem intendens eam esse formam plenam formis ... Secundum doctrinam autem Christianorum *quam necesse est per omnia et in omnibus esse verissimam et ab omni falsitate et errore depuratissimam*, ponendum est animam humanam velut in horizonte duorum mundorum naturaliter esse constitutam et ordinatam. Et alter mundorum est eis mundus sensibilium ... Alter vero creator ipse ... ab illo igitur sunt impressiones de quibus agitur ... in virtute nostra intellectiva'.

754. William therefore does not take the view that the active intellect is a separate substance, as maintained by Gilson ('Avicenne en occident' (1969), p. 102), but attributes it to Aristotle.

747. Cf. Bertola, 'È esistito' (1971), pp. 304–305, who fails to recognize William's objectives in the passage and quotes sentences out of context (from *De universo*, pp. 822 and 823).

748. William, *De universo*, 2.1.42, p. 841a: 'Interim autem sufficiat tibi cognoscere quia causae, quae induxerunt Aristotelem ad ponendum intelligentias et ordines earum et ad ponendum intelligentiam etiam agentem et illam unicam, non fuerunt causae sufficientes ad hoc'.

749. See pp. 45–6 above.

750. William, *De universo*, 2.1.41, p. 840b: '... et quoniam non omnis veritas circa substantias spirituales abstractas adhuc declarata est, nec philosophia in his adhuc completa, suo loco tentabo investigare de hoc, si deus voluerit'.

The conclusion is that William does not fulfil either condition for Avicennized Augustinianism: he does not say that the active intellect is God, and he does not appeal to Augustine and Avicenna (or Aristotle) as authorities for such a position (*pace* Gilson and his followers).<sup>755</sup>

If William did not assent to the doctrine of Avicennized Augustinianism in writing, did he do so orally? This seems to be suggested by the aforementioned testimony of Roger Bacon, which, however, cannot be pressed so far. For the statement in the *Opus maius*<sup>756</sup> says only that William twice taught (like Robert Grosseteste and Adam of Marsh) that the active intellect cannot be part of the soul: 'quod intellectus agens non potest esse pars animae'. The more ambiguous passage in the *Opus tertium*<sup>757</sup> refers to the same two instances ('bis audiui ...'), since in this work Bacon uses the same vocabulary as in the *Opus maius* to describe the scene, and again relates the incident under the heading: 'Sed falsum est quod agens sit pars animae'. It is not altogether clear whom Bacon includes within his sweeping and historically incorrect statement: 'All wise men of ancient times and <those wise men> who still remain up to the present time, said that <the active intellect> was God'. Whereas Bacon maintains that Adam of Marsh hinted at his conviction that the active intellect is God, the only thing he says about William is that he refuted the opinion of others. It seems more likely (considering the testimony of the *Opus*

755. Gilson's interpretations (see nn. 744–5 above) are not exactly false but always on the verge of being so. His claim that William connected Avicenna to Augustine in no way reflects William's intention. More accurate are some interpretations that predate Gilson since they acknowledge that William polemized against the entire notion of the active intellect: Werner, 'Die Psychologie des Wilhelm von Auvergne' (1873), p. 50; Baumgartner, 'Die Erkenntnislehre des Wilhelm von Auvergne' (1893), pp. 51–2; Keicher, 'Zur Lehre der ältesten Franziskanertheologen vom "intellectus agens"' (1913), p. 176: 'Dieser hatte schon ... in seiner Schrift De anima überhaupt gegen den Begriff des intellectus agens polemisiert'; id., 'Der Intellectus agens bei Roger Baco', p. 297. Cf. also Grabmann, 'Mittelalterliche Deutung und Umbildung' (1936), p. 35, and the recent study by Teske who bases his argument on an analysis of William's own theory of intellection: 'William of Auvergne's Rejection of the Agent Intellect' (1994), pp. 211–35.

756. Roger Bacon, *Opus maius*, 2.5, p. 47: 'Nam universitate Parisiensi convocata, bis vidi et audiui venerabilem antistitem Gulielmum Parisiensem Episcopum felicis memoriae coram omnibus sententiarum quod intellectus agens non potest esse pars animae; et dominus Robertus Episcopus Lincolniensis et frater Adam de Marisco et huiusmodi maiores idem firmaverunt'.

757. Roger Bacon, *Opus tertium*, 23, pp. 74–5 (underlining points to parallels in the wording of *Opus maius* and *Opus tertium*): 'Sed falsum est quod agens sit pars animae. Nam hoc est penitus impossibile, sicut ibi ostendo per auctoritates et rationes sufficientes. Et omnes sapientes antiqui, et qui adhuc remanserunt usque ad tempora nostra, dixerunt quod fuit Deus. Unde ego bis audiui venerabilem antistitem Parisiensis ecclesiae, dominum Guilielmum Alvernensem, congregata universitate coram eo, reprobare eos, et disputare cum eis; et probavit per aliquas rationes, quas pono, quod omnes erraverunt. Dominus vero Robertus Lincolniensis, et frater Adam de Marisco, maiores clerici de mundo, et perfecti in sapientia divina et humana, hoc idem firmaverunt. Unde quando per tentationem et derisionem aliqui Minores praesumptuosi quaesiverunt a fratre Adam: "Quid est intellectus agens?" respondit, "Corvus Eliae", volens per hoc dicere quod fuit Deus vel angelus. Sed noluit exprimere, quia tentando et non propter sapientiam quaesiverunt'.

*maius*) that the opinion at issue is that the active intellect is a part of the soul.<sup>758</sup>

That Robert Grosseteste is an exponent of Avicennized Augustinianism is the least probable of all, since he does not even mention the distinction between the active and the possible intellect.<sup>759</sup> The only hint in this direction would be Bacon's story, which says much less than that, as we have seen, and which is further weakened by the fact that his statement does not agree with what we now know about Grosseteste and William.<sup>760</sup> Gilson, however, speculated that Grosseteste, supposing that one had forced him to use the distinction between the active and the possible intellect, could have answered only that it is God who is our active intellect.<sup>761</sup> Hypothetical statements like this can never be disproved, which is why they are of little value historically.<sup>762</sup> Surely it is wrong to say that Grosseteste 'developed' the theory that 'the active intellect is God'.<sup>763</sup>

The next two authors to consider are Jean de la Rochelle and Considerans, the author of *Summa fratris Alexandri*, book II, who have both been ruled out as exponents of Avicennized Augustinianism for the reason that they accepted both an active intellect outside the soul and a created active intellect (a *lumen naturale*) in the soul.<sup>764</sup> However, neither Gilson's double condition nor the external testimonies by Adam of Buckfield, Bonaventura and Thomas preclude the possibility that authors identify the active intellect with God and also acknowledge an additional active intellect inside the soul.

From recent scholarship we know that Jean de la Rochelle's works predate the

758. Gilson's latest interpretation of Bacon's testimony repeats his older view that William, Grosseteste, Adam of Marsh and other important figures (*et huiusmodi maiores*) agree in their opinion that the active intellect is a separate substance ('Avicenne en occident' (1969), p. 103). Compare also his *History of Christian Philosophy* (1955), p. 309: 'they <vid. William, Grosseteste and Adam> were substituting the Christian Word of Saint John and Saint Augustine for the separate Intelligence of Avicenna'.

759. As Gilson admitted in 'Pourquoi saint Thomas', p. 99; see n. 761 below.

760. McEvoy (*The Philosophy of Robert Grosseteste*, pp. 347–9) concludes that Bacon is not a reliable witness to Grosseteste's doctrine.

761. Gilson, 'Pourquoi saint Thomas', p. 99: 'Laissé à lui-même, Grosseteste passe sous silence la distinction de l'intellect agent et de l'intellect possible; supposé qu'on ait voulu le contraindre à en user, la seule réponse qu'il ait pu fournir est que si intellect agent il y a, c'est Dieu qui est notre intellect agent'.

762. For a critical assessment of Gilson's speculative reasoning, see McEvoy, *The Philosophy of Robert Grosseteste*, pp. 346–51. Gilson, however, does not maintain that Grosseteste belongs 'to the school of *augustinisme avicennisant*', as McEvoy says (*ibid.*, p. 346), but says only that he comes very close to being an adherent ('Pourquoi saint Thomas', pp. 99 and 104).

763. Marenbon, *Later Medieval Philosophy*, p. 116: 'According to the theory developed by writers such as Alexander of Hales and Robert Grosseteste, and popular among the theologians, the active intellect is God'.

764. Gilson, 'Pourquoi saint Thomas', pp. 85–9 and p. 121: 'les textes d'Alexandre de Halès et de Jean de la Rochelle, avec leur intellect agent créé identique à notre lumière naturelle, sont en réaction décidée contre l'avicennisme proprement dit'. This, however, would also be true for John Pecham, an indisputable exponent of Avicennized Augustinianism according to Gilson.

*Summa fratris Alexandri*.<sup>765</sup> In his earlier *Tractatus de divisione multiplici potentiarum animae* (about 1233–5) he cites Avicenna as the authority to prove that there exists an active intellect; and he goes on to ask the question whether this intellect is separate from the human soul or a part of it, and if separate, whether it is a created intelligence like an angel or an uncreated intelligence, that is, God. His conclusion is to accept all three alternatives – God, angel and ‘lumen internum’ – but in respect to different objects of knowledge, using a distinction explicitly attributed to Augustine: objects that are above the soul (‘supra animam’), next to the soul (‘iuxta animam’) and in the soul (‘intra animam’).<sup>766</sup> In his later *Summa de anima* (about 1235–6), which is designed less as a collection like the *Tractatus* than as a work of his own, Jean literally repeats his own text.<sup>767</sup> It is therefore clear that Jean maintains – among other doctrines – the doctrine of Avicennized Augustinianism. He identifies the active intellect with God and builds up this solution on the explicit basis of Augustine and Avicenna. In fact, the argument used to interpret Avicenna’s active intellect as being identical with God refers to the same passage in Augustine’s *Soliloquia* as did the anonymous *Liber de causis primis et secundis*.<sup>768</sup>

Concerning the position of the unknown author of book two of the *Summa fratris Alexandri* (dating from the 1240s) there is considerable disagreement. Some scholars say that he develops the theory that the active intellect is God;<sup>769</sup> others maintain that he hesitantly accepts this doctrine;<sup>770</sup> while still others assume that he makes the active intellect a part of the soul.<sup>771</sup> It has been demonstrated above that the unknown author who is referred to as Considerans took over the structure of Jean’s *Summa de anima*. However, he abridges the part based on Augustine and omits the part based on John of Damascus, with the result that he inherits the structure of Avicenna’s psychology from Jean’s treatise. Nevertheless, he is independent from Jean in his *solutiones*. The question then is: what does he do with the material on the active intellect? Jean’s quotation from Avicenna about the

existence of the active intellect appears with similar wording, but without reference to Avicenna, in Considerans (p. 451a), who goes on to say: ‘someone may doubt about whether <the active intellect> is separate in its substance from the soul or a part of the soul itself’. The editors refer to the aforementioned testimony by Roger Bacon, but it is more likely that Considerans means Jean de la Rochelle:

Jean de la Rochelle, *Summa de anima*  
(p. 277)

*Summa fratris Alexandri*  
(p. 451b)

Utrum autem intellectus agens sit  
separatus a substantia animae vel sit  
animae differentia ...quaerendum est

Sed adhuc dubitaret aliquis utrum sit  
separatus secundum substantiam ab anima  
an sit pars ipsius animae

Considerans relates the argument that for knowing intelligible forms relating to the divine (‘sicut sunt ea quae sunt in divinis’; Jean had said: ‘sicut sunt ea quae de divina essentia et trinitate personarum intelliguntur’),<sup>772</sup> a separate active intellect is needed. It is Considerans’s response to this argument which has produced disagreement about his position. There is no disagreement about the fact that the author in general supports the view that the possible and active intellects are two *differentiae* (the same expression as in Jean)<sup>773</sup> of the rational soul, and that the active intellect in the soul is a ‘lumen quoddam naturale’ (‘lumen internum’ in Jean), the perfection or *actus* of the intelligible forms. It is rather Considerans’s answer to the *in divinis* argument which is controversial:

As regards the objection that some intelligibles are above the intellect and that it is thus necessary that intellection happens through an active <intellect> which is above the intellect, it shall be said that the active <intellect> is not said to be in actuality because it knows all forms from the beginning, but <because> it is illuminated by the first agent <intellect?>, however (‘et iam’) not in respect to all forms but in respect to certain forms, and when <the active intellect> is illuminated, it in this way also perfects the possible <intellect>. It is therefore not necessary to postulate a separate active <intellect> in respect to all intelligible objects of knowledge.<sup>774</sup>

Note that Considerans argues only against the thesis that *all* intellection (or

765. See p. 52 above. On his theory of the active intellect, see e.g. Keicher, ‘Zur Lehre der ältesten Franziskanertheologen’, pp. 177–80; Gilson, ‘Pourquoi saint Thomas’, p. 87; Dales, *The Problem ...*, p. 89.

766. Jean de la Rochelle, *Tractatus*, 2.1.19–20, pp. 88–91. The distinction can often be found in early medieval literature: see Alcuin, *De animae ratione*, p. 641; Isaac de Stella, *Epistola de anima*, pp. 1879, 1886; Pseudo-Augustine, *Liber de spiritu et anima*, p. 781. Jean remarks that in the present context he will be speaking about the active intellect in the soul (p. 91, line 746). This should not be mistaken for his conclusion, which consists in the whole passage leading from ‘responsio sine praeiudicio’ (line 706) to line 746, with the résumé in the last paragraph: ‘dicendum igitur quod ...’

767. Jean de la Rochelle, *Summa de anima*, ed. Bougerol, 116, pp. 277–80.

768. See n. 739 above.

769. Marenbon, *Later Medieval Philosophy*, p. 116 (see n. 763 above).

770. Keicher, ‘Zur Lehre der ältesten Franziskanertheologen’, p. 177; Curtin, ‘The “Intellectus Agens” in the “Summa” of Alexander of Hales’, pp. 429–30; Bowman, ‘The Development of the Doctrine of the Agent Intellect’, p. 254.

771. Gilson, ‘Pourquoi saint Thomas’, pp. 85–6; Grabmann, ‘Mittelalterliche Deutung’, p. 10; Van Steenberghen, *Die Philosophie im 13. Jahrhundert*, p. 162; Dales, *The Problem ...*, p. 30.

772. Alexander of Hales *et al.*, *Summa theologia*, II.4.1.2.3.1, p. 451b; Jean de la Rochelle, *Summa de anima*, 116, p. 277.

773. This expression ultimately derives from Aristotle’s *Peri psychēs*, III,5, 430a13, Greek-Latin version: ‘necesse est et in anima has esse differentias’.

774. Alexander of Hales *et al.*, *Summa theologia*, II.4.1.2.3.1, p. 452b: ‘Ad id vero quod obicitur quod aliqua intelligibilia sunt supra intellectum et ita oportet quod cognitio fiat per agentem qui est supra intellectum, dicendum est quod agens non dicitur esse actu quia omnes formas a principio intelligit, sed ab agente primo illuminatur, et iam non respectu omnium, sed respectu quarundam formarum, et cum est illuminatus, perficit etiam possibilem illo modo; unde non est necesse ponere agentem separatum quoad omnia intelligibilia cognoscenda’.

intellection in general) happens through a separate active intellect. He concedes that in some cases intellection depends on it. Whether one calls this tentative or not, Considerans certainly acknowledges here the existence of a separate agent, as Jean did. Considerans does not explicitly identify this entity with God, but an agent that informs human beings about divine things can hardly be something other than God or his messengers.

It has been argued that this concerns only prophetic knowledge, that is, a very special case of knowledge.<sup>775</sup> But the case is not as special. Considerans calls the intelligible objects at issue 'intelligibilia supra intellectum', which is a phrase taken from Jean de la Rochelle, who in turn uses Augustinian vocabulary.<sup>776</sup> Jean gives the Trinity only as an example; he is thinking of eternal and uncreated objects ('aeterna' and 'increata') in general, in contrast to the natures of bodies.<sup>777</sup> It is therefore likely that Considerans also means universal intelligibles which are abstract as such. William of Auvergne, in fact, had attributed to 'Aristotle' the idea that a separate active intellect is needed exactly for 'universalia per se'. In contrast to the *Summa fratris Alexandri*, he refuses to accept the Aristotelian concept of an active intellect and insists on the illumination of the 'regulae primae ac per se notae' by God. We see here the difference between William and Considerans: the former still prefers the theological theory of intellection, whereas the latter has taken over the conceptual framework of the Peripatetic tradition and does not speak of God but of the active intellect.<sup>778</sup>

Two reservations have to be made: Considerans's primary solution is, as mentioned, that the active and possible intellects are two *differentiae* in the rational soul, and this is how Alexander is later classified by Gonsalvus de Vallebona in his *Quaestiones disputatae*.<sup>779</sup> Secondly, Considerans certainly grants the doctrine of Avicennized Augustinianism, but he does not refer to Augustine or Avicenna explicitly, thus not fulfilling the second condition, although their names appear in his source, the *Summa de anima* of Jean de la Rochelle.

Because of his strong Avicennian leanings, Petrus Hispanus Portugalensis has

long been counted among the adherents of Avicennized Augustinianism.<sup>780</sup> Against this interpretation it has been argued that Petrus 'does not reduce the separate Intelligence to the God of Saint Augustine', but describes it entirely in Avicennian terms, so that this is 'the only known case of straight "Latin Avicennism"'.<sup>781</sup> The disagreement is not about the analysis of Petrus's doctrine, but only about which label to attach to it. In chapter 10.6 of his *Scientia libri de anima* (dating from 1250–60), Petrus introduces the distinction between the possible and the active intellect, which are both called powers of the soul but differ in many respects. There are no traces of Avicenna's *De anima* in this chapter. Chapter 10.7, however, deals with the separate active intelligence ('de intelligentia agente separata'), described in purely Avicennian terms: from it emanate the universal forms if the human intellect is prepared for this; the forms, however, do not remain in the intellect, but emanate to the soul whenever it requests them; learning consists in the preparedness to make contact with the active intelligence; after death, the intellect will be joined to the intelligence.<sup>782</sup>

It has been claimed that chapter 10.6 is influenced by Augustine and chapter 10.7 by Avicenna, and that this juxtaposition makes Petrus an adherent of Avicennized Augustinianism.<sup>783</sup> A juxtaposition, however, is not enough to fulfil Gilson's (or Bonaventura's) criteria for Avicennized Augustinianism. Petrus does not identify God with the active intelligence; in fact, he does not mention the illuminator God of Augustine, but prefers terms such as 'rerum ordinatrix natura' or 'factor primus'.<sup>784</sup> God comes in only as the creator, but not as the illuminator. Moreover, chapter 10.6 seems to be influenced at least as much by Aristotle as by Augustine, for Petrus's demonstration that the soul's active intellect is 'immortalis, separabilis, perpetua, immixta'<sup>785</sup> recalls the vocabulary of *Peri psychês*, III,5: 'Et hic intellectus separatus, immixtus et impassibilis, substantia actu est. ... et hoc solum immortale et perpetuum est'.<sup>786</sup> One can conclude that Petrus acknowledges two active

775. Gilson, 'Pourquoi saint Thomas', p. 86, n.2. He criticizes Keicher in this passage.

776. In the passage at question, Jean relies mainly on the Pseudo-Augustinian *De spiritu et anima*, chapter 11, pp. 786–7 (cf. *Tractatus*, p. 90). The vocabulary is genuinely Augustinian. Cf. *De doctrina christiana* 2, 38, p. 72: '... constituta tamen inter incommutabilem supra se veritatem et mutabilia infra se cetera ...'.

777. Jean de la Rochelle, *Summa de anima*, 116, p. 279, lines 45–55 and 57.

778. One may object that Considerans leaves out the word *intellectus* in the phrase '<intellectus> agens primus' in the passage translated above. But given the fact that he is answering and partly accepting an argument in favour of an *intellectus agens separatus* in a *quaestio* about the active intellect, it is very likely that the term *agens* is merely an abbreviated form of *intellectus agens*.

779. Gonsalvus, *Quaestiones disputatae*, 13, p. 264: '... quidam dicunt quod sunt diversae potentiae animae nostrae, et haec opinio est Fratris Alexandri de Hales, in secunda parte Summae'.

780. Grabmann, 'Die Lehre vom intellectus possibilis', p. 180: 'Die Erkenntnispsychologie des Petrus Hispanus trägt sonach das Gepräge des "Augustinisme avicennisant" an sich'; Ferreira, *Presença do Augustinismo avicennizante*, p. 50; Van Steenberghen, *Die Philosophie im 13. Jahrhundert*, p. 134, n. 40.

781. Gilson, *History of Christian Philosophy*, pp. 681–2.

782. Petrus Hispanus, *Scientia libri de anima*, 10.7, pp. 445–50. Petrus draws on passages in Avicenna's *De anima*, V,5 and V,6 (pp. 126–7, 143, 146–50), which are identified in the Index locorum, V.5.a–d, V.6.d, e–p.

783. See n. 780 above.

784. Petrus Hispanus, *Scientia libri de anima*, pp. 311 ('rerum ordinatrix natura'), 321 ('natura omnium rerum provida ordinatrix'), 331 ('lex naturae provida'), 351 ('creator'), 354 ('creator', 'divina providentia'), 360 ('factor primus'), 371 ('dator primus'), 420 ('conditor'). It may be that Petrus identifies the creator with the first intelligence he mentions on p. 449. This intelligence, however, is a different entity from the active intelligence.

785. Petrus Hispanus, *Scientia libri de anima*, 10.6, p. 443.

786. Aristotle, *Peri psychês*, III,5, Greek-Latin version, 430a17–23.

intellects, one in the soul and one outside the soul.<sup>787</sup> Admittedly, this theory is much more Avicennian than most others since it accepts the existence of a separate active intellect without identifying it with God. But it is only an Aristotelianized version of Avicenna's theory insofar as it also places an additional active intellect in the soul.<sup>788</sup>

To conclude: who then were the 'multi theologi' and 'quidam catholici doctores' referred to by Adam of Buckfield, Bonaventura and Thomas Aquinas? Their testimonies date between 1245 and 1255, thus marking a *terminus ante quem*. They also describe the position as being based on the authority of John 1,9: 'there was the true light which lighteth every man coming into the world' ('erat lux vera quae illuminat omnem hominem venientem in hunc mundum').<sup>789</sup> In fact there is one author who meets the criteria: he writes before 1245, among other theses he holds the doctrine that God is identical with the active intellect and he cites in this context the quotation from John 1, 9. This person is Jean de la Rochelle. His tripartite theory, claiming that the active intellect in different respects is God, angels, and innate light, occurs first in his *De divisione multiplici* (c. 1233–5)<sup>790</sup> and is repeated literally in his *Summa de anima* (c. 1235–6).<sup>791</sup> It is not without influence: Considerans, the anonymous redactor of book II of the *Summa fratris Alexandri* (c. 1245), adopts the theory from Jean's *Summa*, putting the emphasis on innate light but still acknowledging the existence of a divine separate active intellect. The original tripartite theory reappears a few years later in Vincent of Beauvais's encyclopedia as an abbreviated quotation from Jean's *Summa*.<sup>792</sup>

787. My reference to Petrus in 'Aristotle versus Progress', p. 874, needs to be corrected: Petrus and Gundissalinus differ on this issue.

788. I am not taking into account the testimony of the commentary on *De animalibus* (Biblioteca Nacional de Madrid, MS 1877, ff. 256r–299r) attributed by Grabmann to Petrus Hispanus ('Mittelalterliche ... Aristoteleskommentare', pp. 98–113), because Petrus's authorship is not certain. See Pontes, 'Un nouveau manuscrit', p. 177. Again, Gilson has not been read with sufficient care ('Les Sources gréco-arabes', pp. 106–107): Gilson looks forward to seeing Grabmann's proof that Petrus Hispanus adhered to Avicennized Augustinianism, but he does not assert this adherence, as Pontes claims. Gilson later even opposed Grabmann's view, as we have seen.

789. Adam of Buckfield, *Sententia*, f. 54ra; Bonaventura, *In quatuor libros sententiarum*, II.24.1.2.4, p. 568b; Thomas, *Scriptum super sententiis*, II.17.2.1.c, p. 423; Matthew of Aquasparta, *Quaestiones disputatae de anima*, 7, p. 125. See the quotations above, pp. 203–4.

790. Jean de la Rochelle, *Tractatus*, 2.19–20, p. 88, line 658 – p. 91, line 739 (esp. lines 710–19).

791. Jean de la Rochelle, *Summa de anima*, 116, pp. 277–80.

792. Vincent of Beauvais, *Speculum naturale*, 27.41, pp. 1946–7: 'Nos itaque dicimus quod quia ad intelligendum ea quae supra se sunt id est divina, indiget anima irradiatione lucis divinae; secundum hunc respectum dicitur Deus intellectus agens, cuius illuminatio est ad contemplanda divina. Ad cognoscenda vero ea quae iuxta se sunt, ut sunt angelicae virtutes, indiget anima revelatione angelica et instructione. Et in hac comparatione dici posset angelus intellectus agens, in quantum scilicet instruens, non tamen respectu superioris partis intellectus humani qui a Deo illuminatur immediate, sed respectu inferioris, secundum quod Augustinus inter intellectivam et intellectum et rationem distinguit. Porro ad cognoscenda ea quae sunt intra se vel infra se, non indiget anima lumine extrinseco, sed haec omnia cognoscit lumine interno et innato, quod est intellectus agens, vis scilicet animae suprema de qua sit hic sermo'.

The answer then is that Jean de la Rochelle and Considerans (probably not the encyclopedist Vincent) can be identified as the theologians mentioned in the testimonies. There were probably others. This is shown by the fact that Anonymous (de Vaux) in his *Liber de causis primis et secundis* (around 1200?) quotes the same passage as Jean de la Rochelle from Augustine's *Soliloquia* I.8.15, where the sun is compared to God.<sup>793</sup> This he does in support of a theory which is a fore-runner to Avicennized Augustinianism: he implies that the doctrine of the separate active intellect can be expressed in Augustinian phrases about primary light and can thus be justified.

As to the other authors: four later writers are indisputable exponents of the doctrine of Avicennized Augustinianism: Roger Bacon, John Pecham, Roger Marston and Vital du Four. In contrast, Dominicus Gundissalinus, William of Auvergne, Robert Grosseteste and Petrus Hispanus do not adhere to the doctrine. Gundissalinus's use of Augustine is too vague to influence his thoroughly Avicennian theory of the intellect. William of Auvergne argues strongly against the existence of any active intellect, either inside or outside the soul, and withdraws to a traditional Christian position. Robert Grosseteste does not touch upon the question; and Petrus Hispanus combines Aristotelian and Avicennian notions of the active intellect, but does not bring Christian ideas of God into his account.

The term Avicennized Augustinianism has proved useful as referring to a specific doctrine. The doctrine is often supported by the authority of Augustine, and the same holds true for Avicenna: the anonymous *Liber de causis primis et secundis* merely inserts Christian notions into an otherwise fundamentally Avicennian work, drawing both on Avicenna's *De anima* and his *Metaphysica*. For Jean de la Rochelle, Avicenna is the philosophical authority *par excellence*, and he quotes him by name when he introduces the notion of the active intellect. In the *Summa fratris Alexandri* and Bonaventura, Avicenna's name has disappeared, but there are clear signs of Avicenna's influence in their passages on the issue.<sup>794</sup> Roger Bacon, John Pecham, Roger Marston and Vital du Four all refer to Avicenna as an authority for the doctrine of Avicennized Augustinianism.

How then did Avicenna come to be identified with the doctrine of the separate active intellect? Avicenna himself, who explores so many questions of the Peripatetic tradition in detail, does not discuss or even raise the question of whether the

793. Augustine, *Soliloquiorum libri duo*, I 8.15, p. 24, line 3: 'Ergo quomodo in hoc sole tria quaedam licet animadvertere: quod est, quod fulget, quod illuminat, ita in illo secretissimo deo, quem vis intelligere, tria quaedam sunt: quod est, quod intelligitur, et quod cetera facit intelligere'. Cf. Anonymous (de Vaux), *Liber de causis primis et secundis*, 10, p. 133, and Jean de la Rochelle, 2.1.19, *Tractatus*, p. 89. It may well be that Bonaventura's testimony quoted above (p. 203, n. 699) refers to this Augustinian passage.

794. Alexander of Hales *et al.*, *Summa theologica*, II.4.1.2.3.1, p. 451a: '... nihil potest educere formas intelligibiles de potentia in actum nisi sit actu in illo genere'. Bonaventura, *In quatuor libros sententiarum*, II.24.1.2.4, p. 568a: 'Et modus iste ponendi et dicendi fundatus est super multa verba philosophorum, qui posuerunt animam rationalem illustrari a decima intelligentia et perfici ex coniunctione sui ad illam'.



active intellect is separate. It was not a specific topic for him, but rather a Peripatetic commonplace.<sup>795</sup> Thus, we have the strange situation that Avicenna is often quoted as stating the proposition 'intellectum agentem esse separatum', which does not appear in his translated works. An important factor is Avicenna's analogy of the sun (Aristotle had compared the activating intellect to light).<sup>796</sup> It not only served as a link to Augustine's comparison of God with the sun,<sup>797</sup> it also implied Avicenna's conviction of the separateness of the active intellect. This is obvious for instance from the early testimony (1225) of Anonymous (Gauthier), *De anima et de potentiis eius*: 'In this Avicenna erred, because he made the active intellect, i.e. the intelligence or angel, separate from the soul, just as the sun is separate from sight'.<sup>798</sup> A late testimony is John Pecham's *Quaestiones tractantes de anima* (about 1269–77):

Further, Avicenna <says> in his *De anima* <that> (1) the intelligible forms are given by the intelligence in actuality, (2) the action of which on our souls is like the relation of the sun to our eyes.<sup>799</sup>

In Van Riet's edition of Avicenna's *De anima*, there is a paragraph break between the sentences labelled (1) and (2) in Pecham's quotation.<sup>800</sup> Pecham read this as one sentence, its sense being that the intelligence which delivers the forms is analogous to the sun. In William of Auvergne, the phrasing of the analogy is turned into illuminationist language: 'That is why Aristotle and his followers claimed that this intelligence is the sun of our souls and the intelligible sun itself'.<sup>801</sup> Well-read scholastics also knew that Avicenna's *Philosophia prima* identifies the active intellect with the lowest intelligence in the hierarchy of the universe.<sup>802</sup>

795. See Davidson, *Alfarabi, Avicenna, and Averroes*, pp. 13–18.

796. See n. 598 above.

797. Cf. p. 208 and n. 793 above. As an example of the Augustinian tradition before the advent of Avicenna one may refer to Isaac of Stella, *Epistola de anima*, p. 1888: 'Sicut enim solem non videt oculus nisi in lumine solis, sic verum ac divinum lumen videre non poterit intelligentia nisi in ipsius lumine'.

798. Anon. (Gauthier), *De anima et de potentiis eius*, p. 51, line 453: 'In hoc erravit Avicenna quia posuit intellectum agentem separatum ab anima, puto intelligentiam sive angelum, sicut sol est separatus a visu'.

799. John Pecham, *Quaestiones tractantes de anima*, 5, p. 60: 'Item Avicenna, VI Naturalium: Intelligentia in effectu dat formas intelligibiles, cuius operatio (perhaps: comparatio) est ad animas nostras sicut comparatio <solis> ad visus nostros'.

800. Avicenna, *De anima*, V,5, ed. Van Riet, p. 126, line 33: 'Sed causa dandi formam intelligibilem non est nisi intelligentia in effectu, penes quam sunt principia formarum intelligibilium abstractarum. // Cuius comparatio ad nostras animas est sicut comparatio solis ad visus nostros ...'. In the Arabic (ed. Rahman, p. 234, lines 18–19) the second sentence is a *ḥāl*-clause (a circumstantial phrase) to the preceding sentence. There is no justification, therefore, for the paragraph break in Van Riet's edition.

801. William, *De anima*, 5.8, p. 123a: 'Propter quod et solem animarum nostrarum et solem intelligibilem ipsam <scil. intelligentiam> esse posuerunt Aristoteles et sequaces eius'. Illuminationist language also appears in works that do not clearly refer to a separate active intellect. Cf. Alfred of Shreshill, *De motu cordis*, 15, p. 83: 'Ideoque et bruta ... cum intellectus activi non illustrentur acuminis, ad rationis apicem non conscendunt', and Robert Grosseteste, *In posteriorum analyticorum libros*, f. 8c (as quoted in McEvoy, *The Philosophy*, pp. 351–2): '... intellectus humanus ... recipit irradiationem a luce creata quae est intelligentia'.

802. See Albertus Magnus, *De homine*, 55.3, p. 462: 'De decima vero sic dicit <Avicenna>: Decima

As such, the doctrine did not find much acceptance in the West, not even with writers such as Gundissalinus and Petrus Hispanus who come closest to the Avicennian idea of an active intellect. In the final analysis, the theory of its separateness survived only in a Christian garment; the doctrine of the four intellects was transformed and lived on in many different versions, as a footnote to Aristotle, as a theory about syllogistic intellection, as a scheme of ascension to divine knowledge; the theory of the active intellect's mediating role in abstraction travelled as part of very different psychologies. In contrast, therefore, to Avicenna's system of the vegetative faculties and external and internal senses, which replaced the older accounts of the twelfth century, the theory of the intellect did not find a scholastic writer who would accept it as a whole. There are many reasons for this, among which is Avicenna's incoherent presentation of his intellect theory in *De anima*; it prevented readers from understanding the connection between the various pieces of doctrine, as for instance intuition and the four intellects. As a more decisive reason, one may point out that theories about the highest modes of intellection can be very dependent upon world views. In the case of the Arabic philosopher and his Christian readers these views were different enough to influence significantly and fruitfully the reception of Avicenna's theory.

est intelligentia a qua fluit super nostras animas, et haec est intelligentia mundi terreni, et vocamus eam intelligentiam agentem'. This is a literal quotation (apart from the *decima* which is not in Avicenna) of *Philosophia prima* IX, 3, ed. Van Riet, p. 476, lines 29–30. Cf. Bonaventura in n. 700 above.

### III. CONCLUSION

In this final section, a new attempt will be made to place Avicenna and his psychology within the history of Western thought. I shall, however, begin by describing what seem to me the four most important previous approaches.

Proponents of the first position, the theory of 'Avicennized Augustinianism', maintain that the significance of Avicenna's influence has to be seen in a 'doctrinal school' instigated by him which prompted Thomas Aquinas to reject basic Augustinian teachings. The key doctrine of this school is the identification of Avicenna's 'Neoplatonic' theory of the separate active intellect with Augustine's notion of the Christian God.<sup>1</sup>

For the supporters of the second position, the role and significance of Avicenna lies rather in the use of his writing as a secondary source. Avicenna's 'paraphrases' of Aristotle's works served as guides for interpreting Aristotle until they were replaced by Averroes's commentaries. As a consequence, early thirteenth-century authors had a 'distorted' picture of Aristotle's philosophy.<sup>2</sup>

Those who put forward the third position maintain that in the years 1225 to 1240 there was a 'fight' between the Avicennian and the early Averroist interpretation of Aristotle. In about 1240, Avicennian Aristotelianism, the theory 'most dangerous' to Christian belief – because it makes the active intellect separate – was defeated.<sup>3</sup>

According to the fourth position, Avicenna is the philosopher who introduced the West to philosophy, to reason and its use in secular contexts, to science and also to

1. This is the theory of the early Gilson. See pp. 204–5, 211, nn. 744–6, 755 above, for a detailed description and criticism of his position. To quote a key sentence from 'Les Sources gréco-arabes' (1929), p. 103: 'Nous avons montré ailleurs que la critique de l'augustinisme médiéval par saint Thomas supposait l'existence d'une école dont la doctrine combinait ... l'influence dominante de saint Augustin au néoplatonisme d'Avicenne.'

2. This is the standpoint of Van Steenberghen; see *Die Philosophie im 13. Jahrhundert* (1977), p. 180: 'Die Paraphrasen des Avicenna haben den ersten Aristotelesinterpreten solange als Arbeitsinstrument gedient, bis sie von den wörtlichen Kommentaren des Averroes abgelöst wurden'. For Van Steenberghen's use of the word *entstellen* ('to distort'), see pp. 180, 333 ('contaminer' in the French edition, pp. 173, 320). Cf. Kübel, 'Albertus Magnus' (1980), p. 297: '... befreit von fälschender Interpretation, insbesondere der arabischen Kommentatoren ...'. Cf. also Dales, *The Problem of the Rational Soul* (1995), p. 65 and p. 75: '<Bacon's> understanding of Aristotle was distorted by the influence of Avicenna ...', and his language of orientalism on p. 20: 'Although his <i.e. John Blund's> understanding of Aristotle is still conditioned by the interpretations of Arabic intermediaries, Blund was better able to penetrate this exotic veil and get to the meaning of the text than scores of his successors, who had less excuse.'

3. This is Gauthier's theory. See 'Le Traité *De anima et de potentiis eius*' (1982), p. 25: '... 15 ans de lutte entre l'aristotélisme avicennien et l'aristotélisme averroïste ... l'aristotélisme le plus opposé à la foi, c'est l'aristotélisme avicennien qui en faisant de l'intellect agent une Intelligence séparée aboutit à nier l'immortalité de l'âme (sans compter qu'il en fait un rival de Dieu). C'est donc Avicenne qu'il faut avant tout combattre et Guillaume <d'Auvergne> le fait avec d'autant plus de violence qu'il se sent seul ...'

religious rationality. There are two main arguments for this view: first, Avicenna's most important works were known in the West before their Aristotelian counterparts; second, Avicenna, as both a philosopher and a mystic, went beyond Aristotle and connected philosophical and religious teachings.<sup>4</sup>

In the course of the present survey of the influence of Avicenna's *De anima* in the Latin West I have often profited from the work of earlier scholars, and I hope it is obvious that the following criticism of some of their positions is made *salva reverentia eorum*. One might object to the critical conclusion I shall put forward that the afore-mentioned theories consider the entire range of Avicenna's works and not only his *De anima*. This is not quite true: the focus of the first three theories is on psychology, and the last one also focuses on the *De anima* when referring to Avicenna's very early influence. The *Metaphysics*, Avicenna's second most influential philosophical book (we have fifty Latin manuscripts of the *De anima* and twenty-five of the *Metaphysics*), had much less impact in the first half of the thirteenth century.<sup>5</sup> It is therefore appropriate to measure the standpoints set out above against the following conclusions regarding the *De anima*.

Avicenna and his psychology dominated the structure and much of the content of psychological writings in the West for half a century, from John Blund to Albertus Magnus and Petrus Hispanus.<sup>6</sup> Avicenna had developed a theory of the soul which combined Peripatetic philosophical argumentation with an elaborate system of faculties, based on a great deal of physiological material. Avicenna's *De anima* offered the latest and best in philosophical subtlety and comprehensiveness and in terms of scientific discoveries. It was for these reasons that he was preferred even to Aristotle by many writers of the period examined.

A factor which contributed greatly to Avicenna's success was the compatibility of his theory with the teachings of the medical tradition, which had begun to influence even theological discussions of the soul. Aristotle's treatise could not compete with Avicenna's on the level of physiology; it was written before, for

4. This is de Libera's standpoint; see his 'Penser au Moyen Âge' (1991), p. 112: 'On oublie trop souvent que les Latins ont connu Avicenne avant qu'Aristote n'ait été intégralement traduit. ... C'est Avicenne, non Aristote, qui a initié l'Occident à la philosophie. A ce propos, on ne peut se contenter de dire que l'élève a été connu avant le maître. Ibn Sinā était un philosophe et un soufi. Sa pensée doit beaucoup à Aristote, elle doit aussi beaucoup à d'autres sources, religieuses ou philosophiques. Le néoplatonisme y est omniprésent ... cet auteur n'initie pas seulement l'Occident à la raison, à son usage profane, en un mot à la science, il l'introduit aussi à la rationalité religieuse ...' Cf. Gilson's emphasis on Avicenna's views on religion in 'Avicenne en occident' (1969), p. 118.

5. William of Auvergne is an exception; see pp. 42–7 above.

6. D'Alverny once stated this plainly and correctly: 'Sa classification des facultés, sens internes et sens externes, et des intellects, a profondément marqué la structure des traités de l'âme écrits à partir du XIII<sup>e</sup> siècle'; see d'Alverny, 'Ibn Sina et l'Occident médiéval' (French Radio, 1951) (printed: *Avicenne en occident* (1993), I, p. 10). D'Alverny was much less hampered by intellectual preoccupations than many historians of philosophy, being herself a philologist; but it may have been for this reason that she never elaborated upon her statement.

instance, the discovery of the nerves and of the ventricles of the brain. Moreover, Aristotle's terminology was rather restricted, not surprisingly since it was a pioneering book in its field. The strength of Avicenna's system, on the other hand, is that, by giving names to many different psychological faculties and their functions, he presented scholars with a language they could use to speak about the causes of numerous psychological phenomena (such as instinct or dreams or intuition). This naming of faculties and describing their physiological basis was familiar to the Latin twelfth century.

A number of theses held by previous scholarship may now be challenged. Avicenna's *De anima* was not translated before Aristotle's *Peri psychēs*, nor was it known much earlier (as claimed by supporters of position four); John Blund and the anonymous author of Vat. lat. 175 already had both works to hand. Averroes's commentary, on the other hand, was translated later and known from 1225 onwards, but did not attract much attention until the early 1240s. The interesting question in the years up to 1240 is not whether scholars followed Avicenna or Averroes (position three), but whether they followed Avicenna or Aristotle. The answer in most cases is that they followed Avicenna, even the masters of the arts faculty, who had to teach Aristotelian logic.

It is not true that Avicenna was read as a commentator on Aristotle (position two). If any work needed a commentator, then it was Avicenna's huge and difficult psychological *magnum opus*. Of the about 1600 implicit and explicit references in the Index Locorum, only eleven refer to Avicenna as a *commentator* or to the *De anima* as a *commentum* (or use a similar phrase, like *Avicenna super .ii. de anima*), and even these references are ambiguous.<sup>7</sup> Also, Avicenna's *De anima* never appears together with Aristotle's *Peri psychēs* in the same manuscript, as did many of Averroes's commentaries.<sup>8</sup> These findings are confirmed by the way the *De anima* was used by thirteenth-century scholastics: as we have seen in the first part of this study, they treated the work as a primary source.

That Avicenna was preferred to Aristotle is not to say that Aristotle's philosophy was rejected. Aristotle and Avicenna were regarded as the most eminent representatives of *philosophia*: they were the *philosophi*. A quotation from Avicenna was as authoritative as one from Aristotle; and since the material in Avicenna was more abundant and more scientifically advanced, scholars tended to quote Avicenna.

It is misleading to emphasize the fact that Avicenna was a Muslim (position four). It is true that he touched upon religious matters (though in a philosophical manner)

such as the theory of resurrection, but hardly ever in the works translated in the twelfth century.<sup>9</sup> These were all parts of *aš-Šifā'*, which, according to Avicenna himself, follows for the most part the arrangement of the Peripatetic tradition.<sup>10</sup> Avicenna was considered to be a *philosophus, sequax Aristotelis* or *Peripateticus*, as William of Auverge and Albertus Magnus labelled him.<sup>11</sup>

It is incorrect to say that Aristotle's doctrine was confused with that of Avicenna, or worse, that Aristotle's views were distorted (position two). There are not many examples of Avicennian theories being attributed to Aristotle or vice versa.<sup>12</sup> Before Albertus Magnus, scholastic authors did not for the most part point out the many differences in doctrine between the two philosophers. But it is unlikely, given the excellent knowledge of both authors in John Blund, for example, that these differences were overlooked. Even a casual reader would notice that *Peri psychēs* does not have chapters on the internal sense of estimation or on the immortality of the soul. In the fresh approach to psychology adopted in the first half of the thirteenth century, it did not matter whether a theory could be proved by quoting Aristotle; what mattered was whether it could be found in a philosophical author and whether it fulfilled certain criteria of quality, as Albertus said about a definition by Avicenna: 'dicimus quod praehabita diffinitio bona est et physica'.<sup>13</sup>

There seem to be three major reasons for the misconceptions which have arisen among modern scholars with regard to Avicenna's influence in the West: first, a bias in favour of the Greek philosopher Aristotle; second, a preoccupation with theories of the intellect; and third, a prevailing interest in theories that were either conducive or dangerous to Christian belief.

As to the first, historians of philosophy seem to be the only scholars of the Middle Ages who describe the translation movement in their field as a reintroduction of a single Greek author (Aristotle) supplemented by various additional works.<sup>14</sup> Historians of medicine, of the occult sciences and of the exact sciences speak of Greek, Arabic and Hebrew works translated into Latin. Gundissalinus's main interest was certainly not Aristotle: it has been noted above that he did not choose to translate works by Aristotle, even though his fellow translator Gerard of Cremona was doing so, at the same time and in the same city. Instead, he translated

9. There are some exceptions, such as chapter IX, 7 of the *Metaphysics*, which deals with resurrection. I doubt, however, that it is possible to show that the Latins conceived of the *Metaphysics* as a Muslim or religious book rather than a philosophical work by a Peripatetic philosopher.

10. See pp. 1–2 above.

11. See William, *De universo*, p. 618, and, for Albertus, Index locorum I.5.u, z, aa (B1+2); II.3.j; III.6.a; IV.1.f; V.2.a; V.7.b.

12. An example is the theory that the separate active intellect illuminates the human soul from outside which William of Auvergne attributes to Aristotle, while ascribing to Aristotle's followers the thesis that the active intellect is in the soul. See pp. 211–14 above.

13. See p. 64 above.

14. See, e.g., Dod, 'Aristoteles Latinus', pp. 45–79.

7. See p. 20 above.

8. This can be seen by looking through d'Alverny's description of Latin manuscripts of Avicenna's works (d'Alverny, *Avicenna latinus: Codices*). The same applies to Avicenna's *Metaphysics*: there are no manuscripts (with the exception of a 15th-century codex from Basle, p. 187, that consists of two different parts) which contain both Aristotle's and Avicenna's *Metaphysics*.

philosophical works by Arabic and Hebrew authors, Alfarabi, Avencebrol and others.<sup>15</sup> Moreover, medieval scholars were not so very eager to study the newest translation of Aristotle: a hundred years separate the translation of *Peri psychês* from the first extant commentary, that by Petrus Hispanus (about 1240). The story of Avicenna's *De anima* shows that readers were interested in finding out about and adopting new philosophical theories, but not necessarily those of Aristotle. Just because the works of Aristotle became the canon of university education in the middle of the thirteenth century, that does not mean that he was at the centre of attention during the previous hundred years.

Secondly, it has been shown above that the success of Avicenna's psychology was primarily due to the reception of his elaborate system of faculties, which determined the structure of most writings on the soul in the period under review. The theory of the intellect, on the other hand, was not often mentioned by early authors such as Michael Scot and Roland of Cremona, and later authors transformed rather than accepted it. We therefore have to be careful not to base our judgement on the reception of this theory alone, for it is not representative. The theories of both Gilson and Gauthier (positions one and three) suffer from this weakness. They even link the rise and decline of Avicennian psychology to the fate of the single doctrine of the separate active intellect.

Finally, as to the Church's condemnations of philosophy, hardly anyone in the West found Avicenna's psychological theories a danger to Christian belief, apart from William of Auvergne and Giles of Rome. Ironically, this has led modern historians to underestimate the influence of Avicenna. Since so many admittedly interesting disputes in the thirteenth century concern theses condemned in one of the several condemnations issued by the Church, scholars thought it unlikely that an Arabic philosopher could dominate the theological and philosophical discussion of the soul for decades without provoking fierce opposition. But Avicenna did.

Turning now from the rise of Avicenna's *De anima* to its decline, it seems clear that this is a topic that deserves further attention. Why did a theory with so many advantages lose the greater part of its influence on philosophical discussion of the soul? This problem is addressed above in greater detail.<sup>16</sup> Summing up the results, it can be said that Avicenna's faculty psychology disappeared into the gap which opened between, on the one hand, the development of an increasingly theoretical and metaphysical theory of the soul among the philosophers and theologians, and, on the other hand, the advances made by the late thirteenth century by the physiologically oriented theory of the soul of medical writers. In the chapter on Albertus Magnus it was shown that after *De homine*, which led to the final culmination of Avicennian writing on the soul, it was possible for philosophers to

take one of two courses: either to develop Peripatetic psychology in a new, post-Avicennian direction, as happened in the Arabic East, where Avicenna's philosophy formed the starting-point for philosophical enterprises moving in different directions,<sup>17</sup> or to return to the father of philosophers, Aristotle. The scholastics chose the latter course, partly because of the influence of Averroes. Historical developments in general have advantages and disadvantages depending upon the viewpoint of the historian. The major advantage of this turn of events was an improved knowledge of Aristotelian psychology; the major disadvantage was a setback for the progress of science.<sup>18</sup>

\* \* \*

I shall now try to bring into focus the results of this study regarding the scholastics' understanding of Avicenna's *De anima* and its impact on Western thought.

On the whole, the translation of Avendauth and Gundissalinus was a very fine piece of work; it provided the basis for the success of the book. Nonetheless, some flaws in the translation prevented readers from understanding Avicenna's philosophy correctly. Examples of influential misrenderings are the inconsistent translation of *qâtubu* – twice with *se* and twice with *sua essentia* – which hampered the interpretation of the Flying Man,<sup>19</sup> and the use of the term *imaginatio* both for *ḥayāl* and *taḥayyul*, which for Avicenna are two distinct faculties.<sup>20</sup> Most inadequate is their translation of Avicenna's optical theory: they did not correctly understand the significance and meaning of a number of key terms, in particular *ḍau* ('natural light'), *nūr* ('light') and *mustafād* ('acquired'). In addition, the abbreviated definition of vision in chapter I,5 was not translated using the vocabulary employed in the rest of the book, with the result that basic tenets of Avicenna's optics were misinterpreted.<sup>21</sup> The translators, however, were not responsible for one of the most blatant misunderstandings of an Avicennian theory: the missing *non* in the definition of *lumen*, which seems to have been due either to a faulty manuscript tradition or to a tendentious, that is, Aristotelianizing, reading.<sup>22</sup> Most of the other misunderstandings were caused by the intrinsic difficulty of Avicenna's philosophy, as in the case of the theory of the Flying Man and of the faculty of estimation. There are also, however, examples of careless interpretation: attentive readers should have noticed that Avicenna's explanation of the Evil Eye and the prophetic capacity to produce

15. See p. 16 above.

16. See pp. 73–9 above.

17. See p. 75, n. 352 above.

18. See pp. 103–6 (on nerves), and pp. 152–3 (on instinct) above, and Hasse, 'Aristotle versus Progress', pp. 875–80.

19. Also, they did not recognize the technical meaning of *tanbih* as referring to the logical status of the Flying Man; see p. 90 above.

20. See p. 167 above.

21. See pp. 114 and 123–4 above.

22. See 114–17 above.

wonders was connected with his doctrine of the faculty of will-power,<sup>23</sup> or that the distinction between voluntary and non-voluntary movement was crucial for understanding the case of the shellfish.<sup>24</sup>

This summary should not, however, give the false impression that the reception of Avicenna's psychology was beset with problems. In fact, the understanding of Avicenna's *De anima* in the thirteenth-century West was in many cases superior to that of nineteenth- and twentieth-century interpreters.<sup>25</sup> This is particularly true for the theory of estimation and connotational attributes: medieval scholars, much more used to reading literature translated from the Arabic than their modern counterparts, were not as easily confused by the many different meanings of the word *intentio*.<sup>26</sup>

What impact did Avicenna have on the actual content of Western psychology? The reception of Avicenna's theories varied a great deal: some were openly welcomed (e.g. the many definitions and distinctions of the faculties, the Flying Man, the example of the shellfish, the theory of individuation); others were quickly adopted and soon became common philosophical knowledge (e.g. the theory of estimation); some were rejected, but triggered a significant discussion (e.g. the theory of prophecy); some found both partisans and opponents (e.g. the denial of intellectual memory, the theories about the media and instruments of the external senses); some were transformed (e.g. the doctrine of the four intellects, the theory of the separate active intellect); and some were ignored (e.g. most parts of the theories of substantiality, I, 1–4, and of the motive faculties, IV, 4).

I have, in general, refrained from pointing out the intellectual gaps between Avicenna and his Western readers, even in obvious cases such as Thomas's rejection of Avicenna's theory of prophecy and the formation of the doctrine of Avicennized Augustinianism. There are two main reasons for this approach. Firstly, the gaps were not so significant as to seriously disrupt the understanding of Avicenna's philosophy. It was a very important factor that the Latins had enough knowledge of Aristotle to understand that Avicenna had to be classified as a *peripateticus*, a philosopher in the tradition of Aristotle. Basically, the Peripatetic language spoken by Avicenna was comprehended by his Latin readers, who had all started their education with the *Categories*. Secondly, my aim in this study of Avicenna's *De anima* was to focus on the exact extent of its influence and on the intellectual quality of the discussion of its theories among Western writers. But the quality of the reception of a translated text is not necessarily lowered by the existence of intellectual gaps between the work and its audience: a profound misunderstanding

of a theory can be of great profit to the discussion.

This may be seen with regard to the doctrine of Avicennized Augustinianism. The identification of the separate active intellect with the Christian God would certainly not have pleased Avicenna, but it reveals the sagacity of certain scholastic writers. In Jean de la Rochelle and Considerans (one of the authors of the *Summa fratris Alexandri*) this fusion of Avicennian and Augustinian ideas does not lead to a simple explanation of all knowledge as coming from above, but instead to a refined epistemological position which discriminates between different kinds of intellection depending on the ontological status of their object.<sup>27</sup> Likewise, one may lament the scholastics' failure to understand Avicenna's non-Aristotelian criterion for the demarcation of plants from animals, i.e. the voluntary movement of contraction and dilation, but it provoked a discussion about the notion of movement which was of interest in its own right.<sup>28</sup>

Looking at the issue of reception from a different angle it is noteworthy that the range of reactions to Avicenna's theory was quite impressive, starting with Gundissalinus's *De anima*, which, as has been shown, was an intelligent compilation. John Blund surpasses many modern scholars in his understanding of the theory of estimation. Then there are the theologians who confronted and ultimately mastered the difficult task of integrating a complete psychological system into their theological *Summae* and commentaries on the *Sentences*. To achieve this required not only the whole weight of Avicenna's system and the backing of Aristotle's authority, but also philosophical understanding on the part of the theologians. Thomas Aquinas stands out for his critical engagement with Avicenna's position: he did not read Avicenna as carefully as others, but investigates some of Avicenna's positions until he discovers the basic cause of his disagreement with the Arabic philosopher. Finally, there is the *doctor universalis*, Albertus Magnus, whose philosophical expertise and sound philological instinct have repeatedly emerged in this study.

We may now consider the cultural and intellectual gulfs that feature in this story of the transmission of an Arabic work into the Latin West. Such gulfs certainly existed. Avicenna was not a theologian, nor a university teacher, as were his Latin counterparts. Only Michael Scot, the court astrologer of Frederick II Hohenstaufen, comes close to Avicenna's position at different Persian courts, where he held various administrative posts and contributed, with his philosophical and medical skill and fame, to the rulers' standing. These differences played a considerable role in the reception of Avicenna's philosophy. Thus, Dominicus Gundissalinus, the translator, and Petrus Hispanus, an independent master of arts, were alone in accepting the idea of a separate active intellect without identifying it

23. See p. 167 above.

24. See pp. 95–6 above. Cf. also Bonaventura's reading of Avicenna's optical theory, p. 117 above.

25. See pp. 117–19, 125–7 (on Albertus) and p. 202 (on intellect) above.

26. See pp. 142–3 and 145 above.

27. See pp. 216–18 above.

28. See pp. 95–8 above.

with the Christian God. The vegetative faculties received little attention because Christian theologians thought that this issue did not pertain to their field of enquiry. Thomas rejected Avicenna's theory of prophecy because he did not agree with the Arabic philosopher's naturalistic approach.

The theologians' problems with Avicenna's philosophy are obvious; but more telling in terms of intellectual differences is the attitude of the masters of arts and of Albertus Magnus, who in spirit was more akin to this group than to the theologians. The gap that divides Avicenna from his Latin readers is the attitude of the latter towards authority – not the Church, but, in this case, Aristotle. It was the masters of arts who chose to drop a well-developed theory of instinct (estimation), to omit the nerves in the discussion of touch, and to make the heart the centre of sensation, because Aristotle said so. In a remarkable chapter in the history of medieval thought, even the open-minded Albertus changed his opinion after writing *De homine* and turned against Avicenna in his *De anima*. One of the few exceptions was the physician Petrus Hispanus. His *Scientia libri de anima* from about 1255, written while he held an independent ecclesiastical position in Portugal, indicates which direction the philosophers might have taken: the formation of an ambitious new synthesis of psychological learning. Petrus Hispanus, in fact, uses words that resemble those of Avicenna: 'After inquisitive discourses proceeding under the examination of the disputation <-method> had been published by us in other books ..., in this work the sentences of truth regarding all questions are brought to a conclusion in firm and short summaries.'<sup>29</sup> Unfortunately, Petrus did not have the methodological skills to achieve this goal, and his *Summa* remains a very heterogeneous piece of work. Here then is the key factor which distinguishes the Persian court philosopher from Western thinkers: throughout his life, Avicenna worked on a method which would enable him to emancipate himself from the traditional body of Peripatetic teaching and, in the end, to become another Aristotle. The method rested upon the core concept of the intuition of middle terms, which ensured a way to establish the truth following a logical order which corresponds to ontological reality. In the final stages of his development, Avicenna worked and improved upon only his own texts and theories. Aristotle was left behind.<sup>30</sup>

29. Petrus Hispanus, *Scientia libri de anima*, p. 47: '... ut postquam sermones inquisitivi sub disputationis examine procedentes in aliis operibus a nobis editis sint praemissi, in hoc ergo negotio omnium inquisitionum veritatis sententiae certis summis ac brevibus concludantur' (for the context, see pp. 57–60 above). Compare Avicenna's statement in the prologue to *as-Šifā'*, which he wrote some time after its completion. He compares it to a work written in the meantime, the *Mašriqiyyūn*: 'I also wrote a book ..., in which I presented philosophy as it is in itself and as required by an unbiased attitude ...; this is my book on Eastern philosophy (= *Mašriqiyyūn*) ... Whoever wants the truth <stated> without indirection, he should seek the former book (the *Mašriqiyyūn*); whoever wants the truth <stated> in a way which is somewhat conciliatory to colleagues, elaborates a lot ... then he should read the present book' (tr. Gutas, *Avicenna*, pp. 52–3). For Avicenna's method in *as-Šifā'* see pp. 1–2 above.

30. On Avicenna's theory of intuition and his attitude towards the philosophical tradition, see Gutas,

In the West, we can discern in figures like John Blund, Albertus Magnus and Petrus Hispanus an aspiration to establish a free approach to psychology, independent of authoritative writings – but it remained an aspiration. Here institutional factors seem to have been at work: the masters of arts had to teach Aristotle, and Albertus had to lecture on theological authorities. But what was perhaps decisive was that Avicenna could look back upon a long sequence of Peripatetic commentators and philosophers, from Alexander of Aphrodisias to Alfarabi. He could thus conceive of an historical tradition into which he wanted to insert himself and which he eventually abandoned. The situation was not so favourable for Western philosophers. When Averroes entered the scene, and with him an advanced knowledge of the Greek commentators, he confronted the West with an account of the Peripatetic tradition in which Avicenna had deserted Aristotle who alone could validate the truth. Under these circumstances, it proved extremely difficult to develop a sense of a progressive and non-authoritative history of philosophy, as Avicenna had done, thus enabling him to enjoy an intellectual freedom of his own devising which was unknown to his Latin readers.

*Avicenna*, pp. 159–76 and 286–96, and pp. 154–5, 163–4, 180–83 above.



## INDEX LOCORUM

This Index, which is admittedly provisional, lists quotations and adaptations of Avicenna's *De anima* from the beginning of the book (chapter I,1) to its end (chapter V,8). Each entry first gives the page number of Van Riet's edition of *De anima*, followed by a brief description of the content of Avicenna's passage and its opening words in Latin (in *italic*), and then a list of references to the scholastic authors who quote the passage, in chronological order. Silent quotations are indicated by the phrase 'no attribution'. In some cases a few Latin words have been added to facilitate the identification of the passage in the scholastic writer.

## I,1

## a) pp. 14–15:

We observe that some bodies have sense-perception and voluntary movement; this is not in virtue of something corporeal but of something called 'the soul' – *et dicemus quod nos videmus ...*

- Dominicus Gundissalinus, *Liber de anima*, 1, p. 32 (no attribution; *nos videmus ...*)  
 John Blund, *Tractatus de anima*, 1.1, p. 1, lin. 9–17 (no attribution; *nos videmus ...*)  
 Jean de la Rochelle, *Summa de anima*, 1, p. 50 (no attribution; *cum videamus ...*)  
 Alexander of Hales *et al.*, *Summa theologica*, II.4.2.1.4, pp. 547a and 548b  
 cf. Petrus Hispanus, *Quaestiones libri de anima*, 1.13.3, p. 442  
 Albertus Magnus, *De homine*, 1.2, pp. 7–8  
 Matthew of Aquasparta, *Quaestiones disputatae de anima*, 1, p. 15

## b) pp. 15–16:

The term 'soul' is not given in respect to the substance of this thing – *et hoc nomen est nomen ...*

- Albertus Magnus, *De homine*, 4.1, p. 34 (*et ideo dicit Avicenna ... et dat Avicenna simile dicens ...*)  
 —, 61.2, p. 530a  
 John Pecham, *Quaestiones tractantes de anima*, 4, p. 51

## c) pp. 18–19:

The soul is called faculty/power or form or perfection – *dicemus igitur nunc ...*

- Petrus Hispanus, *Scientia libri de anima*, 1.2, p. 59 (no attribution; *anima igitur forma ac perfectio ... dicitur*)  
 Thomas Aquinas, *De ente et essentia*, 5, p. 379, line 90  
 cf. Matthew of Aquasparta, *Quaestiones disputatae de anima*, 4, p. 57

## d) p. 19:

Every form is perfection, but not every perfection is form – *deinde dicimus ...*

- Albertus Magnus, *De homine*, 4.1, p. 32b

## e) pp. 20–21:

The most appropriate and comprehensive definition is that the soul is perfection – *clarum est igitur quod ...*

- cf. Albertus Magnus, *De homine*, 4.1, p. 33 (*actus aequivoce dicitur de vegetabili, sensibili et rationali*)  
 —, 4.1, p. 35a  
 Matthew of Aquasparta, *Quaestiones disputatae de anima*, 2, p. 33

## f) pp. 21–2:

Why the soul is not appropriately called 'faculty/power' – *ea autem quae ...*

- Albertus Magnus, *De homine*, 4.1, p. 37a

## g) p. 25:

Definition of *accidens* – *si autem inveneris accidens ...*

- cf. Albertus Magnus, *Super quartum sententiarum*, 12.E.16, p. 330 (*hoc falsum est cum expresse dicat Avicenna ...*)  
 cf. Albertus Magnus, *De praedicamentis*, 1.4, p. 158 (*dicit enim Avicenna ubi agit de anima ...*)

## h) pp. 26–7:

To have determined that the soul is perfection does not say anything about its essence, for the name 'soul' is given in respect to its government of the body, but not in respect to its substance – *dicemus igitur quod ...*

- Dominicus Gundissalinus, *De anima*, 1, p. 33, lin. 26 (no attribution; *hoc enim nomen anima ...*)  
 John Blund, *Tractatus de anima*, 2.1, p. 5, lin. 23 (no attribution)  
 Petrus Hispanus, *Quaestiones libri de anima*, 1.10.6, p. 381 (*dicit Dionysius et Avicenna quod ...*)  
 —, 2.1.2, p. 505 (*dicit enim Isidorus et Avicenna quod ...*)  
 Albertus Magnus, *Super Dionysium de divinis nominibus*, 4, p. 136

## i) pp. 27–8:

There are two kinds of perfection – *perfectio autem est duobus modis ...*

- Dominicus Gundissalinus, *De anima*, 2, p. 41, lin. 14 (no attribution)  
 Michael Scot, *Liber introductorius*, f. 44rb (*cuius ambiguitatis illa est solutio quam tangit Avicenna in sexto de naturalibus quod duplex est rei perfectio, scilicet ...*)  
 Petrus Hispanus, *Quaestiones libri de anima*, 2.2.7, p. 552 (*duplex est actus ...*)  
 —, 2.7.1, p. 680  
 Albertus Magnus, *De homine*, 4.2, p. 39a

j) p. 29:

Definition of the soul as the first perfection of the natural body which is equipped with instruments – *ideo anima ... est perfectio prima corporis ...*

Albertus Magnus, *De homine*, 4.1, p. 32a

—, 4.5, p. 53a

Albertus Magnus, *Summa theologiae*, II.12.69.2.1, p. 11 (*definitio Avicennae bona est et eundem sensum habet cum definitione quam ponit Aristoteles*)

k) p. 33:

Definition of sense-perception – *similiter etiam sensus hic dicitur ...*

cf. John Blund, *Tractatus de anima*, 8, p. 23, lin. 1 (no attribution)

l) pp. 35–6:

We have determined the meaning of 'soul' in relation to something else (the body), but we still have to determine its essence – *ergo iam cognovimus ...*

Dominicus Gundissalinus, *De anima*, 1, p. 33, lin. 24 (no attribution; *aliqua vis relationis est in hoc quod dicitur anima*)

m) p. 36–7:

The pointer of the Flying Man – *et debemus innuere in hoc loco ...*

Dominicus Gundissalinus, *De anima*, 2, p. 37, lin. 17–32 (no attribution)

Anonymous (Vat. lat. 175), *Dubitationes circa animam*, f. 219ra (*amplius ponatur quod homo creetur perfectus*)

William of Auvergne, *De anima*, 2.13, pp. 82–3 (*ponam tibi adhuc declarationem quam adducit Avicenna ...*)

—, 3.11, p. 101 (*cum autem inspexeris librum Avicennae de anima, leges in eo evidenter ...*)

Jean de la Rochelle, *Summa*, 1, p. 51 (*ad hoc est ratio Avicennae talis ...*)

Petrus Hispanus, *Quaestiones libri de anima*, 2.4.10, p. 622 (*alia est ratio Avicennae per quam possumus animam intellectivam imaginari esse in nobis ...*)

—, 2.6.1, p. 650 (*quia sicut vult Avicenna ...*)

Matthew of Aquasparta, *Quaestiones disputatae selectae*, 1, p. 324

Vital du Four, *Quaestiones disputatae*, 4.1, p. 242

I,2

a) p. 38:

The ancient authors held (four) different opinions on the subject – *dicemus igitur quod antiqui ...*

John Blund, *Tractatus de anima*, 3, p. 9, lin. 24 (*multas alias opiniones de anima ponit tam Aristoteles quam Augustinus et alii auctores*)

Anonymous (Vat. lat. 175), *Dubitationes circa animam*, f. 219rb (attributed to Aristotle and Avicenna; *fuertunt uero circa creaturas philosophorum sententiae et hae quadripartita. alii enim respicientes ad ... utrumque scilicet motum et apprehensionem*)

b) pp. 38–43:

The different opinions of the ancients (1–3) – *qui autem voluit pervenire ...*

Anonymous (Vat. lat. 175), *Dubitationes circa animam*, f. 219rb (no attribution)

Michael Scot, *Liber introductorius*, f. 44rb–va (no attribution; *fuertunt alii qui posuerunt animam esse principium omnium aliarum rerum ...*)

c) p. 43:

(4) Explanation in terms of life (innate heat, cold, mixture, blood) – *sed qui consideraverunt ...*

Dominicus Gundissalinus, *De anima*, 2, p. 37, lin. 3 (no attribution; *alii quod ipsa est complexio corporis; alii quod anima est sanguis*)

Anonymous (Vat. lat. 175), *Dubitationes circa animam*, f. 219rb (no attribution)

Michael Scot, *Liber introductorius*, f. 44va (no attribution; *fuertunt alii dicentes animam esse calorem naturalem ... fuertunt alii dicentes ipsam esse sanguinem ...*)

d) pp. 43–4:

Some people thought that the soul is God – *quidam autem putaverunt ...*

Anonymous (Vat. lat. 175), *Dubitationes circa animam*, f. 219rb (no attribution; *... fuit quaedam sententia circa creatorem ... et hos vocat avicenna bereticos*)

Michael Scot, *Liber introductorius*, f. 44vb (no attribution; *fuertunt alii dicentes animam esse deum ...*)

Albertus Magnus, *De homine*, 5.2, pp. 67–8

Albertus Magnus, *Summa theologiae*, II.12.72.4.2, pp. 42 and 44 (*ad dictum Avicennae dicendum quod ipse bene dicit*)

e) pp. 44–6:

Arguments against the first opinion (in terms of movement) – *sed qui eam apprehendere voluerunt per motum ...*

Dominicus Gundissalinus, *De anima*, 1, p. 33, lin. 31 (no attribution)

—, 1, p. 34, lin. 20 and 25 (no attribution)

—, 1, p. 35, lin. 16 (no attribution)

—, 9, p. 67, lin. 28 (no attribution)

cf. Michael Scot, *Liber introductorius*, f. 43va (*cuius motus est quadruplex ...*)

cf. —, f. 44rb (*huius vero ambiguitatis illa est solutio quem ponit Aristoteles in libro de anima quod tres species motus ...*)

Albertus Magnus, *De homine*, 3.1, p. 26 (*contra hoc sunt rationes Avicennae sic ...*)

—, 3.1, p. 28 (*... ut probant philosophi Aristoteles et Avicenna, Averroes, Constabulinus, Alfarabius et <Toletanus> et multi alii naturales*)

Albertus Magnus, *De spiritu et respiratione*, 1.1.10, p. 229

f) pp. 49–53:

Against the opinion that the soul is a number – *sed qui posuerunt eam apprehendi per numerum ...*

John Pecham, *Quaestiones tractantes de anima*, 1, p. 10 (drawing on p. 51, lin. 14–15)

—, 27, p. 190 (same passage)

I,3

a) p. 58:

The human soul can exist when the body does not exist, therefore it is a substance.  
This is not the case for the vegetative and animal soul – *si autem constiterit quod ...*

b) p. 58:

First argument: about proximate matter – *quia materia propria ...*

Dominicus Gundissalinus, *De anima*, 2, p. 41, lin. 23 (no attribution; *nam corpus proprium ...*)

Albertus Magnus, *De homine*, 2.1, p. 12 (*item Avicenna: proprium subiectum animae ...*)

c) p. 59:

Second argument: about remote matter – *sed inter subiectum remotum ...*

Dominicus Gundissalinus, *De anima*, 2, p. 41, lin. 35 (no attribution; *cum vero anima separatur ab eo ...*)

William of Auvergne, *De anima*, 1.2.1, p. 73 (*supposuit vero corpus omnis animalis ...*)

cf. Albertus Magnus, *Super quartum sententiarum*, 44.C.11, p. 561

d) p. 60:

Conclusion: The existence of the soul in the body is not like the existence of an accident in a subject. Therefore the soul is a substance – *ergo animam esse ...*

Dominicus Gundissalinus, *De anima*, 2, p. 42, lin. 4 (no attribution)

William of Auvergne, *De anima*, 1.2.1, p. 73 (*ratiocinatio autem qua Avicenna arbitratus est se declarasse animam esse substantiam et nullo modo accidens nec doctrinae nec fidei congruit christianae*)

e) pp. 61–2:

Someone might object that the animal soul arrives when the vegetative soul has already perfected its matter – Refutation – *potest autem aliquis dicere ...*

Albertus Magnus, *De homine*, 4.4, p. 47 (*... concludit Avicenna quod ...*)

—, 4.4, p. 48b

f) p. 62:

‘Vegetative soul’ can mean three different things: specifically for plants or in a more general way for animal and vegetative souls or as a faculty of the rational soul – *debemus autem super hoc ...*

Albertus Magnus, *De homine*, 7.1, p. 95

—, 8.1, p. 103 (no attribution; *ad hoc dicendum ...*)

g) pp. 64–5:

The soul is one; from it flow vegetative and animal faculties into the organs – *postea autem declarabitur tibi quod anima una est ex qua defluunt hae vires in membra* (also p. 66, lin. 33; cf. V.7, pp. 171–2)

Albertus Magnus, *De homine*, 7.1, p. 90 (*ex una anima ... emanant diversae virtutes*)

—, 78, p. 637 (*anima rationalis talis est substantia a qua fluunt potentiae ...*)

Albertus Magnus, *Super primum sententiarum*, 8.F. 26, p. 256 (*quod anima vegetabilis et sensibilis non sint in homine ut substantiae sed ut potentiae*)

Albertus Magnus, *Super ethica*, 1.8, p. 38 (*ab anima humana ... fluunt quaedam potentiae ...*)

—, 1.15, p. 81 (*contra est auctoritas Avicennae ... and: concedimus quod ...*)

—, 6.2, p. 407 (*... fundantur in eadem essentia animae ...*)

—, 9.5, p. 671 (*... fluunt ab ipsa potentiae ...*)

Albertus Magnus, *De anima*, 3.5.4, p. 249 (no attribution; *nec sensibilem nec vegetabilem esse in homine animas vel substantias sed potentias quae fluunt a substantia*)

Albertus Magnus, *Super Lucam*, 10.26, p. 56 (*... ab <anima humana> fluunt quaedam vires ...*)

Albertus Magnus, *Politica*, 7.13, p. 721 (*... quod sensibilis et vegetabilis in homine potentiae sunt ...*)

Albertus Magnus, *De causis*, 2.3.16, p. 153 (*anima humana est substantia a qua fluunt potentiae ...*)

—, 2.5.10, p. 177 (*a <anima> ... quaedam ... potentiae fluunt ...*)

Albertus Magnus, *Summa theologiae*, I.3.13.1, p. 39 (*... substantia ... a qua fluunt potentiae ...*)

cf. —, I.3.15.2, p. 68

—, II.2.9, p. 141

—, II.13.77, p. 87

Bernardus of Trilia, *Quaestiones disputatae de cognitione animae separatae*, 3, p. 86

I,4

a) pp. 67–8:

The soul's actions differ in intensity, habitus, relation to contrary things, genus – *dicimus igitur quod ...*

Dominicus Gundissalinus, *De anima*, 9, p. 64, lin. 20 (no attribution)

Petrus Hispanus, *Quaestiones libri de anima*, 2.8.1, p. 701 (no attribution; *tertia ratio haec est ...*)

Petrus Hispanus, *Scientia libri de anima*, 2.2, p. 91 (no attribution; *septima ratione ...*)

—, 2.10, p. 115 (no attribution; *operationum vero distinctiones ...*)

Thomas Aquinas, *De veritate*, 15.2, p. 488

b) pp. 68–71:

Introduction to the problem of how many faculties are causes of how many actions – *dicimus igitur quod actionum ...*

Dominicus Gundissalinus, *De anima*, 9, p. 64, lin. 27 – p. 65, lin. 19 (no attribution)

cf. John Blund, *Tractatus de anima*, 6, p. 17, lin. 5–7 (no attribution)

Thomas Aquinas, *De veritate*, 15.2, p. 488

c) p. 72:

One faculty may produce opposite actions; one cannot deduce a diversity of faculties from a diversity of actions – *et quia diversitas actionum ...*

Dominicus Gundissalinus, *De anima*, 9, p. 65, lin. 19 (no attribution)

Petrus Hispanus, *Quaestiones libri de anima*, 2.8.1, p. 700

Petrus Hispanus, *Scientia libri de anima*, 2.10, p. 116 (no attribution; *immo eadem virtus ...*)

Albertus Magnus, *Super ethica*, 4.12, p. 270 (cf. also p. 68, lin. 62)

Albertus Magnus, *Summa theologiae*, I.2.8.2, p. 30

—, I.7.30.3, p. 236

Thomas Aquinas, *De veritate*, 15.1, p. 480  
 —, 15.2, p. 488

**d) p. 73:**

A faculty as a faculty is the cause for certain (primary) actions; in a secondary way, it is also the cause for many other actions – *dicemus igitur primum quia vis ...*

Dominicus Gundissalinus, *De anima*, 9, p. 64, lin. 3–9  
 Petrus Hispanus, *Quaestiones libri de anima*, 2.8.1, p. 701, lin. 16  
 —, 2.10.6, p. 751  
 cf. Albertus Magnus, *Ethica*, 2.2.2, p. 171  
 Albertus Magnus, *Super ethica*, 6.2, p. 401  
 Vincent of Beauvais, *Speculum naturale*, 24.61, p. 1756  
 Thomas Aquinas, *De veritate*, 15.1, p. 480  
 Thomas Aquinas, *De virtutibus in communi*, 9.12, p. 238

**e) pp. 73–4:**

Examples – *sicut visus ...*

cf. John Blund, *Tractatus de anima*, 25.2, p. 92, lin. 19 (on the definition of intellect; cf. V,1, p. 76)  
 cf. Albertus Magnus, *De homine*, 63.3, p. 543b (on the definition of intellect)  
 cf. Vincent of Beauvais, *Speculum naturale*, 27.59, p. 1959 (from *De homine*)

**I,5**

**a) pp. 79–80:**

Definitions of the vegetative, animal and human soul – *dicemus igitur quod ...*

Anonymous (Gauthier), *De anima et de potentiis eius*, p. 30, lin. 68  
 —, p. 32, lin. 118  
 cf. Michael Scot, *Liber introductorius*, f. 43va (no attribution; *quorum nomina sunt rationalis, sensibilis et vegetabilis*)  
 cf. —, f. 46ra (no attribution; *animarum tres sunt species scilicet rationalis, sensibilis et vegetabilis ...*)  
 Jean de la Rochelle, *Tractatus*, 2.1.1, p. 70  
 Petrus Hispanus, *Quaestiones libri de anima*, 2.10.1, p. 740  
 Petrus Hispanus, *Scientia libri de anima*, 2.1, p. 88 (no attribution)  
 Albert von Orlamünde, *Summa naturalium*, 5.Rec.A.3, p. 40  
 Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 134ra, p. 389  
 —, f. 134rb, p. 392  
 Thomas Aquinas, *De unitate intellectus*, 2.124, p. 302

**b) p. 81:**

The vegetative soul as the genus of the animal soul – *melius est autem ...*

John Blund, *Tractatus de anima*, 4, p. 12, lin. 5–7 (no attribution)  
 cf. Albertus Magnus, *De homine*, 6.6, p. 88b

**c) p. 81:**

The vegetative soul has three faculties – *anima autem vegetabilis ...*

Jean de la Rochelle, *Tractatus*, 2.1.1, p. 71 (no attribution; *vegetabilis dividitur ...*)  
 cf. Albertus Magnus, *De homine*, 8, p. 102 (no attribution; *secundum de divisione eius ...*)  
 John Pecham, *Tractatus de anima*, 9, p. 31

**d) pp. 81–2:**

The nutritive faculty – *unam nutritivam ...*

Dominicus Gundissalinus, *De anima*, 9, p. 66, lin. 21 (no attribution)  
 John Blund, *Tractatus de anima*, 5, p. 13, lin. 13 (no attribution)  
 Petrus Hispanus, *Scientia libri de anima*, 2.3, p. 93 (no attribution)  
 —, 3.3, p. 131 (no attribution)  
 Albertus Magnus, *De homine*, 9.1, p. 108a  
 Vincent of Beauvais, *Speculum naturale*, 24.64, p. 1757  
 Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 134ra, p. 390  
 Anonymous (Vennebusch), *Quaestiones in tres libros de anima*, 2.37, p. 191  
 cf. Witelo, *De causa primaria ...*, p. 161 (no attribution; *et restaurat etiam ...*)

**e) p. 82:**

The faculty of growth – *aliam augmentativam ...*

Dominicus Gundissalinus, *De anima*, 9, p. 66, lin. 26 (no attribution)  
 John Blund, *Tractatus de anima*, 5, p. 13, lin. 17 (no attribution)  
 Petrus Hispanus, *Scientia libri de anima*, 2.3, p. 93 (no attribution)  
 —, 3.4, p. 141 (no attribution)  
 Albertus Magnus, *De homine*, 13.2, p. 128a  
 Vincent of Beauvais, *Speculum naturale*, 24.64, p. 1757  
 Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 134ra, p. 390  
 cf. Witelo, *De causa primaria ...*, p. 161 (no attribution; *... et ducit ad quantitatem ...*)

**f) p. 82:**

The reproductive faculty – *tertiam generativam ...*

Dominicus Gundissalinus, *De anima*, 9, p. 66, lin. 29 (no attribution)  
 John Blund, *Tractatus de anima*, 5, p. 13, lin. 21 (no attribution)  
 Albertus Magnus, *De homine*, 17.1, p. 143a  
 Vincent of Beauvais, *Speculum naturale*, 24.64, p. 1757  
 —, 24.78, p. 1768

**g) p. 82:**

The animal soul has two faculties, the faculty of motion and the faculty of perception – *anima autem vitalis ...*

Dominicus Gundissalinus, *De anima*, 9, p. 67, lin. 35 (no attribution)  
 John Blund, *Tractatus de anima*, 6, p. 16, lin. 13 (no attribution)  
 Anonymous (de Vaux), *De causis primis*, 8, p. 119 (no attribution; *dicimus igitur iterum ...*)  
 —, 8, p. 121 (no attribution; *... ex apprehensione et motione ...*)  
 Alexander Nequam, *Speculum*, 3.94, p. 374 (no attribution)  
 Michael Scot, *Liber introductorius*, f. 46rb (no attribution; *duplicem itaque potestatem habet anima sensibilis scilicet apprehensivam et motivam*)  
 Anonymous (Gauthier), *De anima et de potentiis eius*, p. 35, lin. 190 (no attribution)  
 cf. Hugh of Saint-Cher, *In quatuor libros sententiarum*, 2.24, f. 66ra ( *... aliae vires tam motivae quam apprehensivae*)

cf. —, 2.24, f. 66rb (*potentiarum sive virium animae aliae sunt motivae, aliae apprehensivae ut dicit Iohannes Damascenus*)  
 cf. —, 2.25, f. 68vb (no attribution; *duplex est vis animae scilicet apprehensiva et motiva*)  
 Jean de la Rochelle, *Tractatus*, 2.1.2, p. 72 (no attribution; *dicto de vi vegetabili ...*)  
 Grosseteste, *De confessione*, p. 262 (no attribution; *vires sensibiles sunt duae ...*)  
 Grosseteste, *Ex rerum initiatarum*, p. 122 (no attribution; *... virtutes apprehensivas et motivas ...*)  
 cf. Anonymous (Gauthier 1985), *Lectura in librum de anima*, 2.26, p. 439, lin. 389 (no attribution)  
 Petrus Hispanus, *Scientia libri de anima*, 2.4, p. 97 (no attribution)  
 —, 6, p. 199 (no attribution)  
 —, 6.2, p. 203 (no attribution)  
 Albertus Magnus, *De homine*, 19, p. 164 (no attribution; *sed quia partium ...*)  
 Albertus Magnus, *De anima*, 3.1.1, p. 166 (no attribution; *prima divisio est in apprehensivas et motivas*)  
 Albert von Orlamünde, *Summa naturalium*, 5.Rec.A.3, p. 40  
 Vincent of Beauvais, *Speculum naturale*, 24.61, p. 1756  
 —, 25.101, p. 1837  
 John Pecham, *Tractatus de anima*, 10, p. 33

#### h) p. 82:

The motive faculty has two kinds, one ordering the movement and one performing the movement – *sed motiva est duobus modis ...*

Dominicus Gundissalinus, *De anima*, 9, p. 68, lin. 1 (no attribution)  
 John Blund, *Tractatus de anima*, 6, p. 16, lin. 14 (no attribution)  
 Anonymous (de Vaux), *De causis primis*, 8, p. 120 (*sicut audisti in naturalibus*)  
 Anonymous (Gauthier), *De anima et de potentiis eius*, p. 47, lin. 392 and lin. 403 (no attribution)  
 Jean de la Rochelle, *Tractatus*, 2.1.12, p. 79 (no attribution; *... imperantes moveri ... exequentes motum ...*)  
 —, 2.1.25, p. 101 (*imperans et non imperata ...*; also draws on *De anima* IV.4, p. 57)  
 —, 2.2.36, p. 112 (*Hucusque sunt verba Avicennae in suo medicinali libro. De hac enim virtute nihil amplius ibi dicit, sed in suo libro De anima ...*)  
 Alexander of Hales et al., *Summa theologica*, ii.4.1.2.2.2, p. 440a (no attribution; *disponentis ad motum ...*)  
 —, iv.3.1.1.4, p. 983b  
 Grosseteste, *De motu corporali et luce*, pp. 90–91 (no attribution; *In motu animalium est ordo talis ... primum efficiens motus simpliciter*; the vocabulary of the passage is Avicennian)  
 Grosseteste, *De confessione*, p. 262 (no attribution; *motiva dividitur ...*)  
 Roland of Cremona, *Summa theologica*, f. 32vb (no attribution; *... videamus ... quae <sint> motivae et quae apprehensivae et quae imperantes et quae imperatae*)  
 William of Auvergne, *De anima*, 3.7, p. 94 (no attribution; *... imperativam ... effectivam sive executivam ...*)  
 Albertus Magnus, *De homine*, 66.1, p. 554a  
 —, 68.2, p. 560 (cf. the *solutio* on p. 563b)  
 Vincent of Beauvais, *Speculum naturale*, 25.101, p. 1837  
 Petrus Hispanus, *Scientia libri de anima*, 2.6, p. 105 (no attribution; *... imperans ad motum ...*)  
 —, 8.1, p. 333 (no attribution; *... motus imperativa ... executiva ...*)  
 Thomas Aquinas, *Secunda pars summae theologicae*, 2.1.17.2, p. 119  
 John Pecham, *Tractatus de anima*, 10, p. 33

#### i) pp. 82–3:

The ordering faculty has two branches: one called the power of desire (*qūwa šahwāniya*), the other the power of anger (*qūwa ḡaḍabiya*) – *quae habet duas partes ... vis concupiscibilis ... irascibilis ...*

Dominicus Gundissalinus, *De anima*, 9, p. 68, lin. 3 (no attribution)  
 John Blund, *Tractatus de anima*, 6, p. 16, lin. 15 (no attribution)

—, 7, p. 19, lin. 3 (*... diversae sunt vires vis concupiscibilis et vis irascibilis ...*)  
 —, 7, p. 20, lin. 26 (*cum tamen dicat Avicenna eas esse motivas et non apprehensivas*)  
 Alexander Nequam, *Speculum*, 3.94, p. 374 (no attribution; *continet appetitivam et animositatem*; draws on John Blund)  
 Anonymous (Gauthier), *De anima et de potentiis eius*, p. 47, lin. 396 (no attribution)  
 Anonymous (Callus), *De potentiis animae et obiectis*, p. 159, lin. 32 (no attribution; *in appetitivam et aggressivam*; draws on Anonymous (Gauthier))  
 Jean de la Rochelle, *Tractatus*, 2.1.12, p. 79, lin. 358 (no attribution; also draws on *De anima* IV.4, p. 57)  
 —, 2.2.36, p. 112, lin. 260  
 Jean de la Rochelle, *Summa de anima*, 104–105, p. 254 (also draws on *De anima* IV.4, p. 57)  
 —, 108, p. 263  
 —, ed. Domenichelli, 2.40, p. 300 (no attribution; also draws on *De anima* IV.4, p. 57)  
 Alexander of Hales et al., *Summa theologica*, ii.4.2.2.1.1, p. 579a  
 Grosseteste, *De confessione*, p. 262 (no attribution; *vis imperans motui ...*)  
 Grosseteste, *Ecclesia sancta*, p. 177 (no attribution; *appetitiva ... dividitur in ...*)  
 cf. Roland of Cremona, *Summa theologicae*, f. 34rb (no attribution; *restat videre de vi irascibili et concupiscibili. Illae sunt vires motivae ...*)  
 Albertus Magnus, *De homine*, 66.1, p. 554a (quotes partly from *De anima* IV.4, p. 57)  
 —, 66.2, p. 555a  
 —, 67.1, p. 557a  
 —, 68.2, p. 560b  
 cf. Albertus Magnus, *Super primum sententiarum*, 10.B.2, p. 312 (*... quod in natura animae rationalis ... debeant esse concupiscibilis et irascibilis ... Philosophus ... et Avicenna dicunt contrarium*)  
 cf. Albertus Magnus, *Super secundum sententiarum*, 42.H.6, p. 664 (*... sint partes sensibilis animae ...*)  
 cf. Albertus Magnus, *Super tertium sententiarum*, 26.A.3, p. 494 (*... pars animae sensibilis ...*)  
 cf. Albertus Magnus, *De resurrectione*, 4.1.12, p. 334 (*... sunt partes sensibilis animae ...*)  
 cf. Albertus Magnus, *Super Dionysium de divinis nominibus*, 4, p. 223 (*... tantum in sensitiva anima*)  
 cf. Albertus Magnus, *Super ethica*, 1.16, p. 86 (*omnes loquentes de istis viribus ponunt eas in sensitiva sicut Aristoteles hic et Plato ... et Avicenna*)  
 cf. —, 3.14, p. 209 (*auctoritas omnium ... qui non ponunt nisi unam <concupiscentiam> sicut Avicenna, Plato*)  
 Vincent of Beauvais, *Speculum naturale*, 25.101, p. 1837  
 —, 25.103, p. 1839 (from Jean, *Summa*, p. 254)  
 —, 27.64, p. 1962 (from Jean, *Summa*, p. 263)  
 Petrus Hispanus, *Scientia libri de anima*, 8.1, p. 333 (no attribution; *imperativa vero est duplex ...*)  
 cf. Thomas Aquinas, *De veritate*, 25.2, p. 731 (no attribution; *concupiscibilis se habet ad conveniens, irascibilis vero ad nocivum*)  
 cf. Thomas Aquinas, *Sententia libri ethicorum*, 2.5, p. 90 (no attribution; with long note by Gauthier)  
 Thomas Aquinas, *De malo*, 8.3.5, p. 202  
 cf. John Pecham, *Tractatus de anima*, 10, p. 33 (*sed Avicenna numerat eam <vid. efficientem motum> inter vires sensibiles motivas*)

#### j) p. 83:

The performing faculty is dispatched in the nerves and muscles – *... infusa nervis et musculis ...*

Dominicus Gundissalinus, *De anima*, 9, p. 68, lin. 10 (no attribution)  
 John Blund, *Tractatus de anima*, 6, p. 16, lin. 22 (no attribution)  
 Alexander Nequam, *Speculum*, 3.94, p. 374 (no attribution)  
 Anonymous (Gauthier), *De anima et de potentiis eius*, p. 48, lin. 400 (no attribution)  
 Jean de la Rochelle, *Tractatus*, 2.1.12, p. 79, lin. 364 (no attribution)  
 —, 2.1.25, p. 102  
 —, 2.2.36, p. 112  
 Jean de la Rochelle, *Summa*, 110, p. 266 (no attribution)  
 —, ed. Domenichelli, 2.40, p. 301

Alexander of Hales *et al.*, *Summa theologica*, ii.4.2.2.1.1, p. 579a  
 Grosseteste, *De confessione*, p. 262 (no attribution; *vis efficiens motus ...*)  
 Albertus Magnus, *De homine*, 68.2, p. 560b (cf. the *olutio* on p. 563b)  
 Vincent of Beauvais, *Speculum naturale*, 25.101, p. 1837  
 —, 25.104, p. 1839 (from Jean, *Summa*, p. 266)  
 —, 27.76, p. 1970 (from Jean, *Summa*, p. 266)  
 Thomas Aquinas, *Secunda pars summae theologiae*, 2.1.17.2, p. 119

**k) p. 83:**

The faculty of perception has two kinds: external and internal perception – *sed vis apprehendens ...*

Dominicus Gundissalinus, *De anima*, 9, p. 68, lin. 16 (no attribution)  
 John Blund, *Tractatus de anima*, 6, p. 16, lin. 26 (no attribution)  
 Alexander Nequam, *Speculum*, 3.94, p. 374 (no attribution)  
 Anonymous (Gauthier), *De anima et de potentiis eius*, p. 35, lin. 193 (no attribution)  
 Anonymous (Callus), *De potentiis animae et obiectis*, p. 150, lin. 23 (no attribution)  
 Michael Scot, *Liber introductorius*, f. 46rb (no attribution; *quarum apprehensiva dividitur in communem sensum sive interiorem et in sensum particularem sive exteriorem*)  
 Jean de la Rochelle, *Tractatus*, 2.1.4, p. 73 (no attribution)  
 Jean de la Rochelle, *Summa*, 87, p. 229 (no attribution; *nam quaedam est apprehensiva ...*)  
 Hugh of Saint-Cher, *In quatuor libros sententiarum*, 2.24, f. 66ra (no attribution; *apprehensivae deintus et deforis ...*)  
 Grosseteste, *De confessione*, p. 262 (no attribution; *virium apprehensivarum ...*)  
 Grosseteste, *Ecclesia sancta*, p. 175 (no attribution; *praeter has potentias ...*)  
 cf. Anonymous (Gauthier 1985), *Lectura in librum de anima*, 2.10, p. 268, lin. 16 (no attribution)  
 Petrus Hispanus, *Scientia libri de anima*, 6, p. 199 (no attribution)  
 —, 6.2, p. 203 (no attribution)  
 Albertus Magnus, *De homine*, 5.2, p. 70 (no attribution; *sicut apprehensiva deforis ...*)  
 —, 19, p. 164 (no attribution; *quia vero iterum ...*)  
 Vincent of Beauvais, *Speculum naturale*, 25.8, p. 1780 (from Jean, *Summa*, p. 229)  
 —, 27.3, p. 1919 (no attribution; *nam quaedam est ...*)  
 Albert von Orlamünde, *Summa naturalium*, 5.Rec.A.5, p. 51  
 Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 134rb, p. 392 (no attribution; *alia apprehensiva deforis ...*)  
 Witelo, *De causa primaria ...*, p. 162 (no attribution; *et dividitur ista in partes extrinsecas et intrinsecas*)

**l) p. 83:**

The faculty of external perception has five or eight senses – *apprehendens autem ...*

Anonymous (Gauthier), *De anima et de potentiis eius*, p. 40, lin. 265  
 Jean de la Rochelle, *Tractatus*, 2.1.4, p. 73 (no attribution)  
 Alexander of Hales *et al.*, *Summa theologica*, ii.4.1.2.2.1.1, p. 431b

**m) pp. 83–4:**

Definition of vision – *ex quibus est visus ...*

Dominicus Gundissalinus, *De anima*, 9, p. 68, lin. 20 (no attribution)  
 John Blund, *Tractatus de anima*, 9, p. 24, lin. 5 (*hanc descriptionem ponit Avicenna in commento de anima*)  
 cf. Anonymous (Gauthier), *De anima et de potentiis eius*, p. 37, lin. 228 (no attribution; *... continens spiritum visibilem ...*)  
 Michael Scot, *Liber introductorius*, f. 37rb (no attribution; *vis visibilis ...*)  
 Jean de la Rochelle, *Tractatus*, 2.1.4, p. 73 (no attribution)

Petrus Hispanus, *Scientia libri de anima*, 6.6, p. 219 (no attribution)  
 —, 6.13, p. 277 (no attribution)  
 Albertus Magnus, *De homine*, 19.1, p. 165  
 Vincent of Beauvais, *Speculum naturale*, 25.28, p. 1793  
 Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 134va, p. 394

**n) p. 84:**

Definition of hearing – *ex illis etiam est auditus ...*

Dominicus Gundissalinus, *De anima*, 9, p. 68, lin. 24 (no attribution)  
 John Blund, *Tractatus de anima*, 12, p. 39, lin. 8 (*ab Avicenna in commento de anima habetur ...*)  
 Michael Scot, *Liber introductorius*, f. 37rb (no attribution; *vis audibilis ...*)  
 Jean de la Rochelle, *Tractatus*, 2.1.4, p. 73 (no attribution)  
 Petrus Hispanus, *Scientia libri de anima*, 6.6, p. 219 (no attribution)  
 —, 6.14, p. 285 (no attribution)  
 Albertus Magnus, *De homine*, 23, p. 228  
 —, 27, p. 253  
 Vincent of Beauvais, *Speculum naturale*, 25.50, p. 1807  
 Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 134vb, p. 394–5 (no attribution)  
 cf. Anonymous (Giele), *Quaestiones de anima*, 2.16, p. 93

**o) p. 84:**

Definition of smelling – *et ex illis est olfactus ...*

Dominicus Gundissalinus, *De anima*, 9, p. 68, lin. 30 (no attribution)  
 John Blund, *Tractatus de anima*, 14.1, p. 51, lin. 21 (*habetur autem in commento super libro de anima ...*)  
 cf. Anonymous (Gauthier), *De anima et de potentiis eius*, p. 39, lin. 247 (no attribution)  
 Michael Scot, *Liber introductorius*, f. 37rb (no attribution; *vis odorabilis ...*)  
 Jean de la Rochelle, *Tractatus*, 2.1.4, p. 73 (no attribution)  
 Petrus Hispanus, *Scientia libri de anima*, 6.6, p. 219 (no attribution)  
 —, 6.12, p. 265 (no attribution)  
 Albertus Magnus, *De homine*, 28, p. 254  
 Vincent of Beauvais, *Speculum naturale*, 25.61, p. 1813 (from *De homine*)  
 Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 134vb, p. 395 (no attribution)

**p) p. 84:**

Definition of taste – *et ex illis est gustus ...*

Dominicus Gundissalinus, *De anima*, 9, p. 68, lin. 34 (no attribution)  
 John Blund, *Tractatus de anima*, 15, p. 56, lin. 1 (*gustus autem sic describitur ab Avicenna ...*)  
 Michael Scot, *Liber introductorius*, f. 37rb (no attribution; *vis gustabilis ...*)  
 cf. —, f. 48vb (no attribution; *unde cum res gustanda ...*)  
 Jean de la Rochelle, *Tractatus*, 2.1.4, p. 74 (no attribution)  
 Petrus Hispanus, *Scientia libri de anima*, 6.6, p. 219 (no attribution)  
 —, 6.11, p. 255 (no attribution)  
 Albertus Magnus, *De homine*, 32, p. 272a  
 —, 32.3.5, p. 278 (no attribution; *dictum omnium auctorum ...*)  
 Vincent of Beauvais, *Speculum naturale*, 25.70, p. 1819 (from *De homine*, p. 272)  
 Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 134vb, p. 396 (no attribution)

**q) pp. 84–5:**

Definition of touch – *et ex illis est tactus ...*



- Dominicus Gundissalinus, *De anima*, p. 68, lin. 37 (no attribution)  
 John Blund, *Tractatus de anima*, 16, p. 58, lin. 15 (no attribution)  
 Michael Scot, *Liber introductorius*, f. 37rb (no attribution; *vis tactibilis percipit calidum ... vigore nervi expansi per totam cutim et per totam carnem*)  
 —, f. 48ra (no attribution; *nam tactus est vis ordinata in nervis totius corporis ad comprehendendum quicquid tangit*)  
 Jean de la Rochelle, *Tractatus*, 2.1.4, p. 74 (no attribution)  
 Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 134vb, p. 396 (no attribution)  
 Albertus Magnus, *De homine*, 33.1, pp. 281–3  
 Vincent of Beauvais, *Speculum naturale*, 25.76, p. 1822 (from *De homine*)  
 Petrus Hispanus, *Scientia libri de anima*, 6.6, p. 219 (no attribution; *tactus igitur organum caro nervis contexta totam corporis machinam comprehendens*)  
 Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 134vb, p. 396 (no attribution)  
 Anonymous (Bazán), *Quaestiones de anima*, 2.31, p. 450

r) p. 85:

There is only one faculty of touch – *videtur autem aliquibus ...*

- Dominicus Gundissalinus, *De anima*, p. 68, lin. 39 (no attribution)  
 John Blund, *Tractatus de anima*, 6, p. 18, lin. 13 (no attribution)  
 Anonymous (Gauthier), *De anima et de potentiis eius*, p. 40, lin. 259 (no attribution)  
 Jean de la Rochelle, *Tractatus*, 2.1.4, p. 74  
 John Pecham, *Tractatus de anima*, 10, p. 35

s) pp. 85–7:

Distinctions between different kinds of internal faculties – *sed virium ab intus ...*

- John Blund, *Tractatus de anima*, 18, p. 68, lin. 3 (... *in commento de anima ...*)  
 Jean de la Rochelle, *Tractatus*, 2.1.10, pp. 77–8  
 Jean de la Rochelle, *Summa*, 102, p. 251 (no attribution; *nota tamen differentiam ...*)  
 Petrus Hispanus, *Scientia libri de anima*, 2.5, p. 99 (no attribution)  
 Vincent of Beauvais, *Speculum naturale*, 25.85, p. 1828  
 —, 27.3, p. 1919 (*item alio modo ...*)

t) p. 86:

The difference between the perception of a form and the perception of a connotational attribute – *differentia autem inter apprehendere formam et apprehendere intentionem ...*

- Dominicus Gundissalinus, *De anima*, 9, p. 71, lin. 1–11 (no attribution)  
 cf. John Blund, *Tractatus de anima*, 19, p. 69, lin. 2 (*intentionem appellat commentator ...*)  
 cf. Anonymous (Gauthier), *De anima et de potentiis eius*, p. 46, lin. 372 (no attribution)  
 cf. Anonymous (Callus), *De potentiis animae et obiectis*, p. 154, lin. 26 (no attribution; influenced by Anonymous (Gauthier))  
 Jean de la Rochelle, *Tractatus*, 2.1.10, p. 78  
 Petrus Hispanus, *Scientia libri de anima*, 2.5, p. 99 (no attribution; *virtutum enim interiorum quaedam ...*)  
 —, 2.11, p. 118 (no attribution; *sensibilium vero quoddam est sensibile ...*)  
 cf. Albertus Magnus, *De anima*, 2.4.7, p. 157, lin. 30 (no attribution)  
 Vincent of Beauvais, *Speculum naturale*, 25.85, p. 1828  
 —, 27.3, p. 1919

u) p. 87:

The internal senses – *virium autem apprehendentium occultarum ...*

- cf. Alexander Nequam, *Speculum speculationum*, 3.94, p. 374 (no attribution; *vis apprehensiva deintus ...*)  
 Anonymous (Gauthier), *De anima et de potentiis eius*, p. 44, lin. 331 (no attribution)  
 cf. William of Auvergne, *De anima*, 4.4.3, p. 108a (no attribution; *... aliae quinque ...*)  
 cf. —, 5.22, p. 147a (no attribution; *apprehensivae ab intus*)  
 cf. Hugh of Saint-Cher, *In quatuor libros sententiarum*, 2.24, f. 66rb (*apprehensivae sunt sensus, imaginatio, aestimatio, memoria, intellectus*)  
 cf. Roland of Cremona, *Summa theologica*, f. 33vb (*ergo sunt plures sensus interiores quam quinque quod est contra autores*)  
 Jean de la Rochelle, *Tractatus*, 2.1.5, pp. 74–5  
 Jean de la Rochelle, *Summa*, 96, p. 240 (*alio modo subdividitur ...*)  
 Alexander of Hales et al., *Summa theologica*, ii.4.1.2.2.1, p. 434a  
 —, ii.4.1.2.2.1, p. 438a (on the localization of the internal senses)  
 Albertus Magnus, *De homine*, 37, p. 323 (*quae secundum philosophos sunt ...*)  
 —, 40.3, p. 349a (on the localization of the internal senses)  
 —, 42.2, p. 360b (same topic)  
 Albertus Magnus, *Super ethica*, 1.8, p. 44  
 Albertus Magnus, *Ethica*, 6.1.4, p. 400  
 Albertus Magnus, *De anima*, 2.4.7, p. 158a (*Peripatetici*; on the localization of the internal senses)  
 Albertus Magnus, *Summa theologica*, II.6.27, p. 298  
 —, II.8.30, p. 327  
 —, II.13.76, p. 64  
 —, II.22.133, p. 450  
 Vincent of Beauvais, *Speculum naturale*, 25.87, p. 1830 (from Jean, *Summa*, p. 240)  
 —, 27.3, p. 1919  
 Albert von Orlamünde, *Summa naturalium*, 5.Rec.B.7, p. 79  
 —, 5.Rec.B.7, p. 80  
 Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 135ra, pp. 396–7  
 Thomas Aquinas, *Prima pars Summae theologicae*, 1.78.4, p. 255  
 Witelo, *De causa primaria ...*, p. 162 (no attribution; *intrinsicae similiter ...*)

v) p. 87:

Definition of common sense/*fantasia* – *prima est fantasia quae est sensus communis ...*

- Dominicus Gundissalinus, *De anima*, 9, p. 71, lin. 12 (no attribution)  
 John Blund, *Tractatus de anima*, 17, p. 63, lin. 8 (*ab Avicenna habetur in commento de anima ...*)  
 cf. —, 17, p. 65, lin. 1 (*dicendum est secundum Aristotelem in libro de anima et secundum alios philosophos sensum communem esse*)  
 Michael Scot, *Liber introductorius*, f. 37rb (no attribution; *sensus communis est vis interior recipiens communiter sensata omnium sensuum exteriorum*)  
 Roland of Cremona, *Summa theologica*, f. 33ra (*avicenus dicit quod sugit alios sensus sicut aliqua fovea absorbet aquas rivulorum* (in fact from Algazel, p. 169))  
 Jean de la Rochelle, *Tractatus*, 2.1.6, p. 75 (no attribution)  
 —, 2.2.35, p. 110 (*nota lector quod Avicenna hic <i.e. in libro C. Anonis> aliter accipit fantasiam quam in suo libro de anima*)  
 cf. —, 2.2.35, p. 111  
 Jean de la Rochelle, *Summa*, 97, p. 240 (no attribution; *sensus autem ...*)  
 cf. Petrus Hispanus, *Scientia libri de anima*, 2.5, p. 101 (no attribution; *est igitur sensus ...*)  
 —, 2.5, p. 103 (no attribution; *organum igitur ...*)  
 —, 7.1, p. 301 (no attribution)  
 Albertus Magnus, *De homine*, 35.2, p. 310a,b (twice)  
 —, 35.3, p. 314a  
 —, 43.1, p. 364b

- Albertus Magnus, *De memoria et reminiscentia*, 1.1, p. 99 (... *sensus communis et imaginatio sunt in fronte in anteriori parte cerebri*)  
 Vincent of Beauvais, *Speculum naturale*, 25.86, p. 1829  
 —, 25.87, p. 1830 (from Jean, *Summa*, p. 240)  
 —, 25.90, p. 1831 (from *De homine*, p. 310)  
 Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 135ra, p. 397  
 —, f. 135rb, p. 398 (... *non ponit in numerum* ...)  
 Roger Bacon, *Opus maius*, 5.1.2, p. 4  
 Anonymous (Bazán), *Quaestiones de anima*, 2.40, p. 464  
 John Pecham, *Tractatus de anima*, 10, p. 35

w) pp. 87–8:

Definition of imagination – *post hanc est imaginatio* ...

- Dominicus Gundissalinus, *De anima*, 9, p. 71, lin. 16 (no attribution)  
 John Blund, *Tractatus de anima*, 18, p. 67, lin. 14 (no attribution)  
 Michael Scot, *Liber introductorius*, f. 37rb (no attribution; *fantasia eadem sensata retinet*)  
 Grosseteste, *In posteriorum analyticorum libros*, 2.6, p. 404 (no attribution; ... *ad imaginativam* ...)  
 Grosseteste, *De confessione*, p. 262 (no attribution; *imaginatio receptiva est* ...)  
 Grosseteste, *Ecclesia sancta*, p. 176 (no attribution; *et quia haec sensibilia* ...)  
 Jean de la Rochelle, *Tractatus*, 2.1.7, p. 75 (*imaginatio est* ...)  
 —, 2.5.57, p. 136  
 Jean de la Rochelle, *Summa*, 98, p. 242  
 cf. Petrus Hispanus, *Scientia libri de anima*, 2.5, p. 101 (no attribution; *imaginatio vero* ...)  
 —, 2.5, p. 103 (no attribution; *imaginatio eius pars* ...)  
 —, 7.2, p. 312 (no attribution)  
 Albertus Magnus, *De homine*, 37.2, p. 326b  
 —, 37.3, p. 327  
 —, 45.3, p. 416 (*cella autem est concavitas cerebri ut dicit Avicenna*)  
 Albertus Magnus, *Super Dionysium de divinis nominibus*, 1, p. 30  
 Albertus Magnus, *De anima*, 2.3.22, p. 131, lin. 51 (no attribution)  
 —, 2.4.7, p. 157, lin. 59 (*Peripatetici*)  
 Vincent of Beauvais, *Speculum naturale*, 25.86, p. 1829  
 —, 27.10, p. 1923 (from Jean, *Summa*, p. 242)  
 Albert von Orlamünde, *Summa naturalium*, 5.Rec.B.7, p. 80  
 Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 135ra, p. 397  
 Thomas Aquinas, *De sensu et sensato*, 2.2, p. 110 (*et conservationem earundem* ...)  
 John Pecham, *Tractatus de anima*, 10, p. 35

x) p. 88:

Demarcation of common sense and imagination: the faculty which receives is different from the one which preserves (example: water) – *debes autem scire* ...

- Dominicus Gundissalinus, *De anima*, 9, p. 73, lin. 11–14 (no attribution)  
 John Blund, *Tractatus de anima*, 9, p. 25, lin. 5 (no attribution)  
 —, 17, p. 66, lin. 10 (*ut habetur ab Avicenna in commento* ...)  
 Anonymous (Gauthier), *De anima et de potentiis eius*, p. 45, lin. 356  
 Jean de la Rochelle, *Tractatus*, 2.1.7, pp. 75–6  
 Jean de la Rochelle, *Summa*, 98, p. 242  
 cf. Anonymous (Gauthier 1985), *Lectura in librum de anima*, 2.26, p. 437, lin. 329 (no attribution)  
 Petrus Hispanus, *Scientia libri de anima*, 7.2, p. 311 (no attribution)  
 cf. —, 10.11, p. 471 (no attribution; *verum virtutis receptivae* ...)  
 Albertus Magnus, *De homine*, 35.2, p. 311a  
 Albertus Magnus, *De anima*, 2.4.7, p. 157, lin. 22 (no attribution)

- Vincent of Beauvais, *Speculum naturale*, 25.86, p. 1829  
 —, 27.10, p. 1923 (from Jean, *Summa*, p. 242)  
 Anonymous (Vennebusch), *Quaestiones in tres libros de anima*, 2.55, pp. 246–7  
 Thomas Aquinas, *De sensu et sensato*, 2.1, p. 104 (no attribution; ... *sicut aqua* ...)  
 —, 2.2, pp. 109–110  
 Roger Bacon, *De multiplicatione specierum*, 2.3, p. 194  
 Roger Bacon, *Opus maius*, 5.1.2, p. 5  
 Witelo, *De causa primaria* ... , p. 162 (no attribution; *secundum diversas cerebri qualitates* ...)  
 John Pecham, *Tractatus de anima*, 10, p. 35

y) pp. 88–9:

Demarcation of external senses and common sense: example of the rain drop – *cum autem volueris* ...

- John Blund, *Tractatus de anima*, 17, p. 64, lin. 1  
 Anonymous (Gauthier), *De anima et de potentiis eius*, p. 44, lin. 341  
 Jean de la Rochelle, *Summa*, 97, pp. 241  
 Petrus Hispanus, *Scientia libri de anima*, 7.2, p. 313 (no attribution; ... *continuazione guttae* ...)  
 Albertus Magnus, *De homine*, 35.2, p. 312a

z) p. 89:

Definition of the imaginative/cogitative faculty – *post hanc est vis quae vocatur imaginativa* ...

- Dominicus Gundissalinus, *De anima*, 9, p. 71, lin. 19 (no attribution)  
 cf. Anonymous (de Vaux), *De causis primis*, 10, p. 138 (no attribution; ... *ad cognitivam, hoc est ad imaginativam* ...)  
 Anonymous (Gauthier), *De anima et de potentiis eius*, p. 45, lin. 360 (no attribution)  
 —, p. 46, lin. 366 (no attribution)  
 Anonymous (Callus), *De potentiis animae et obiectis*, p. 154, lin. 17 (no attribution; from Anonymous (Gauthier), p. 45)  
 cf. Michael Scot, *Liber introductorius*, f. 46va (no attribution; *imaginativa virtus* ...)  
 Jean de la Rochelle, *Tractatus*, 2.1.8, p. 76 (no attribution; *imaginativa est* ...)  
 Jean de la Rochelle, *Summa*, 99, p. 243  
 cf. Grosseteste, *Commentarius in de divinis nominibus*, p. 138 (no attribution; *format et figurat* ...)  
 cf. Petrus Hispanus, *Scientia libri de anima*, 2.5, p. 101 (no attribution; *imaginativa vero* ...)  
 —, 2.5, p. 103 (no attribution; *imaginativae organum* ...)  
 —, 7.3, p. 315 (no attribution; *est igitur fantasia* ...)  
 Albertus Magnus, *De homine*, 38.1, p. 331a  
 cf. —, 38.1, p. 332 (*secundum Algazelem et Avicennam* ...)  
 Albertus Magnus, *Super Dionysium de divinis nominibus*, 1, p. 30  
 Albertus Magnus, *De anima*, 2.4.7, p. 157, lin. 41 and 74 (<*Peripatetici*> ... *vocaverunt phantasiam* ...)  
 Albertus Magnus, *De memoria et reminiscentia*, 1.1, p. 99 (... *cognitio sive distinctio in medio*)  
 Vincent of Beauvais, *Speculum naturale*, 25.86, p. 1829  
 —, 27.10, p. 1924 (from Jean, *Summa*, p. 243)  
 Albert von Orlamünde, *Summa naturalium*, 5.Rec.B.7, p. 81  
 Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 135rb, p. 398  
 Thomas Aquinas, *De veritate*, 10.5, p. 309 (no attribution; *quae est potentia quaedam* ...)  
 Thomas Aquinas, *Prima pars Summae theologiae*, 1.78.4, p. 256 (*Avicenna vero ponit quintam* ...)  
 John Pecham, *Quaestiones tractantes de anima*, 7, p. 75  
 John Pecham, *Tractatus de anima*, 10, p. 35

aa) p. 89:

Definition of the faculty of estimation – *deinde est vis aestimationis* ...

A. Quotations of the whole passage

- Dominicus Gundissalinus, *De anima*, 9, p. 71, lin. 24 (no attribution)  
 John Blund, *Tractatus de anima*, 19, p. 68, lin. 24  
 Jean de la Rochelle, *Tractatus*, 2.1.9, p. 76 (no attribution)  
 Jean de la Rochelle, *Summa*, 101, p. 248  
 Vincent of Beauvais, *Speculum naturale*, 25.86, p. 1829  
 —, 25.99, p. 1836 (from Jean, *Summa*, p. 248)  
 cf. Petrus Hispanus, *Scientia libri de anima*, 2.5, pp. 101–2 (no attribution; *aestimativa vero* ...)  
 Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 135rb, pp. 399–400 (no attribution)  
 John Pecham, *Tractatus de anima*, 10, p. 37

B. Partial adaptations

B. 1 estimation is located in the end of the middle cavity of the brain – *vis ordinata in summo mediae concavitate cerebri*

- see Dominicus Gundissalinus and John Blund above (A.)  
 Alexander Nequam, *Speculum speculationum*, 3.95, p. 374 (no attribution; *in media concavitate cerebri*)  
 cf. Alfred of Shreshill, *De motu cordis*, 3, p. 12 (no attribution; *cerebrum vero sensus et motus, fantasiae, aestimationis, rationis, memoriae regimen tenet*)  
 Michael Scot, *Liber introductorius*, f. 46rb (no attribution; ... *media (scil. cellula cerebri) dicitur in qua ratio sensibilis sive estimatarum virtus principaliter dominatur (?)*)  
 Grosseteste, *De confessione*, p. 262 (no attribution; ... *aestimatio in media* ...)  
 Roland of Cremona, *Summa theologica*, f. 33va (*estimativa est in cerebro secundum autores*)  
 Jean de la Rochelle, *Tractatus*, 2.1.9, p. 76 (no attribution)  
 Jean de la Rochelle, *Summa*, 101, p. 248  
 Alexander of Hales et al., *Summa theologica*, ii. 4.1.2.2.1, p. 436b  
 Petrus Hispanus, *Scientia libri de anima*, 2.5, p. 103 (no attribution; ... *postrema pars eiusdem (scil. medii ventriculi)* ...)  
 —, 7.4, p. 320 (no attribution; ... *in extremo mediae cellulae cerebri* ...)  
 —, 10.4, p. 426 (no attribution; ... *in media concavitate cerebri* ...)  
 Albertus Magnus, *De homine*, 40.3, p. 349 (*in posteriori parte eiusdem (scil. mediae partis cerebri)* ...)  
 —, 42.2, p. 360b  
 Albertus Magnus, *De anima*, 2.4.7, p. 158, lin. 17 (attributed to the Peripatetics in general)  
 Vincent of Beauvais, *Speculum naturale*, 25.86, p. 1829  
 —, 25.99, p. 1836 (from Jean, *Summa*, p. 248)  
 cf. Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 135rb, p. 400 (no attribution)  
 John Pecham, *Tractatus de anima*, 10, p. 37

B.2

The objects of estimation are connotational attributes ('intentions') which are not perceivable by the senses – *apprehendens intentiones non sensatas quae sunt in singulis sensibilibus*.

Only those quotations are listed that mention *intentiones* in connection with the theory of estimation. Several authors make this connection by drawing upon chapter IV,1 where Avicenna calls memory a *thesaurus intentionum*. See IV.1.f for these quotations. *Intentiones* appear also in the definitions of memory; see I.5.bb.

For quotations that refer to *intentiones* in the context of the theory of abstraction see II.2.f. A number of writers also mention Avicenna's theory of *intentiones* when quoting his theory of the different kinds of estimation; see IV.3.b–d.

- Dominicus Gundissalinus, *De anima*, 9, p. 71 lin. 1–11 and lin. 24 (no attribution)  
 Dominicus Gundissalinus, *De divisione philosophiae*, 2, p. 29 lin. 13 (no attribution; ... *apprehendit intentiones non materiales* ... This is a quotation of II,2 pp. 118–19)  
 John Blund, *Tractatus de anima*, 19, pp. 68–9 (... *utrum res sit fugienda propter intentionem si ipsa intentio sit nocitiva* ...) and p. 69 lin. 2 (... *intentionem appellat commentator qualitatem singularem non cadentem in sensum* ...)  
 Alexander Nequam, *Speculum speculationum*, 3.95, p. 374 (no attribution; ... *rem sensui subiectam* ...) and p. 375 (no attribution; ... *quadam apprehensione proveniente ex sensu et imaginatione cum quadam intentione* ...)  
 Anonymous (Gauthier), *De anima et de potentiis eius*, p. 46, lin. 371 (no attribution; ... *cuius est apprehendere intentiones* ...)  
 Anonymous (Callus), *De potentiis animae et obiectis*, p. 154, lin. 26 (no attribution; ... *intentiones sive formae ... quae sunt non sensibiles per se vel communiter* ...; influenced by Anonymous (Gauthier))  
 Michael Scot, *Liber introductorius*, f. 37rb (no attribution; *quaedam autem vires interiores percipiunt formas et intentiones rerum absente subiecto ut imaginatio et existimatio et memoria. ... existimatio est insensibilium proprietatum per sensibilia perceptio*)  
 Grosseteste, *In posteriorum analyticorum libros*, 2.6, p. 404 (no attribution; ... *retentiva ... intentionum estimatarum ex formis sensatis et haec retentiva vocatur memoria* ...)  
 Grosseteste, *Ecclesia sancta*, p. 176 (no attribution; ... *iudicativam sibi convenientium* ...)  
 Jean de la Rochelle, *Tractatus*, 2.1.9, p. 76 (no attribution)  
 Jean de la Rochelle, *Summa*, 101, p. 248  
 Alexander of Hales et al., *Summa theologica*, ii. 4.1.2.2.2, p. 439b (no attribution; *ex apprehensione intentionis in re sensibili*)  
 —, iv. 3.1.1.4, p. 985b (*intentiones specierum sensibilibus*)  
 Petrus Hispanus, *Notulae super Iohannitii isagoge ad artem parvam Galeni*, p. 37 (Alonso, introduction to his edition of Petrus's *Scientia* (1941), p. 37) (... *apprehendit bonitatem et malitiam eius et hae sunt secundae intentiones et occultae sensui* ...)  
 Petrus Hispanus, *Scientia libri de anima*, 2.5, p. 99 (no attribution; ... *intentiones per se in sensum non cadentes* ...) and pp. 101–102 (no attribution; ... *virtus intentionum ... apprehensiva*) and p. 102 (no attribution; ... *intentiones insensibiles* ...)  
 —, 6.4, pp. 210–12 (no attribution, drawing on II,2, pp. 118–19; ... *formas sensibiles sensibus exterioribus occultas* ...)  
 —, 7.4, pp. 320–22 (no attribution; this is the book's chapter on estimation.)  
 —, 7.5, p. 326 (no attribution; ... *intentionum insensibilium cum formis sensibilibus advenientium* ...)  
 —, 10.4, p. 426 (no attribution; ... *intentiones particulares a singularibus abstractas comprehendens et intentiones insensibiles sensibilibus formis annexas segregans* ...)  
 —, 10.5, p. 435 (no attribution; ... *intentiones insensatas* ...)  
 —, 10.11, p. 472 (no attribution; ... *intentionum insensibilium formis sensibilibus connexarum* ...)  
 —, 11.1, p. 490 (no attribution; ... *circa insensibiles intentiones* ...)  
 Albertus Magnus, *De incarnatione*, 6.1.4, pp. 223–4 (... *aestimatio intentionem convenientis ... ponit super imaginata* ...)  
 Albertus Magnus, *De homine*, 37.1, p. 325b (... *non eliciat ex eis ... intentiones aliquas non acceptas per sensum: hoc enim est phantasiae secundum Avicennam et Algazelem* ...) and p. 326a (no attribution; ... *intentiones elicatas a compositione et divisione sensibilibus facta per phantasiam et aestimationem*)  
 —, 38.1, p. 332 (... *phantasia apprehendit ... intentiones amici* ...)  
 —, 39.1, p. 336 (*dicit Algazel sequens Avicennam* ...)  
 —, 39.2, p. 337 (... *obiectum aestimativae sit id quod non est sensatum, sumitur tamen de sensato. Hoc enim dicunt Avicenna et Algazel*) and p. 338 (*dicendum cum Avicenna quod intentiones ... apprehenduntur per duos modos* ...)  
 —, 59.2, p. 515 (no attribution; ... *quae accipiunt intentiones nocivi* ...)  
 Albertus Magnus, *Super Dionysium de divinis nominibus*, 1, p. 30  
 Albertus Magnus, *Super ethica*, 2.5, p. 114 (... *quod accipitur sub intentione boni vel mali ... est proprium* ...)

- aestimativae quae elicit intentiones ...*)  
 Albertus Magnus, *De anima*, 2.3.4, p. 102, lin. 28 (no attribution)  
 —, 2.3.5, p. 104, lin. 17 (no attribution; ... *sicut sunt intentiones ...*)  
 —, 2.4.7, p. 157, lin. 63 ( ... *Peripatetici ... elicitivum intentionum vocaverunt aestimativam ...*)  
 Albertus Magnus, *De memoria et reminiscencia*, 1.1, p. 98b ( ... *virtus ... quae ex ipsa figura elicit eorum intentiones singulares et hanc quidem Avicenna bene et proprie vocavit aestimationem. Averroes autem improprie vocat cogitativam ...*)  
 Vincent of Beauvais, *Speculum naturale*, 25.86, p. 1829  
 —, 25.99, p. 1836 (from Jean, *Summa*, p. 248)  
 Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 135rb, pp. 399–400 (no attribution)  
 Anonymous (Vennebusch), *Quaestiones in tres libros de anima*, 2.55, p. 248  
 Thomas Aquinas, *De veritate*, 22.7, p. 629 (no attribution; ... *quaedam speciales conceptiones eis necessariae*)  
 —, 25.2, p. 733 (no attribution; ... *intentiones non acceptas per sensum ...*)  
 Thomas Aquinas, *De anima*, 2.8, pp. 121–2, lin. 191 (no attribution; ... *in animalis vero irrationali fit apprehensio intentionis individualis per aestimativam naturalem ...*)  
 Thomas Aquinas, *De sensu et sensato*, 2.2, pp. 109–110 ( ... *intentionem aliquam per sensum non apprehensam*)  
 cf. —, 2.3, pp. 115–16 (*convenienter dicitur Avicenna quod memoria respicit intentionem*)  
 Roger Bacon, *Opus maius*, 5.1.4, p. 8 ( ... *formas insensatas circa sensibilem materiam*)  
 John Peckham, *Tractatus de anima*, 10, p. 37

### B.3:

The example of the sheep and the wolf – *sicut vis quae est in ove diiudicans quod ab hoc lupo est fugiendum et quod huius agni est miserendum*.

This example appears twice in I,5, once in IV,1 and once in IV,3 where Avicenna also mentions the lion and the predatory bird which are feared by many other animals.

- Dominicus Gundissalinus, *De anima*, 9, p. 71, lin. 5 and 26 (no attribution)  
 John Blund, *Tractatus de anima*, 19, pp. 68–9  
 Alexander Nequam, *Speculum speculationum*, 3.95, p. 375 (no attribution)  
 Raoul de Longchamps, *In Anticlaudianum*, 64, p. 61 ( ... *aestimativa ... de hac dicit Rasis in anatomia. Virtutem aestimativam praetermiserrunt antiqui, per quam percipit ovis inimicitiam lupi*)  
 Anonymous (Gauthier), *De anima et de potentiis eius*, p. 46, lin. 377 (no attribution; ... *hac vi iudicat ovis esse lupum inimicum et asinum leonem amicum et aquam inimicum*)  
 Michael Scot, *Liber introductorius*, f. 37va (no attribution; *Qua existimatione agnus percipit lupum esse sibi inimicum et homo in spiritu certificatur de damno rei quae postea sibi contingit faciens tale quid*)  
 Hugh of Saint-Cher, *In quatuor libros sententiarum*, 2.24, f. 65vb (no attribution; *sed illa naturalis est sicut horror de viso lupo quomodo ovis naturaliter fugit eum*)  
 —, 2.34, f. 75rb (no attribution; *sicut aestimatione sua habet ovis naturaliter fugere lupum quia malum est ei esse cum lupo*)  
 Roland of Cremona, *Summa theologica*, f. 33rb ( ... *de vi extimativa. Sentit inimicum et horret et diligit amicum et congaudet illi sicut dicunt philosophi quod mus sentit catum et horret et fugit et hoc est ex vi extimativa. et ovis etsi non videat quodammodo sentit lupum et horret et fugit et ovis congaudet alii ovi et agno suo*)  
 —, f. 33va (no attribution; ... *quia ex virtute formarum relictarum in thesauro memoriae revertuntur boves ad domum possessorum suorum ... Cf. the very similar passage in Witelio*)  
 Jean de la Rochelle, *Tractatus*, 2.1.9, p. 76 (no attribution)  
 Jean de la Rochelle, *Summa*, 101, p. 248  
 Grosseteste, *De confessione*, p. 262 (no attribution)  
 Anonymous (Gauthier 1985), *Lectura in librum de anima*, 2.26, p. 441, lin. 447 (no attribution)  
 Petrus Hispanus, *Scientia libri de anima*, 7.4, p. 320 (no attribution) and p. 321 (no attribution; ... *omnis agnus lupum timet ... et multa animalia leonem et aves multae accipitrem*)  
 Albertus Magnus, *De homine*, 39.1, p. 336 (*dicit Algazel sequens Avicennam ...*)

- cf. —, 39.4, p. 339 (*determinare de fugiendo ...*)  
 Albertus Magnus, *Super Dionysium de divinis nominibus*, 1, p. 30  
 Albertus Magnus, *De anima*, 2.3.4, p. 102, lin. 5 (no attribution)  
 —, 2.3.5, p. 104 (no attribution; ... *sicut videt ovis quod hoc pilosum fukvum est lupus et hoc pilosum est canis et unum aestimat amicum et alterum inimicum*)  
 —, 2.4.7, p. 157 (no attribution; ... *sicut ovis noscit filium et illi et non alii porrigit ubera lactando et fugit lupum ut inimicum et canem sequitur ... For ubera cf. Avicenna, De anima, IV,3, p. 38, lin. 21*)  
 —, 3.1.2, p. 167, lin. 45 (no attribution)  
 Vincent of Beauvais, *Speculum naturale*, 25.86, p. 1829  
 —, 25.99, p. 1836 (from Jean, *Summa*, p. 248)  
 Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 135rb, p. 400 (no attribution)  
 Anonymous (Vennebusch), *Quaestiones in tres libros de anima*, 2.55, p. 248  
 Thomas Aquinas, *De veritate*, 22.7, p. 629 (no attribution)  
 —, 24.2, p. 686 (no attribution; ... *sicut ovis viso lupo necesse habet timere et fugere et canis ... habet latrare*)  
 —, 25.2, p. 733 (no attribution)  
 Thomas Aquinas, *Summa contra gentiles*, 2.74, p. 469  
 Thomas Aquinas, *De regno ad regem Cypri*, 1, pp. 449–50 (no attribution; ... *sicut ovis naturaliter existimat lupum inimicum ...*)  
 Thomas Aquinas, *De sensu et sensato*, 1.1, p. 13 (no attribution; ... *sicut ovis fugit lupum ... lupus autem sequitur ovem visam ...*)  
 Thomas Aquinas, *De malo*, 1.1, p. 4 (no attribution)  
 —, 16.2, p. 288 (no attribution)  
 —, 16.5, p. 304 (no attribution)  
 Roger Bacon, *Opus maius*, 5.1.4, p. 7 (no attribution; ... *et ovis ... fugit eum statim et omne animal timet ad rugitum leonis ...*)  
 Witelio, *De causa primaria ...*, p. 162 (no attribution; ... *cognoscit enim bos possessorem suum et asinus praesepe domini sui*)  
 John Peckham, *Tractatus de anima*, 10, p. 37

### bb) p. 89:

Definition of memory – *deinde est vis memorialis ...*

- Dominicus Gundissalinus, *De anima*, 9, p. 71, lin. 29 (no attribution)  
 John Blund, *Tractatus de anima*, 20, p. 71, lin. 10 (no attribution)  
 Grosseteste, *In posteriorum analyticorum libros*, 2.6, p. 404 (no attribution; ... *et haec retentiva ...*)  
 Grosseteste, *De confessione*, p. 262 (no attribution; *memoria qua ... memoria in posteriori*)  
 Jean de la Rochelle, *Tractatus*, 2.1.10, p. 76 (no attribution)  
 Jean de la Rochelle, *Summa*, 102, p. 249 (no attribution)  
 Petrus Hispanus, *Scientia libri de anima*, 2.5, p. 103 (no attribution; *ventriculus vero ...*)  
 —, 7.5, p. 325 (no attribution)  
 Albertus Magnus, *De homine*, 37.1, p. 326 (no attribution; ... *sed etiam intentiones ...*)  
 —, 40.1, p. 344b  
 —, 40.1, p. 346a  
 —, 41.2, p. 354a  
 Albertus Magnus, *De anima*, 2.4.7, p. 157, lin. 65 (*Peripatetici*)  
 Vincent of Beauvais, *Speculum naturale*, 25.86, p. 1829  
 —, 25.100, p. 1836 (from Jean, *Summa*, p. 249)  
 Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 135va, p. 400 (no attribution)  
 Thomas Aquinas, *De sensu et sensato*, 2.2, p. 110 (*vis autem memorativa ...*)  
 Roger Bacon, *Opus maius*, 5.1.4, pp. 8–9  
 John Peckham, *Tractatus de anima*, 10, p. 37

cc) p. 89:

The relation between memory and estimation is the same as the relation between imagination and the senses – *comparatio autem virtutis memorialis* ...

- Anonymous (Gauthier), *De anima et de potentiis eius*, p. 46, lin. 382 (no attribution; *haec habet se ad aestimationem sicut* ...)  
 Jean de la Rochelle, *Tractatus*, 2.1.10, pp. 76–7  
 Jean de la Rochelle, *Summa*, 102, p. 249  
 cf. Petrus Hispanus, *Scientia libri de anima*, 2.5, p. 102 (no attribution; *memoria vero* ...)  
 Petrus Hispanus, *Scientia libri de anima*, 2.5, p. 102 (no attribution; *est autem comparatio memoriae* ...)  
 Vincent of Beauvais, *Speculum naturale*, 25.86, p. 1829  
 Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 135va, p. 400 (no attribution)  
 Thomas Aquinas, *De sensu et sensato*, 2.3, pp. 115–16 (*ideo convenienter dicit Avicenna quod memoria respicit intentionem, imaginatio vero formam per sensum apprehensam*)  
 cf. John Pecham, *Quaestiones tractantes de anima*, 30, p. 197

dd) pp. 90–91:

The faculties of the human rational soul are divided into a theoretical and a practical faculty – *sed animae rationalis humanae* ...

- Dominicus Gundissalinus, *De anima*, 10, p. 84, lin. 20 (no attribution)  
 John Blund, *Tractatus de anima*, 25.1, p. 91, lin. 9 (no attribution)  
 Anonymous (Gauthier), *De anima et de potentiis eius*, p. 48, lin. 412 (no attribution)  
 Michael Scot, *Liber introductorius*, f. 49ra (no attribution; *illa enim vis ... dividitur in duas partes videlicet in intellectum speculativum et intellectum practicum*)  
 Hugh of Saint-Cher, *In quatuor libros sententiarum*, 2.27, f. 69va (no attribution; *duplex enim est intellectus scilicet speculativus ... et practicus* ...)  
 Jean de la Rochelle, *Tractatus*, 2.1.13, p. 81  
 Jean de la Rochelle, *Summa*, 111, p. 268 (no attribution; *sive per intellectum* ...)  
 Albertus Magnus, *Super ethica*, 6.3, p. 412  
 Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 135va, p. 401 (no attribution)  
 Witelo, *De causa primaria* ..., p. 162 (no attribution; ... *duae potentiae, speculativa et practica* ...)

ee) pp. 90–93:

Definition and explanation of the practical faculty – *vis autem activa est* ...

- Dominicus Gundissalinus, *De anima*, 10, p. 84, lin. 23–34 (no attribution)  
 —, 10, p. 86, lin. 9–21 (no attribution)  
 John Blund, *Tractatus de anima*, 25.1, p. 91, lin. 10–22 (no attribution)  
 Anonymous (Gauthier), *De anima et de potentiis eius*, p. 48, lin. 413  
 Petrus Hispanus, *Scientia libri de anima*, 2.8, p. 112 (no attribution; *illa vero* ...)  
 Albertus Magnus, *De homine*, 63.1, pp. 538–41, *passim*  
 —, 63.3–4, pp. 543b and 544a  
 Vincent of Beauvais, *Speculum naturale*, 27.59, p. 1958  
 —, 27.59, p. 1959 (... *mores perversi* ...)

ff) pp. 93–4:

The theory of the two faces of the human soul – *mores autem qui in nobis sunt* ...

- Dominicus Gundissalinus, *De anima*, 10, p. 86, lin. 21 – p. 87, lin. 1 (no attribution)  
 John Blund, *Tractatus de anima*, 25.1, p. 91, lin. 23 – p. 92, lin. 7 (no attribution)

—, 25.1, p. 92, lin. 12

—, 25.2, p. 95, lin. 32 (no attribution)

cf. Anonymous (de Vaux), *De causis primis*, 10, p. 129 (no attribution; ... *illuminatur intellectus sursum versus* ...)

William of Auxerre, *Summa aurea*, 4.18.4.1, p. 547 (no attribution; *habet enim duas facies* ...)

cf. Michael Scot, *Liber introductorius*, f. 37vb (no attribution; *item dicitur intellectus activus et intellectus speculativus sive contemplativus. Activus est quo movemur et ordinamur ad ea quae sunt infra nos. Speculativus vero quo ordinamur ad superiora per fidem et per spem praemiorum*)

Hugh of Saint-Cher, *In quatuor libros sententiarum*, 2.35, f. 77ra (no attribution)

Jean de la Rochelle, *Tractatus*, 2.1.26, p. 103 (... *quod magnam habet dubitationem*)

cf. Petrus Hispanus, *Scientia libri de anima*, 2.7, p. 110 (no attribution; *duas continet partes* ...)

—, 2.8, p. 112 (no attribution; ... *duas habet facies* ...)

gg) pp. 94–5:

Definition of the theoretical faculty: some of its objects are abstract as such, some of them are abstracted by it – *sed virtus contemplativa* ...

Dominicus Gundissalinus, *De anima*, 10, p. 85, lin. 1–5 (no attribution)

Albertus Magnus, *De homine*, 54, p. 449b

hh) pp. 95–6:

Potentiality has three different meanings – *potentia autem dicitur tribus modis* ...

Dominicus Gundissalinus, *De anima*, 10, p. 87, lin. 4–15 (no attribution)

Jean de la Rochelle, *Tractatus*, 2.1.18, p. 87 (no attribution; *constans est* ...)

Alexander of Hales et al., *Summa theologica*, ii.4.1.2.3.1.2, p. 459b (*philosophus*)

Petrus Hispanus, *Scientia libri de anima*, 6.9, p. 230 (no attribution)

Albertus Magnus, *De homine*, 2.5, p. 19 (*una autem potentia est quae est* ...)

—, 34.1, p. 295b (no attribution; *sicut supra notatum est* ...)

ii) pp. 96–9:

The four intellects – *perfectionis autem contemplativae* ...

John Blund, *Tractatus de anima*, 25.2, p. 92, lin. 23 (*distinguitur autem intellectus ab Avicenna quatuor modis et a multis aliis auctoribus* ...)

Anonymous (de Vaux), *De causis primis*, 10, p. 128 (no attribution; *et quoniam liquet* ...)

Anonymous (Gauthier), *De anima et de potentiis eius*, p. 53, lin. 469–79 (no attribution)

Anonymous (Callus), *De potentiis animae et obiectis*, p. 158, lin. 3–10 (no attribution; from Anonymous (Gauthier))

Michael Scot, *Liber introductorius*, f. 37va (no attribution; *intellectus enim dividitur in intellectum possibilem sive materiale et in intellectum adaptatum sive ... (?) sive dispositum et in intellectum adeptum sive iam acquisitum et completum*)

Jean de la Rochelle, *Tractatus*, 2.1.18, p. 88

Jean de la Rochelle, *Summa*, 115, pp. 276 (*secundum Avicennam et alios*)

Alexander of Hales et al., *Summa theologica*, ii.4.1.2.3.1.2, p. 458a (*philosophus*)

—, ii.4.1.2.3.1.2, p. 459b (*philosophus*)

Petrus Hispanus, *Scientia libri de anima*, 2.7, p. 110 (no attribution)

—, 2.12, p. 120 (no attribution; *virtutum vero* ...)

—, 10.10, pp. 466–7 (no attribution; *quoniam vero intellectiva* ...; hardly any similarities in wording)

cf. Albertus Magnus, *De homine*, 2.5, p. 19 (*similiter est de intellectu possibili* ...)

—, 54, p. 449 (*secundum autem Algazelem et Avicennam quatuor sunt differentiae intellectus* ...)

—, 54, p. 450 (*secundum Aristotelem et Avicennam potentiae <exeuntis> in actu quatuor sunt gradus* ...)

—, 56.3, p. 480b

cf. Albertus Magnus, *Summa theologiae*, II.13.77.3, p. 75  
 Vincent of Beauvais, *Speculum naturale*, 27.39, p. 1945 (from *De homine*, p. 449)  
 —, 27.46, p. 1950 (from Jean, *Summa*, p. 276)  
 John Pecham, *Tractatus de anima*, 11, p. 38

jj) p. 96:

The relation of the theoretical faculty towards the abstracted forms sometimes is a relation of absolute potentiality (material intellect) – *aliquando est sicut comparatio*

Dominicus Gundissalinus, *De anima*, 10, p. 87, lin. 15 (no attribution)  
 John Blund, *Tractatus de anima*, 25.2, p. 92, lin. 27 (no attribution)  
 Jean de la Rochelle, *Tractatus*, 2.1.18, p. 88  
 Jean de la Rochelle, *Summa*, 115, p. 276  
 Alexander of Hales et al., *Summa theologica*, ii.4.1.2.3.1.2, p. 459b (*philosophus*)  
 Vincent of Beauvais, *Speculum naturale*, 27.46, p. 1950 (from Jean, *Summa*, p. 276)  
 Petrus Hispanus, *Scientia libri de anima*, 2.7, p. 110 (no attribution)  
 John Pecham, *Tractatus de anima*, 11, p. 38

kk) pp. 96–7:

... sometimes a relation of possible potentiality (intellect in *habitu*) – *aliquando est comparatio* ...

Dominicus Gundissalinus, *De anima*, 10, p. 87, lin. 19 (no attribution)  
 cf. Anonymous (Gauthier), *De anima et de potentiis eius*, p. 53, lin. 472–6 (no attribution)  
 Jean de la Rochelle, *Tractatus*, 2.1.18, p. 88  
 Jean de la Rochelle, *Summa*, 115, p. 276  
 Vincent of Beauvais, *Speculum naturale*, 27.46, p. 1950 (from Jean, *Summa*, p. 276)  
 Alexander of Hales et al., *Summa theologica*, ii.4.1.2.3.1.2, p. 459b (*philosophus*)  
 Petrus Hispanus, *Scientia libri de anima*, 2.7, p. 110 (no attribution)  
 John Pecham, *Tractatus de anima*, 11, pp. 38–9

ll) pp. 97–8:

... sometimes a relation of highest potentiality (intellect in actuality) – *aliquando est sicut* ...

Dominicus Gundissalinus, *De anima*, 10, p. 87, lin. 28 (no attribution)  
 cf. John Blund, *Tractatus de anima*, 25.2, p. 93, lin. 19 (no attribution)  
 Jean de la Rochelle, *Tractatus*, 2.1.18, p. 88  
 Jean de la Rochelle, *Summa*, 115, p. 276  
 Alexander of Hales et al., *Summa theologica*, ii.4.1.2.3.1.2, p. 459b (*philosophus*)  
 Vincent of Beauvais, *Speculum naturale*, 27.46, p. 1950 (from Jean, *Summa*, p. 276)  
 —, 27.49, p. 1952 (from *De homine*)  
 Petrus Hispanus, *Scientia libri de anima*, 2.7, p. 110 (no attribution)  
 Albertus Magnus, *De homine*, 57.1, p. 487a  
 John Pecham, *Tractatus de anima*, 11, p. 39 (*tertio* ...)

mm) pp. 98–9:

... sometimes a relation of absolute actuality (acquired intellect) – *aliquando autem*

Dominicus Gundissalinus, *De anima*, 10, p. 87, lin. 38 (no attribution)

cf. John Blund, *Tractatus*, 25.2, p. 93, lin. 9 (*apellat ... Aristoteles ibi rem intellectam intellectum adeptum* ...)  
 cf. —, 25.2, p. 94, lin. 10 (no attribution)  
 cf. Anonymous (de Vaux), *De causis primis*, 10, p. 135 (no attribution; ... *intellectum ... adeptum* ...)  
 Jean de la Rochelle, *Tractatus*, 2.1.18, p. 88  
 Jean de la Rochelle, *Summa*, 115, p. 276  
 Alexander of Hales et al., *Summa theologica*, ii.4.1.2.3.1.2, p. 459b (*philosophus*)  
 Vincent of Beauvais, *Speculum naturale*, 27.46, p. 1950 (from Jean, *Summa*, p. 276)  
 Petrus Hispanus, *Scientia libri de anima*, 2.7, p. 110 (no attribution)  
 cf. Anonymous (Vennebusch), *Quaestiones in tres libros de anima*, 3.64, p. 278  
 John Pecham, *Tractatus de anima*, 11, p. 38

nn) pp. 99–102:

There is a hierarchy of the faculties: at the top the acquired intellect, at the bottom the four qualities – *considera ergo nunc* ...

Dominicus Gundissalinus, *De anima*, 9, p. 66, lin. 33–7 (no attribution)  
 —, 10, p. 96, lin. 17 – p. 97, lin. 10 (no attribution)  
 Alfred of Shreshill, *De motu cordis*, 13, p. 64 (no attribution; *prima harum et praecipua* ...)  
 Michael Scot, *Liber introductorius*, f. 37rb (no attribution; *potentiarum vero animae quaedam est vis vegetabilis ... – ... nutritivae serviunt* ...)  
 Jean de la Rochelle, *Tractatus*, 2.1.26, pp. 102–3  
 cf. Albertus Magnus, *De anima*, 3.5.4, p. 249, lin. 39 (no attribution)  
 cf. Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 134rb, p. 391 (no attribution; *aliae sunt virtutes servientes* ...)  
 cf. Anonymous (Vennebusch), *Quaestiones in tres libros de anima*, 2.34, p. 184  
 John Pecham, *Quaestiones tractantes de anima*, 4, p. 50 (draws on p. 100, lin. 85–7)  
 —, 10, p. 91  
 John Pecham, *Tractatus de anima*, 2, p. 8

II,1

a) pp. 103–4:

(1) Description of how the nutritive faculty works – *dicemus nunc quod nutrimentum*

John Blund, *Tractatus de anima*, 5, p. 13, lin. 27 (no attribution)  
 Jean de la Rochelle, *Summa*, 83, p. 224 (*secundum philosophos et Avicennam*)  
 Petrus Hispanus, *Scientia libri de anima*, 3.2, p. 128 (no attribution; ... *convertens ... assimilans ... restituens*)  
 Albertus Magnus, *De homine*, 9.2, p. 111 (passages *sed contra* and *solutio*)  
 —, 10.1, p. 113 (*omnes philosophi dicunt* ...)  
 Vincent of Beauvais, *Speculum naturale*, 24.67, p. 1759

b) p. 105:

As long as the nutritive faculty works, the plant or animal is alive – *ergo virtus nutritiva* ...

Dominicus Gundissalinus, *De anima*, 9, p. 67, lin. 4 (no attribution)  
 Jean de la Rochelle, *Summa*, 83, p. 225 (no attribution; *ideo nutritiva operatur omni tempore* ...)  
 Albertus Magnus, *De homine*, 4.2, p. 38b  
 —, 10.5, p. 118a

Vincent of Beauvais, *Speculum naturale*, 24.67, p. 1760

c) p. 105:

The nutritive faculty distributes the nourishment among the organs – *quod enim debet ...*

John Blund, *Tractatus de anima*, 5, p. 14, lin. 5 (no attribution)

Jean de la Rochelle, *Summa*, 83, p. 225 (no attribution; *virtus enim nutritiva ex se ...*)

Vincent of Beauvais, *Speculum naturale*, 24.77, p. 1767

d) pp. 105–6:

(2) The faculty of growth – *augmentativa vero ...*

John Blund, *De anima*, 5, p. 15, lin. 18 (no attribution)

Jean de la Rochelle, *Summa*, 83, p. 225 (no attribution; *augmentativa vero tollit ...*)

cf. Petrus Hispanus, *Scientia libri de anima*, 3.4, p. 148 (no attribution; *... secundum longitudinem ... ossa ac membra radicalia ...*)

Albertus Magnus, *De homine*, 13.2, p. 128b and p. 130a (*praeterea videtur <Avicenna> in hoc contradicere sibi ipsi ...*)

—, 14.2, p. 135

—, 15.2, p. 140 (*videtur autem falsum quod dicit Philosophus ex dicto Avicennae supra inducto ...*)

—, 43.4, p. 393a (no attribution; *ut in superioribus determinatum est*)

cf. Albertus Magnus, *De anima*, 2.2.7, p. 91, lin. 15

Vincent of Beauvais, *Speculum naturale*, 24.75, p. 1765 (cf. *De homine* 15.2, p. 140)

—, 24.77, p. 1767 (two quotations)

—, 24.77, p. 1768 (quoting p. 107, lin. 63)

John Pecham, *Tractatus de anima*, 9, pp. 32–3

e) p. 107:

(3) The reproductive faculty has two actions, creating the sperm and forming the parts of the body – *sed generativa habet duas actiones ...*

Dominicus Gundissalinus, *De anima*, 9, p. 67, lin. 9 (no attribution)

Jean de la Rochelle, *Summa*, 84, p. 227 (no attribution; *consequenter est operatio ...*)

Vincent of Beauvais, *Speculum naturale*, 24.79, p. 1768

f) p. 107:

The two other faculties assist in this – *nutritiva vero servit ...*

Dominicus Gundissalinus, *De anima*, 9, p. 67, lin. 17 (no attribution)

Jean de la Rochelle, *Summa*, 84, p. 227 (no attribution; *in hoc etiam ministrantibus ...*)

Vincent of Beauvais, *Speculum naturale*, 24.79, p. 1768

g) p. 107:

Different functions of the reproductive faculty at different ages – *haec autem actio*

Albertus Magnus, *De homine*, 17.3, p. 161b

Vincent of Beauvais, *Speculum naturale*, 24.79, p. 1768

h) p. 108:

Summary: the functions of the three vegetative faculties – *omnino autem virtus nutritiva ...*

Dominicus Gundissalinus, *De anima*, 9, p. 67, lin. 19 (no attribution)

Grosseteste, *Hexameron*, 4.30.3, p. 155 (no attribution; *... propter salutem ... perfectionem ... perpetuitatem*)

Jean de la Rochelle, *Tractatus*, 2.1.1, p. 71 (no attribution; *... ad conservationem ... ad perfectionem ...*)

Jean de la Rochelle, *Summa*, 84, p. 227 (no attribution; *nam nutritiva est ut ...*)

Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 134rb, p. 391 (no attribution; *quia per nutritivam ...*)

Petrus Hispanus, *Scientia libri de anima*, 3.1, p. 125 (no attribution; *... ad sui conservationem ... perfectionem ... speciei integritatem*)

Albertus Magnus, *De homine*, 17.5, p. 162 (*appetitus generationis est res quae est a Deo*)

Albertus Magnus, *Super Ethica*, 1.2, p. 11 (*dicitur conservatio speciei conservatio divini esse ...*)

cf. —, 3.13, p. 207 (*Avicenna et Constantinus dicunt ...*)

Vincent of Beauvais, *Speculum naturale*, 24.79, pp. 1768–9

i) pp. 108–9:

Refutation of a divergent opinion about the role of fire – *fuerunt autem multi ...*

Jean de la Rochelle, *Summa*, 83, p. 225 (no attribution; *nota etiam quod fuerunt qui dixerunt quod ignis ...*)

Albertus Magnus, *De anima*, 2.2.4, p. 88, lin. 11

j) p. 110:

The function of natural heat, of cold and moisture – *deinde primum instrumentum ... est calor naturalis*

Dominicus Gundissalinus, *De anima*, 9, p. 66, lin. 37 (no attribution)

Jean de la Rochelle, *Summa*, 83, p. 224 (*nota etiam quod primum instrumentum ...*)

cf. Albertus Magnus, *De homine*, 12, p. 126

—, 16, p. 142

—, 17.3, p. 154b

—, 17.4, p. 161 (passages *sed contra* and *olutio: calidum est instrumentum principale ...*)

Vincent of Beauvais, *Speculum naturale*, 24.67, p. 1760

k) pp. 110–13:

About the vegetative soul in animals and human beings – *virtus autem vegetabilis...*

Dominicus Gundissalinus, *De anima*, 4, p. 44, lin. 32 – p. 45 lin. 12 (no attribution)

—, p. 47, lin. 28 (no attribution)

Albertus Magnus, *De anima*, 2.2.9, p. 94, lin. 85 (no attribution; *... palmifica ... olivifica ...*)

l) p. 113:

The human soul is not connected with the body in the way of a form – *anima autem humana ...*

Thomas Aquinas, *De unitate intellectus*, 2.129, p. 302



II,2

a) p. 114:

Every perception is the grasping of the form of the perceived object in some kind of abstraction – *apprehendere non sit ...*

cf. Anonymous (De Vaux), *De causis primis*, 9, p. 124 (no attribution; *apprehensio autem non est nisi formae apprehensae*)

Albertus Magnus, *De homine*, 27, p. 253 (no attribution; *omnis potentia apprehensiva est ...*)

cf. —, 34.3, p. 303 (no attribution; *omnis sensus est ...*)

Vincent of Beauvais, *Speculum naturale*, 25.7, p. 1779

b) pp. 114–15:

This abstraction has different degrees (partial or complete) – *species autem abstractionis ...*

Dominicus Gundissalinus, *De divisione philosophiae*, 2, p. 28, lin. 16–22 (no attribution)

Jean de la Rochelle, *Tractatus*, 2.1.16, p. 84 (*notandum tamen ...*)

Jean de la Rochelle, *Summa*, 113, p. 272 (*notandum tamen est secundum Avicennam ...*)

Albertus Magnus, *De homine*, 27, p. 253 (no attribution; *... licet una plus abstrahat et altera minus*)

—, 37.1, p. 326 (no attribution; *... secundum modum abstractionis maioris et minoris*)

cf. —, 40.1, p. 341 (*... ut dicit Avicenna recipit speciem cum appenditiis materiae ...*)

cf. —, 57.5, p. 497 (*... habentem appenditia materiae sicut dicit Avicenna*)

Albertus Magnus, *De anima*, 2.3.5, p. 101, lin. 67 (no attribution; *haec autem apprehensio ... quattuor habet gradus ...*)

cf. Albertus Magnus, *Summa theologiae*, I.3.15.2, p. 68 (*... cum appenditiis materiae ut dicit Avicenna*)

cf. —, II.5.25.2.3, p. 282 (*... appenditiis materialibus ut dicit Avicenna*)

Vincent of Beauvais, *Speculum naturale*, 25.7, p. 1779

—, 27.36, p. 1943 (from Jean, *Summa*, p. 272)

c) pp. 115–16:

Example: The form of 'human being' and its material accidents – *exempli gratia ...*

Dominicus Gundissalinus, *De anima*, 10, p. 90, lin. 19 to lin. 35 (no attribution)

Dominicus Gundissalinus, *De divisione philosophiae*, 2, p. 30, lin. 16 (no attribution)

Jean de la Rochelle, *Tractatus*, 2.1.16, pp. 84–5 (*verbi gratia ...*)

Jean de la Rochelle, *Summa*, 113, p. 272 (*verbi gratia ...*)

Vincent of Beauvais, *Speculum naturale*, 27.36, p. 1943 (from Jean, *Summa*, p. 272)

d) pp. 116–17:

Abstraction through sense-perception – *... et propter accidentiam ...*

Dominicus Gundissalinus, *De divisione philosophiae*, 2, p. 28, lin. 22 – p. 29, lin. 2 (no attribution)

Jean de la Rochelle, *Tractatus*, 2.1.16, p. 84

Jean de la Rochelle, *Summa*, 113, p. 271

Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 135va, p. 400 (no attribution)

Petrus Hispanus, *Scientia libri de anima*, 6.4, pp. 210–12 (no attribution)

Albertus Magnus, *De homine*, 37.1, p. 326a (no attribution; *sensus abstrahit ...*)

—, 45.3, p. 416b (*... quod sensus ...*)

—, 59.2, p. 515 (no attribution; *... sensus qui non accipit nisi materia praesente*)

Albertus Magnus, *De anima*, 2.3.4, p. 101, lin. 68 (no attribution)

—, 3.1.1, p. 166, lin. 51

Vincent of Beauvais, *Speculum naturale*, 25.7, p. 1779

—, 27.35, p. 1943 (from Jean, *Summa*, p. 271)

e) pp. 117–18:

Abstraction through imagination and the imaginative faculty – *sed imaginatio ...*

Dominicus Gundissalinus, *De divisione philosophiae*, 2, p. 29, lin. 2–12 (no attribution)

Jean de la Rochelle, *Tractatus*, 2.1.16, p. 84

Jean de la Rochelle, *Summa*, 113, p. 271 (*sensus vero interior ...*)

Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 135va, p. 400 (no attribution)

Petrus Hispanus, *Scientia libri de anima*, 6.4, pp. 210–12 (no attribution)

Albertus Magnus, *De homine*, 37.1, p. 326a (no attribution; *imaginatio autem ...*)

—, 59.2, p. 515 (no attribution; *cum appenditiis materiae determinat ...*)

Albertus Magnus, *De anima*, 2.3.4, p. 101, lin. 72 (no attribution)

—, 3.1.1, p. 166, lin. 48

cf. Albertus Magnus, *Summa theologiae*, I.3.14.3, p. 55 (*... sub dimensione quantitatis ...*)

Vincent of Beauvais, *Speculum naturale*, 25.7, p. 1779

—, 27.35, p. 1943 (from Jean, *Summa*, p. 271)

f) pp. 118–19:

The faculty of estimation has a higher degree of abstraction: it perceives immaterial connotational attributes ('intentions') which happen to be embodied – *sed aestimatio*

Dominicus Gundissalinus, *De divisione philosophiae*, 2, p. 29, lin. 13 – p. 30, lin. 5 (no attribution)

Anonymous (Gauthier), *De anima et de potentiis eius*, p. 46, lin. 374 (no attribution; *... invenitur in rebus sensibilibus ...*)

Jean de la Rochelle, *Tractatus*, 2.1.9, p. 76 (no attribution; *est autem ista virtus transcendens ...*)

—, 2.1.16, p. 84

Jean de la Rochelle, *Summa*, 113, p. 271

Alexander of Hales et al., *Summa theologiae*, ii.4.1.2.2.1, p. 436a (no attribution; *bonitas et malitia ...*)

—, ii.4.1.2.2.1, p. 436b (no attribution; *unde dicitur quod apprehendit ...*)

—, ii.4.1.2.2.1, p. 436b (*... sicut dicit idem philosophus ...*)

Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 135va, p. 400 (no attribution)

Petrus Hispanus, *Scientia libri de anima*, 6.4, pp. 210–12 (no attribution; *tertius est intentiones rerum materialium ...*)

—, 7.4, p. 319 (no attribution; *... sicut sunt bonitas ac malitia ...*)

Albertus Magnus, *De homine*, 39.2, p. 338

—, 59.2, p. 515b (no attribution; *quaedam autem determinant ...*)

Albertus Magnus, *De anima*, 2.3.4, p. 101, lin. 90 (no attribution)

—, 2.3.5, p. 104 (no attribution; *sicut videt ovis ...*)

Albertus Magnus, *Super Ethica*, 2.5, p. 114

Vincent of Beauvais, *Speculum naturale*, 25.7, p. 1779

—, 25.99, p. 1836

—, 27.35, p. 1943 (from Jean, *Summa*, p. 271)

g) p. 120:

The <rational> faculty has the forms present without any accidents – *sed virtus in qua ...*

Dominicus Gundissalinus, *De divisione philosophiae*, 2, p. 30, lin. 6–16 (no attribution)

cf. John Blund, *Tractatus de anima*, 17, p. 62, lin. 6 (no attribution; *intellectus sit abstrahens ...*)

cf. —, 17, p. 63, lin. 2 (no attribution; *... intellectus quidem abstractivus ...*)

Jean de la Rochelle, *Tractatus*, 2.1.16, p. 84  
 Jean de la Rochelle, *Summa*, 113, p. 272 (*virtus vero intellectiva* ...)  
 Alexander of Hales et al., *Summa theologiae*, ii.4.1.2.2.1, p. 436b (*philosophus*)  
 cf. Grosseteste, *De confessione*, p. 263 (no attribution; *intellectus est acceptio alicuius absque materia et materialibus dispositionibus*)  
 Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 135va, p. 400 (no attribution)  
 cf. Anonymous (Gauthier 1985), *Lectura in librum de anima*, 1.1, p. 12, lin. 311 (no attribution)  
 Petrus Hispanus, *Scientia libri de anima*, 6.4, pp. 210–12 (no attribution)  
 cf. Albertus Magnus, *De homine*, 57.2, p. 490  
 Albertus Magnus, *De anima*, 2.3.5, p. 102, lin. 11 (no attribution)  
 Vincent of Beauvais, *Speculum naturale*, 25.7, p. 1779  
 —, 27.35, p. 1943 (from Jean, *Summa*, p. 272)

h) p. 120:

Summary: In this way the faculties differ in abstraction – *et in hoc differunt* ...

Dominicus Gundissalinus, *De divisione philosophiae*, 2, p. 28, lin. 15 (no attribution)

i) p. 120:

Repetition of the definition of sense-perception – *sentire etenim* ...

Vincent of Beauvais, *Speculum naturale*, 25.25, p. 1791

j) pp. 122–3:

Democritus has a wrong theory about perception – *sed Democritus* ...

Albertus Magnus, *De anima*, 2.3.9, p. 111, lin. 35 (no attribution; *Democriti enim schola tenuit ... ex diverso situ* ...)

k) pp. 125–6:

Refutation of the opinion that sense-perception is possible without medium and organs – *dixerunt etiam aliqui antiquorum* ...

Thomas Aquinas, *Scriptum super sententiis*, II.19.1.1.c, pp. 481–2

Vincent of Beauvais, *Speculum naturale*, 25.25, p. 1791 (*dixerunt autem aliqui* ...)

Anonymous (Van Steenberghen), *Quaestiones de anima*, 2.18, p. 225

John Peckham, *Tractatus de anima*, 4, pp. 13–14

II,3

a) p. 130:

Touch is the first of the senses; it makes an animal animal – *primus sensuum* ...

Dominicus Gundissalinus, *De anima*, 9, p. 70, lin. 2 (no attribution)

cf. Petrus Hispanus, *Scientia libri de anima*, 6.10, p. 237 (no attribution; *inter necessitates* ...)

Anonymous (Gauthier 1985), *Lectura in librum de anima*, 2.20, p. 392, lin. 166 (no attribution)

—, 2.25, p. 420, lin. 68 (no attribution)

Albertus Magnus, *De homine*, 19.2, p. 168

—, 33.1, p. 282

Albertus Magnus, *Super Dionysium de caelesti hierarchia*, 15, p. 232 (*ut dicit Philosophus et Avicenna*)

Albertus Magnus, *Summa theologiae*, II.11.61, p. 593

b) pp. 131–2:

Comparison with the sense of taste – *gustus autem quamvis* ...

Dominicus Gundissalinus, *De anima*, 9, p. 70, lin. 12–19 (no attribution)

Petrus Hispanus, *Scientia libri de anima*, 6.11, p. 256 (no attribution; *videtur autem animal* ...)

c) p. 132:

There is a primary kind of movement such as there is a primary kind of sense-perception; objection – *de motu autem potest aliquis dicere quod cognatus est sensui ... sed divulgatum est* ...

Petrus Hispanus, *Scientia libri de anima*, 5.3, p. 190 (no attribution; *in animali igitur aliquis* ...)

—, 6.10, p. 240 (no attribution; *est igitur hic motus sensui cognatus* ...)

d) p. 133:

Answer: There are two kinds of voluntary movement: local movement and the motion of contraction and dilation – *dicemus ergo quod motus voluntarius duplex est*

Jean de la Rochelle, *Tractatus*, 2.1.12, p. 80

—, 2.2.36, p. 112, lin. 268

Jean de la Rochelle, *Summa*, 110, p. 267

Petrus Hispanus, *Scientia libri de anima*, 6.10, pp. 239–40 (no attribution; *sed motus localis est duplex* ...)

Albertus Magnus, *De motibus animalium*, 2.1.1, p. 283 (no attribution; *est autem animalium motus duplex in genere* ...)

Albertus Magnus, *Summa theologiae*, II.11.61, p. 593

Albert von Orlamünde, *Summa naturalium*, 5.Rec.A.3, p. 40

Anonymous (Vennebusch), *Quaestiones in tres libros de anima*, 1.25, p. 150, lin. 25 (no attribution)

e) p. 133:

All animals have the faculty of touch and the faculty of contraction and dilation, even the shellfish – *impossibile est autem* ...

Jean de la Rochelle, *Tractatus*, 2.2.36, p. 112, lin. 271

Jean de la Rochelle, *Summa*, 110, p. 267

Roland of Cremona, *Summa theologiae*, f. 33va (*in spongia marina non invenitur nisi tactus et quod habent tactum probatur quia quando ei admoventur ignis vel pungitur contrahitur ut dicit Avicenna*)

Petrus Hispanus, *Scientia libri de anima*, 6.10, p. 240 (no attribution; *hic est in omni animali* ...)

—, 8.1, p. 333 (no attribution; *ab omnibus animalibus* ...)

—, 8.7, p. 349 (no attribution; *sed cum eorum* ...)

Albertus Magnus, *De homine*, 62.1, 43.4, p. 392a

—, pp. 534a and 535b (*quaeritur de contrarietate quae videtur esse inter Aristotelem et Avicennam*)

Albertus Magnus, *De motibus animalium*, 2.1.1, pp. 283–4 (no attribution; *unus quidem qui in omni animali invenitur ... Si enim pungantur ac[te]u constringuntur* ...)

Albertus Magnus, *Quaestiones de animalibus*, 1.6, p. 83 (*ubicumque non sensus non est motus*)

—, 2.5, p. 111 (*motus sequitur sensum*)

—, 7.24, p. 180 (*praeterea Commentator et Avicenna dicunt super ii de anima quod quaedam animalia habent* ...)

*actum primum animae sine secundo ut conchilia*)

Anonymous (Vennebusch), *Quaestiones in tres libros de anima*, 1.25, p. 150 (no attribution)

f) pp. 133–4:

The objects of touch – *ea autem quae tanguntur ...*

John Blund, *Tractatus de anima*, 16, p. 59, lin. 22 (no attribution)

Jean de la Rochelle, *Summa*, 94, p. 237 (no attribution; *secundaria vero sunt ...*)

Petrus Hispanus, *Scientia libri de anima*, 6.10, p. 247 (no attribution; *asperum cuius partes ...*)

—, 6.10, p. 251 (no attribution; *aestimatur autem ...*)

g) pp. 135–7:

Other objects of touch are the solution of continuity (in wounds) and lust in sexual intercourse – *est autem hic alius modus ...*

Jean de la Rochelle, *Summa*, 94, p. 237 (no attribution; *quia solutio continuitatis quae venit ...*)

Petrus Hispanus, *Scientia libri de anima*, 6.10, p. 250 (no attribution; *aestimatur autem omnes ...*)

Albertus Magnus, *De homine*, 33.4, pp. 292–3 (no attribution; *quaeritur de quibusdam aliis quae sentiuntur ... solutio ...*)

Albertus Magnus, *De anima*, 2.3.30, p. 141, lin. 73 (no attribution; *est autem tactus etiam quorundam aliorum ...*)

cf. Thomas Aquinas, *Expositio super Iob*, 16, p. 101 (no attribution; *dolor ... ex solutione continui proveniens*)

h) p. 137:

Every disposition contrary to that of the body is perceived in the period of change, but not afterwards when it has become natural; example of the fever – *dicemus etiam quod ...*

Petrus Hispanus, *Scientia libri de anima*, 6.10, p. 248 (no attribution; *unde innaturales ...*)

Albertus Magnus, *De homine*, 33.4, pp. 292–3 (no attribution; *... ethicus non sentit calorem suum*)

Albertus Magnus, *Super Ethica*, 2.2, p. 100

—, 7.5, p. 539

—, 10.8, pp. 735–6

Albertus Magnus, *De anima*, 2.3.33, p. 146, lin. 47 (no attribution; *sed ethicus ...*)

—, 3.2.14, p. 197, lin. 18 (no attribution; *sicut becticus suum calorem non sentit*)

Thomas Aquinas, *Scriptum super sententiis*, IV.49.3.2.c

i) p. 137:

Touch differs from other senses in that it is delighted and sad without any mediation – *ergo dolor et remedium doloris ...*

Jean de la Rochelle, *Summa*, 94, p. 238 (no attribution; *notanda est ergo differentia ...*)

Petrus Hispanus, *Scientia libri de anima*, 6.9, p. 234 (no attribution; *in omni operatione ...*)

—, 6.10, p. 252 (no attribution; *soli autem tactui ...*)

Albertus Magnus, *De homine*, 33.4, p. 293

Albertus Magnus, *Super Dionysium de caelesti hierarchia*, 2, p. 33

Albertus Magnus, *Super Ethica*, 1.9, p. 49

—, 3.12, p. 203

—, 7.8, p. 552

—, 10.7, p. 731

John Pecham, *Tractatus de anima*, 10, p. 34

j) p. 138:

One of the properties of touch is that its organ (flesh and nerves) perceives by contact, even though there is no medium at all – *ex proprietatibus autem tactus ...*

cf. Anonymous (Gauthier 1985), *Lectura in librum de anima*, 2.20, p. 395, lin. 255 (no attribution)

Albertus Magnus, *De homine*, 33.3, pp. 288–9a (*Hoc idem videtur per Avicennam sic ... Qui dicit sic ... Item Avicenna: Manifestum ... Item videtur per Avicennam ...*)

Albertus Magnus, *Quaestiones de animalibus*, 3.7, p. 128 (*sed organum tactus est nervus secundum Avicennam*)

Albertus Magnus, *De anima*, 2.3.31, p. 143 (*tres magni viri in Peripateticorum secta ...*)

—, 2.3.33, p. 146 (*Alexander et Themistius et Avicenna ...*)

—, 2.3.34, p. 147 (*et ideo Avicenna et multi alii hanc sententiam Aristotelis imitari contempserunt ...*)

Anonymous (Bazán), *Quaestiones de anima*, 2.31, p. 450 (*in oppositum sunt isti quatuor, scilicet Commentator, Albertus Magnus, Themistius et Avicenna dicentes omnes quod caro est medium tactus et non organum et nervus est organum*)

k) p. 140:

Another property of touch is that the whole skin perceives with this sense because of the sense's role as a guard – *ex proprietatibus etiam tactus est quod tota cutis ...*

Dominicus Gundissalinus, *De anima*, 9, p. 70, lin. 20–29 (no attribution)

Jean de la Rochelle, *Summa*, 94, p. 238 (no attribution; *nota etiam aliam differentiam ...*)

Albertus Magnus, *De homine*, 33.3, p. 289b (*videtur etiam per Avicennam quod multiplex ...*)

cf. Albertus Magnus, *Quaestiones de animalibus*, 12.5, pp. 227–8

—, 12.7, p. 235 (*tactus est custos totius corporis machinae ut dicit Philosophus et Avicenna*)

l) p. 141:

There seem to be many faculties of touch; but they have only one instrument – *videntur autem virtutes ...*

Albertus Magnus, *De homine*, 33.2, p. 284b

—, 33.3, p. 289b (*Item Avicenna. Non oportet necessario ...*)

m) pp. 141–2:

The medium of touch (which is its natural instrument) has qualities in common with its object – *omne autem medium ...*

Anonymous (Gauthier), *De anima et de potentiis eius*, p. 36, lin. 212 (no attribution)

cf. Roger Bacon, *Opus maius*, 5.10.2, p. 77 (*... medium et sensus non debent habere naturas sensibilibus ...*)

n) p. 142:

Human beings have a highly developed sense of touch since among all animals they are closest to the equilibrium – *quia homo ...*

Anonymous (Gauthier), *De anima et de potentiis eius*, p. 36, lin. 216 (no attribution; *unde homo ...*)

Petrus Hispanus, *Scientia libri de anima*, 6.10, p. 253 (no attribution; *propter hoc ...*)

## II,4

### a) p. 143:

The faculty of taste: It differs from touch in that it needs a medium, the humour of saliva – *gustus sequitur* ...

Petrus Hispanus, *Scientia libri de anima*, 6.7, p. 222 (no attribution; *humor salivalis*)

—, 6.11, p. 257 (no attribution; *concurrit autem ad gustum* ...)

cf. Albertus Magnus, *Quaestio de sensibus corporis gloriosi*, 2.4, p. 122

Albertus Magnus, *De anima*, 2.3.27, p. 138, lin. 47 (*est autem hoc medium non humor salivalis* ...)

Vincent of Beauvais, *Speculum naturale*, 25.73, p. 1821

cf. Thomas Aquinas, *De anima*, 2.21, p. 156, lin. 115 (no attribution; *saliva*)

### b) pp. 143–4:

Question: whether the medium (the saliva) is changed by mixing with particles of the tasted object or without – *est autem hic locus* ...

Albertus Magnus, *De homine*, 32.4, p. 280

Vincent of Beauvais, *Speculum naturale*, 25.73, p. 1821 (from *De homine*)

### c) p. 145:

Enumeration and discussion of the flavours – *sapores autem* ...

Dominicus Gundissalinus, *De anima*, 9, p. 69, lin. 8–18 (no attribution)

cf. Albertus Magnus, *De anima*, 2.3.29, p. 140, lin. 37 (cf. also Avicenna, *De anima* II,3, pp. 132–4)

### d) p. 146:

The faculty of smelling: Human beings do not smell things as intensively as animals – *de olfactu* ...

cf. John Blund, *Tractatus de anima*, 21, p. 79, lin. 27 (no attribution)

Albertus Magnus, *De homine*, 28.2, p. 258a

Vincent of Beauvais, *Speculum naturale*, 25.68, p. 1818 (from *De homine*)

### e) p. 147:

Human beings have only few names for different smells – *et ideo apud eum* ...

Dominicus Gundissalinus, *De anima*, 9, p. 69, lin. 19 (no attribution)

### f) p. 148:

The medium of smell is a body without smell like air and water – *medium autem* ...

Albertus Magnus, *De homine*, 30, p. 270a

Vincent of Beauvais, *Speculum naturale*, 25.65, p. 1816 (from *De homine*)

### g) p. 148:

There are different opinions on smelling. The first says that the medium is mixed

with particles issued by the smelling body like a vapor – *iam autem dissenserunt* ...

cf. John Blund, *Tractatus de anima*, 14.1, p. 52, lin. 1 (no attribution)

Petrus Hispanus, *Scientia libri de anima*, 6.12, p. 268 (no attribution; *primus est quod* ...)

Albertus Magnus, *De homine*, 30, p. 269b (*quaeritur* ...)

Albertus Magnus, *Quaestio de sensibus corporis gloriosi*, 2.3, p. 122

Vincent of Beauvais, *Speculum naturale*, 25.65, pp. 1817–18 (from *De homine*)

### h) p. 148:

The second says that smell is delivered through permutation of the medium – ... *permutationem medii* ...

Petrus Hispanus, *Scientia libri de anima*, 6.12, p. 269 (no attribution; *secundus modus est* ...)

Albertus Magnus, *De homine*, 30, p. 269b (*quaeritur* ...)

Albertus Magnus, *Quaestio de sensibus corporis gloriosi*, 2.3, p. 122

Vincent of Beauvais, *Speculum naturale*, 25.65, pp. 1817–18 (from *De homine*)

### i) p. 148:

The third says that something is transmitted without any change in the medium – ... *redditur sine permixtione* ...

Anonymous (Gauthier), *De anima et de potentiis eius*, p. 41, lin. 281 (no attribution)

Petrus Hispanus, *Scientia libri de anima*, 6.12, p. 270 (no attribution; *tertius modus est* ...)

Albertus Magnus, *De homine*, 30, p. 269b (*quaeritur* ...)

Albertus Magnus, *Quaestio de sensibus corporis gloriosi*, 2.3, p. 122

Vincent of Beauvais, *Speculum naturale*, 25.65, pp. 1817–18 (from *De homine*)

### j) pp. 148–9:

Arguments used by the partisans of the first theory (vapor), example of the apple – *debemus autem nos* ...

John Blund, *Tractatus de anima*, 14.2, p. 53, lin. 18 (no attribution)

Anonymous (Gauthier), *De anima et de potentiis eius*, p. 39, lin. 245 (no attribution)

cf. Anonymous (Gauthier 1985), *Lectura in librum de anima*, 2.18, p. 370, lin. 240 (no attribution)

Petrus Hispanus, *Scientia libri de anima*, 6.12, p. 268 (no attribution; *huius autem modi assertio* ...)

Albertus Magnus, *De homine*, 30, p. 270 (no attribution; *contra hoc est quod odorabilia*)

Albertus Magnus, *De anima*, 2.3.25, p. 136, lin. 9

### k) p. 149:

Arguments used by the partisans of the second theory (permutation) – *qui autem dixerunt de permutatione* ...

John Blund, *Tractatus de anima*, 14.2, p. 53, lin. 22 (no attribution)

Petrus Hispanus, *Scientia libri de anima*, 6.12, p. 269 (no attribution; *nam si per hanc* ...)

### l) pp. 149–50:

Arguments used by the partisans of the third theory (transmission without change): example of birds that fly to a distant place for prey – *qui autem dixerunt de redditu*

John Blund, *Tractatus de anima*, 14.2, p. 53, lin. 28 (no attribution)  
 cf. Michael Scot, *Liber introductorius*, f. 47vb (no attribution; *nam sic sunt vultures vivi olphatus quod existentes in francia vel in roma etcetera sentiunt foetorem cadaveris ...*)  
 Petrus Hispanus, *Scientia libri de anima*, 6.12, p. 271 (no attribution; *nam ex odorifero ...*)  
 —, 6.12, p. 271 (no attribution; *et divulgatum est quod in graecia ...*)  
 Albertus Magnus, *De homine*, 30, p. 269 (no attribution; *quod est contra hoc experimentum ...*)  
 Albertus Magnus, *Quaestio de sensibus corporis gloriosi*, 2.3, p. 122  
 Albertus Magnus, *De anima*, 2.3.25, p. 135, lin. 45 (no attribution)  
 Vincent of Beauvais, *Speculum naturale*, 25.66, p. 1817  
 Anonymous (Vennebusch), *Quaestiones in tres libros de anima*, 2.49, p. 228  
 cf. Thomas Aquinas, *De anima*, 2.20, p. 151, lin. 20 and p. 152, lin. 64 (no attribution; *sicut patet de vulturibus ...*)

m) pp. 150–51:

The first theory is possible – *nos autem dicimus ...*

Albertus Magnus, *De anima*, 2.3.25, pp. 135–6 (*Avicenna tamen sequens Platonem dicit ... – ... Plato et Avicenna in hac parte non verum dixerunt*)

n) p. 151:

The second theory is possible – *iam autem nosti quod ...*

cf. John Blund, *Tractatus de anima*, 14.2, p. 54, lin. 1 (no attribution)  
 Petrus Hispanus, *Scientia libri de anima*, 6.12, p. 270 (no attribution; *sed potius per virtutem ...*)  
 —, 6.12, p. 272 (no attribution; *et si odoriferum sicut muscus ...*)  
 Albertus Magnus, *De homine*, 30, p. 269b (no attribution; *hoc idem patet in camphora ...*)  
 Albertus Magnus, *Super Ethica*, 3.12, p. 202

o) p. 152:

To counter the arguments of the birds: they may have seen the prey – *sed id quod induxerunt ...*

Petrus Hispanus, *Scientia libri de anima*, 6.12, pp. 271–2 (no attribution; *et aves tygres ...*)  
 Albertus Magnus, *De homine*, 30, p. 270b  
 Albertus Magnus, *De anima*, 2.3.6, p. 106, lin. 8  
 —, 2.3.16, p. 123 (no attribution; *ventus frequenter aufert sonos et odores ...*)  
 —, 2.3.25, p. 136 (*ad experimenta autem dicit ...*)

II,5

a) p. 154:

Sound is not an existing and stable thing – *dicemus igitur quod sonus ...*

Petrus Hispanus, *Scientia libri de anima*, 6.14, p. 289 (no attribution; *non habet autem ...*)  
 Thomas Aquinas, *De anima*, 2.16, p. 136, lin. 33 (no attribution)

b) p. 155:

Sound is something that happens only due to pulling out or hitting – *sonus quiddam*

*est quod accidit ...*

John Blund, *Tractatus de anima*, 12, p. 39, lin. 11 (no attribution)  
 cf. Albertus Magnus, *De homine*, 24.4.sol., pp. 237–8 (no attribution)  
 cf. Anonymous (Gauthier 1985), *Lectura in librum de anima*, 2.16, p. 344, lin. 321 (no attribution)

c) p. 156:

What is sound? (1) the pulling or hitting itself? (2) the motion that is produced? (3) a third thing? – *debemus autem notificare ...*

cf. Anonymous (Gauthier 1985), *Lectura in librum de anima*, 2.16, p. 346, lin. 369 (no attribution)  
 Albertus Magnus, *De anima*, 2.3.18, p. 125, lin. 65 (no attribution; *fuere autem quidam antiquorum ...*)

d) p. 158:

Is sound something existing outside or only together with hearing? – ... *an non accidat ...*

Albertus Magnus, *De anima*, 2.3.18, p. 125, lin. 72 (no attribution; *et ad hoc dixerunt ...*)

e) p. 161:

Arguments against the thesis that sound does not exist by itself – *si enim sonus ...*

Albertus Magnus, *De anima*, 2.3.18, p. 125, lin. 78 (no attribution; *sed hoc citius refellitur ...*)

f) pp. 163–4:

The effect of hardness of the target – *durities autem iuvat ...*

John Blund, *Tractatus de anima*, 12, p. 46, lin. 21–8 (no attribution)

g) p. 164:

Sound originates out of the undulation of air or water that is pressed between two beating and resisting things – *ergo sonus accidit ...*

Albertus Magnus, *De homine*, 24.1, pp. 232–3  
 cf. —, 26, p. 250b

h) p. 165:

Explanation of the echo – *sed tinnitus accidit ...*

Petrus Hispanus, *Scientia libri de anima*, 6.14, p. 291 (no attribution; *sicut patet in motu pilae ...*)  
 Albertus Magnus, *De homine*, 24.5.2, p. 240a ( ... *tinnitus scilicet echo ...*)  
 Albertus Magnus, *De anima*, 2.3.19, p. 126 (*tinnitus autem ab Avicenna vocatur echon ...*)  
 Thomas Aquinas, *De anima*, 2.16, p. 138, lin. 203 (no attribution)

i) pp. 165–6:

Question: is echo the sound of the arriving air or of the air that is reflected? The

latter – *remansit autem ut consideremus ...*

Albertus Magnus, *De homine*, 24.5.2, p. 240a

j) pp. 166–7:

Every sound has an echo, but often it is not heard – *omnis sonus tinnitum habet ...*

John Blund, *Tractatus de anima*, 13, p. 48, lin. 23–8 (no attribution)

Albertus Magnus, *De homine*, 24.5.2, p. 240a

k) pp. 167–8:

Hearing does not consist of many faculties: sound is the first perceived thing, the rest are accidentia – *poterit autem hic ...*

Dominicus Gundissalinus, *De anima*, 9, p. 69, lines 25–8 (no attribution)

Albertus Magnus, *De homine*, 25.3, pp. 248a and 249a

### III,1

a) pp. 170–71:

The distinction between natural light, acquired light and shining – *una est qualitas quam apprehendit visus in sole et igne (= lux) ... secunda est id quod resplendet ex his (= lumen) ... tertia est ... radiositas ...*

John Blund, *Tractatus de anima*, 10, p. 33 (misunderstood: *splendorem autem dicit esse passionem generatam ex colore ...*)

Anonymous (Gauthier), *De anima et de potentiis eius*, p. 37 (no attribution; *lux in corpore luminoso lux est ... radius autem ...*)

Anonymous (Callus), *De potentiis animae et obiectis*, p. 151 (no attribution; *lux quae est in corpore luminoso sicut est sol ...*; influenced by Anonymous (Gauthier))

Albertus Magnus, *De homine*, 21.1, p. 184b

Albertus Magnus, *Super Dionysium de divinis nominibus*, 2, p. 63

—, 2, p. 83

Albertus Magnus, *Super Iohannem*, 1.9, p. 42

Albertus Magnus, *De anima*, 2.3.8, p. 110, lin. 63 (no attribution)

Albertus Magnus, *De intellectu et intelligibili*, 3.1, p. 498b (no attribution)

Anonymous (Gauthier 1985), *Lectura in librum de anima*, 2.6, p. 220, lin. 474 (no attribution)

Roger Bacon, *De multiplicatione specierum*, 1.1, p. 4 (no attribution)

cf. Thomas Aquinas, *Scriptum super sententiis*, II.13.1.3.c, p. 334 (no attribution)

Thomas Aquinas, *De anima*, 2.14, p. 129, lin. 306 (no attribution: *lux est qualitas ...*)

—, 2.14, p. 129, lin. 318 (no attribution)

Witelo, *Perspectiva*, V.5.1, p. 191 (no attribution)

John Pecham, *Tractatus de perspectiva*, 2, p. 28 (no attribution)

b) pp. 171–2:

Light (*lumen*) as the affection of a body opposed to natural light (*lux*) – *hoc lumen erit in eo affectio corporis habentis lucem cum fuerit oppositum illi*

Albertus Magnus, *De homine*, 21.1, p. 177a

Albertus Magnus, *Super secundum sententiarum*, 13.C.2, p. 245

Albertus Magnus, *Summa theologiae*, 2.11.51.1, p. 535

Bonaventura, *In quatuor libros sententiarum*, 2.8.3.2, p. 328

Roger Bacon, *Opus maius*, 4.4.1, p. 128 (probably misrepresenting Avicenna's theory)

—, 5.9.1, p. 62

c) p. 172:

Luminous bodies cover what is behind them, example of a lamp – *obscurans quod est post ipsum*

Albertus Magnus, *De homine*, 21.4, p. 205b

Albertus Magnus, *Super secundum sententiarum*, 14.A.2, p. 259

Albertus Magnus, *De anima*, 2.3.9, p. 111, lin. 72 (example of a lamp)

d) p. 173:

There is no colour in actuality without light – *color enim in effectu non accidit nisi ex causa luminis*

Albertus Magnus, *De anima*, 2.3.7, p. 108, lin. 47

Roger Bacon, *Opus maius*, 5.8.1, p. 54

Anonymous (Bazán), *Quaestiones de anima*, 2.18, p. 431

e) p. 175:

Darkness is nothing else but a privation of light – ... *et omnino non est nisi privatio luminis ...*

John Blund, *Tractatus*, 9, pp. 27–8 (*sicut testatur tam Avicenna quam Algazel ...*)

Albertus Magnus, *De homine*, 21.1, p. 181a

### III,2

a) p. 178:

Description of the theory of light as the manifestation of colour – *quidam dixerunt quod hoc lumen nihil est ... nisi manifestatio colorati*

Albertus Magnus, *De homine*, 21.1, p. 178a (no attribution; ... *manifestationem ...*)

Albertus Magnus, *De anima*, 2.3.11, p. 115 (no attribution to Avicenna: *opinio ... Avempacis et suorum sequacium*)

Thomas Aquinas, *De anima*, 2.14, p. 128, lin. 287 (no attribution)

b) pp. 178–9:

Arguments against the theory of light as corporeal particles – *aut enim erunt pervia ... similiter si ... essent luminatae ...*

Albertus Magnus, *Super Dionysium de divinis nominibus*, 2, p. 64 ( ... *sustinemus ... opinionem quae est Aristotelis, Avicennae et Averrois et omnium philosophorum quod lux non est corpus ...*)

Albertus Magnus, *De anima*, 2.3.9, p. 111, lin. 81 (the refuted theory is ascribed to Democrit)

Albertus Magnus, *Summa theologiae*, II.11.51.1, p. 536 (again ascribed to Democrit)

Thomas Aquinas, *Scriptum super sententiis*, II.13.1.3.c, p. 333 ( ... *contra hoc Avicenna ... unde haec positio tamquam absurda ... relinquenda est*)

c) p. 178:

The example of crystals which are not translucent anymore but luminous if made dense – *sicut parvissimae partes crystalli* ...

- Albertus Magnus, *Super quartum sententiarum*, 44.C.27, p. 579  
 —, 44.C.30, p. 582  
 Albertus Magnus, *Super Dionysium de caelesti hierarchia*, 13, p. 194  
 —, 15, p. 227  
 Albertus Magnus, *De anima*, 2.3.9, p. 112, lin. 10  
 —, 2.3.12, p. 117, lin. 25 (no attribution; ... *lapides pretiosi* ...)  
 Thomas Aquinas, *Scriptum super sententiis*, II.2.2.2.1, p. 72  
 —, IV.44.2.4.1 (misrepresented: *omne corpus luminosum constat ex partibus perviis*)

d) p. 180:

Arguments used by the atomists – the apparent locomotion of light etc. – *sed ratio a qua pendent auctores ... motu locali* ...

- Albertus Magnus, *De anima*, 2.3.9, p. 111, lin. 50  
 Albertus Magnus, *Summa theologiae*, II.11.51.1, p. 536  
 Thomas Aquinas, *De anima*, 2.14, p. 126, lin. 208 (no attribution)

e) pp. 180–81:

Refutation of these arguments as being metaphorical – ... *argumentationes falsae sunt ... nomina sunt transumptiva* ...

- Albertus Magnus, *De anima*, 2.3.9, p. 112, lin. 16 (no attribution)  
 Thomas Aquinas, *Scriptum super sententiis*, II.13.1.3.ad 4, p. 336  
 Thomas Aquinas, *De anima*, 2.14, p. 126, lin. 222 (no attribution)

f) p. 181:

Another refutation: the movement of light does not happen in a perceptible time – ... *motum mobilis cuius tempus non sentitur* ...

- Albertus Magnus, *De anima*, 2.3.9, p. 112, lin. 38 (no attribution)

g) p. 181:

Another refutation: one would have to say that shadows are corporeal because they move – *sed verbum de locali motu radii non est potius quam de motu locali umbrae* ...

- Albertus Magnus, *De homine*, 21.1, p. 182  
 Albertus Magnus, *Super Dionysium de divinis nominibus*, 2, p. 62 and p. 64  
 Albertus Magnus, *De anima*, 2.3.10, p. 112, lin. 21 (no attribution)

h) p. 185:

Argument of the glow-worms in support of the theory of the manifestation of colour – *dixerunt etiam quod animalia quae nocte lucent* ...

Thomas Aquinas, *De anima*, 2.14, p. 128, lin. 287 (no attribution; used as an argument not for but against the theory)

III,3

a) pp. 188–9:

Two arguments against the theory of light as the manifestation of colour – *si autem concesserimus* ...

- John Blund, *Tractatus*, 10, p. 32, lin. 15 (no attribution)  
 Albertus Magnus, *De homine*, 21.1, p. 179a (*color qui est in ipsa albedine est albedo*)  
 Albertus Magnus, *De anima*, 2.3.11, p. 116, lin. 13 (no attribution)  
 Thomas Aquinas, *Scriptum super sententiis*, II.13.1.3.c, p. 334 ( ... *banc positionem Avicenna multipliciter improbat* ...)

b) p. 194:

Definition of natural light as a quality which is the perfection of the translucent – *lux enim est qualitas quae ... est perfectio translucentis* ...

- John Blund, *Tractatus*, 10, p. 32, lin. 29 (*lucem appellat commentator* ...)  
 Albertus Magnus, *De homine*, 21.1, p. 177a  
 Albertus Magnus, *Super secundum sententiarum*, 13.C.2., p. 245  
 Albertus Magnus, *Summa theologiae*, II.11.51.1, p. 535  
 Thomas Aquinas, *Scriptum super sententiis*, II.13.1.3.sc, p. 332

c) p. 194:

Definition of acquired light as the quality which non-translucent bodies borrow from luminous bodies – *lumen vero est qualitas quam mutuatur corpus non translucens a lucido* ...

- John Blund, *Tractatus*, 10, pp. 32–3 (misunderstood: *lumen vero appellatur passionem generatam in translucente ut in aere*)  
 cf. Petrus Hispanus, *Scientia libri de anima*, 6.13, p. 281 (no attribution; *lumen vero* ...)  
 Albertus Magnus, *De homine*, 21.1, p. 177a  
 Albertus Magnus, *Super secundum sententiarum*, 13.C.2, p. 245  
 Albertus Magnus, *Summa theologiae*, II.11.51.1, p. 535  
 Thomas Aquinas, *Scriptum super sententiis*, II.13.1.3.sc, p. 332

d) p. 194:

Definition of colour as a quality which is perfected by natural light – *color autem est qualitas quae perficitur ex luce* ...

- Petrus Hispanus, *Scientia libri de anima*, 6.13, p. 281 (no attribution; *color autem* ...)  
 Albertus Magnus, *De homine*, 21.3.1, p. 187a,b (two references)  
 —, 21.3.1, p. 190b and p. 191a  
 Vincent of Beauvais, *Speculum naturale*, 25.39, p. 1800  
 cf. Anonymous (Bazán), *Quaestiones de anima*, 2.18, p. 432



e) p. 195:

The egg of a hen as an example for objects which shine at night – *iam autem vidi ego ovum gallinae ...*

Albertus Magnus, *De homine*, 21.2, p. 186a

Albertus Magnus, *De anima*, 2.3.12, p. 117, lin. 15 (no attribution; *et viderunt quidam iam ovum gallinae lucens ...*)

f) pp. 195–6:

The example of the stars which are seen only in the dark – *sed stellae non videntur nisi in tenebris ...*

Albertus Magnus, *De anima*, 2.3.16, p. 122, lin. 73 (no attribution: *et ideo stellae in die non videntur ...*)

Albertus Magnus, *De sensu et sensato*, 1.10, p. 25a (no attribution; *et ideo videntur stellae de nocte ...*)

### III,4

a) pp. 198–9:

One theory about colours is that white is produced by the translucent (or that it is light) – *... color enim albus non fit nisi ex translucenti ...*

Albertus Magnus, *De sensu et sensato*, 2.2, p. 43a (no attribution; *color est ipsa ...*)

b) pp. 200–201:

Description of the different subgroups of partisans of this theory – *... quidam autem ex eis posuit ... quidam autem ... dixerunt autem alii ...*

Albertus Magnus, *De sensu et sensato*, 2.2, pp. 43–4 (no attribution)

c) pp. 201–5:

Arguments and examples against this theory – *... id quod mihi difficilius est definire ... dicimus ita esse sed non in corpore continuo ... gypsum ... ova ... lac virginis ...*

Albertus Magnus, *De sensu et sensato*, 2.2, pp. 44–5 (*ex omnibus autem ...*)

d) pp. 205–6:

One of the arguments: white changes into black in three different ways – *album transit paulatim in nigrum tribus viis ...*

Dominicus Gundissalinus, *De anima*, 9, p. 69, lin. 30 – p. 70, lin. 2

Albertus Magnus, *De homine*, 21.3.2, pp. 193a and 196b

Albertus Magnus, *De sensu et sensato*, 2.2, p. 45a (no attribution; *... tribus modis ...*)

cf. Petrus Hispanus, *Scientia libri de anima*, 6.13, p. 282 (no attribution; *sunt autem duo ...*)

e) pp. 208–10:

Further arguments against this theory – *... iam autem notum est quod ... sed hoc quod dixerunt quod ...*

Albertus Magnus, *De sensu et sensato*, 2.2, pp. 45–46a (*... haec igitur est opinio Avicennae*)

f) pp. 210–11:

Arguments against a second theory, namely that all bodies are coloured – *... sed sententiam secundam ...*

Albertus Magnus, *De sensu et sensato*, 2.2, p. 46 (no attribution; *sententia autem quae <dicunt> de poris ...*)

### III,5

a) pp. 212–14:

Description of three well-known theories of vision – *... dicimus ergo quod famosae sententiae de hoc tres sunt ...*

Albertus Magnus, *De homine*, 22, p. 210 (*super hoc enim tangit Alpharabius in libro suo de sensu et sensato et Avicenna ... quatuor opiniones antiquorum*)

—, 22, p. 215b (no attribution: *item probatur quod radii egredientur ad modum pyramidis ...*)

Albertus Magnus, *De sensu et sensato*, 1.5, p. 8 (*... ponere probabiliore opinione antiquorum ... sicut autem referunt Averroes et Avicenna et <Huchaym> in perspectiva sua*)

Vincent of Beauvais, *Speculum naturale*, 25.43, p. 1803 (from *De homine*, p. 210)

Roger Bacon, *De multiplicatione specierum*, 1.2, p. 32 (*... Albacen et Avicenna et Averrois ... non est contra eos haec veritas*)

b) pp. 214:

Arguments used by the partisans of the first two theories: comparison with the other senses – *... ratiocinatae sunt autem primae duae sententiae dicentes ... sicut odoratus qui attractione cogit odorem obviare ...*

Roger Bacon, *De multiplicatione specierum*, 4.3, p. 224

Roger Bacon, *Opus maius*, 5.9.4, p. 73

c) pp. 215:

Further arguments (the illuminated nose etc.) – *... resplendet super nasum suum ... cum aperit oculos, videtur videre radios coram oculis suis ...*

Albertus Magnus, *De sensu et sensato*, 1.4, p. 8 (no attribution; *... super nasum ...*)

—, 1.6, p. 11b (*... <Avicenna> enumerat ...*)

d) pp. 216–19:

Further arguments (the mirror, infinitely short time, pictures mirrored on the surface of the eye etc.) – *... dicunt quod specula testantur esse radiorum et splendorem*

*eorum ...*

Albertus Magnus, *De anima*, 2.3.14, p. 120, lin. 39 (no attribution: ... *quando duo homines inspiciunt oculos suos ...*)

Albertus Magnus, *De sensu et sensato*, 1.6, pp. 12a–13a (no attribution; various arguments: *de facie oculi ... de speculo ... in tanta profunditate ... tempus sit divisibile in infinitum etc.*)

e) pp. 220–25:

A sequence of arguments that refute the theories of extramission (people who gather would see better, even the heaven would be influenced by vision, etc.) – ... *qui sunt debiles visu, cum convenerint, videant fortius ... quali passione patiaturs (scil. medium) ...*

Albertus Magnus, *De homine*, 22, pp. 218b–219a and 220 (no attribution; *si aliquis stet iuxta multos ... melius videbit ... debilem visum ... coelum impressionem habens ...* (p. 220a:) ... *pleni poris vacuis ...*)

Albertus Magnus, *De sensu et sensato*, 1.7, pp. 13a–14b (no attribution; almost all arguments are taken over)

f) pp. 225–34:

Refutation of the four possible ways in which corporeal rays could be sent from the eye – ... *dicemus ergo quod eius dispositio necesse est ut sit bis quatuor modis ...*

Albertus Magnus, *De homine*, 22, pp. 219b–220a (no attribution; only three possible ways are mentioned; *aut radius ... manu abscissa ...*)

Albertus Magnus, *De sensu et sensato*, 1.7, pp. 14b–17a (no attribution; follows Avicenna closely; ... *modis quatuor ...*)

g) pp. 230–34:

The argument of saffron thrown into a pond (as part of the refutation of the third way) – ... *si autem quis dixerit ... sicut crocus de quo parum quid tingit multum aquae ...*

Albertus Magnus, *De homine*, 22, p. 222a (no attribution)

Albertus Magnus, *De sensu et sensato*, 1.7, p. 16a (no attribution)

### III,6

a) pp. 235–53:

Refutation of claims about the mirror and other arguments of the partisans of extramission theory – *Accedamus nunc ad enumerandum aliqua inconvenientia ...*

Albertus Magnus, *De homine*, 22, p. 221 (no attribution; ... *quare non apparent simulacra in superficiebus parvis planis ... et quare apparent in asperis ...*; draws on pp. 239–40)

Albertus Magnus, *De sensu et sensato*, 1.8 and 1.9, pp. 17b–24b (no attribution, apart from the last sentence (p. 24): *haec igitur sunt quae ex dictis Peripateticorum extraximus et praecipue Avicennae et Averrois*; Albertus Magnus follows Avicenna's text very closely and draws from every page in sequence.)

### III,7

a) p. 253:

Description of the extramissionist's claim that close objects cannot be seen and that the transmission of images is impossible – *solvemur nunc quaestiunculam praedictam ... quod ... propinquitat prohiberet videre et quod impossibile est ... figuras moveri ...*

Albertus Magnus, *De sensu et sensato*, 1.10, p. 24 (no attribution; ... *res de propinquo non videtur ...*)

b) p. 255:

The examples of the image of the sun remaining in the eye and of the raindrop seen as a line (in support of Avicenna's theory of the perception of images) – ... *forma solis remanet in oculo ... similiter imaginatio cadentis guttae videtur linea ...*

Albertus Magnus, *De sensu et sensato*, 1.14, p. 34b (no attribution; *post excellentem qualitatem ... de gutta cadente ...*)

c) p. 257:

The argument that some animals (lions and serpents) have eyes which sent forth light – granted by Avicenna – ... *sicut oculus leonis et serpentis ... multa ex animalibus vident in tenebris quoniam illuminant rem ...*

John Blund, *Tractatus de anima*, 9, p. 30, lin. 8–17 (no attribution; ... *illuminat rem visam ...*)

Albertus Magnus, *De homine*, 22, pp. 216b and 225 (*item, sicut supra ... licet Avicenna dicat quod ... tamen hoc non placet mihi*)

Albertus Magnus, *De sensu et sensato*, 1.10, p. 25b (no attribution; ... *ut leo, lupus, serpens, cattus ...*)

d) p. 257:

The opinion that one pupil is filled with spirit if the other eye is closed – granted by Avicenna – ... *de verbo quod una pupilla impletur cum altera clauditur ...*

Albertus Magnus, *De homine*, 22, p. 216b (no attribution; *videmus oculo uno diu clauso ...*)

Albertus Magnus, *De sensu et sensato*, 1.10, p. 25b (no attribution; ... *quando alter clauditur ...*)

e) pp. 257–60:

Three answers (one accepted, one probable, one Avicenna's own theory) to the extramissionist's theory of how images come about in mirrors – ... *sed oppositio de verbo speculi ... duorum autem quae possunt responderi, unum respondebimus affirmantes illud, et aliud dicemus quasi verisimile. Quod autem affirmamus ...*

Albertus Magnus, *De sensu et sensato*, 1.10, p. 26a–b (no attribution; Albertus uses Avicenna mainly in the second answer which he mixes with Avicenna's own theory: *sed primus modus melior est ...*)

f) pp. 260–61:

Not all action and affection happens through contact – *secundo ... non tamen est necesse ut omnis actio et passio fiat per offensionem et contactum ...*

Albertus Magnus, *De homine*, 22, p. 227b (*non omne agens ...*)  
 Albertus Magnus, *De sensu et sensato*, 1.10, p. 27a–b (no attribution; ... *non enim oportet ...*)

g) p. 262:

The mirror functions like a second medium – ... *non impossibile ut loco unius medii sint duo media ...*

Albertus Magnus, *De sensu et sensato*, 1.10, p. 27b (no attribution, but the context is a presentation of Avicenna's theory; ... *in duabus distantiis ... et hic est modus conversus ei quem ponunt Auctores radiorum ... magis intelligibile est dictum Aristotelis quam dictum Avicennae ...*)

h) p. 264:

The example of motion which produces heat (in support of Avicenna's theory) – ... *sicut est motus ex quo accidit in aliquod corpus calor ...*

Albertus Magnus, *De homine*, 22, p. 227b ( ... *facit calorem ...*)

### III,8

a) pp. 267–8:

It is important to deal with the question why sometimes one thing is seen doubled because the extramissionists depend on its answer – ... *hoc quod unum videtur quasi duo nimis considerandum est ...*

Albertus Magnus, *De sensu et sensato*, 1.11, p. 28a (no attribution; *remanet autem ...*)

b) p. 268:

Avicenna's own theory of intromission of images – ... *verum est autem quod simulacrum visi redditur ...*

Albertus Magnus, *De homine*, 2.19.1.ad3, p. 166a ( ... *est in nervo optico ...*)  
 Albertus Magnus, *De anima*, 2.3.14, p. 120, lin. 44 (Albertus Magnus misunderstands the passage as a solution to the problem of double sight: ... *solvit bene Avicenna ...*)  
 Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 134va, p. 394 (no attribution; *aliter enim una res visa videretur duae ...*)

c) p. 268:

The two optical nerves join in the form of a cross – ... *a duobus nervis concavis ubi coniunguntur in modum crucis ...*

cf. Thomas Aquinas, *De sensu et sensato*, 1.4, p. 29 (no attribution)

d) pp. 272–8:

There are four causes why one thing is seen doubled – ... *et deinde redibimus ad*

*nostrum propositum dicentes quod causa videndi unum duo quadruplex est ...*

Albertus Magnus, *De homine*, 22, pp. 226b–227a (no attribution; a free rewriting)  
 Albertus Magnus, *De sensu et sensato*, 1.11, pp. 28b–29a (no attribution; *dicimus igitur ...*)

e) pp. 273:

The second cause: movement of the optical spirit – ... *secunda autem causa est motus visibilis spiritus ... ad anteriora, dextrorsum et sinistrorsum*

Albertus Magnus, *De homine*, 22, p. 223b  
 cf. Albertus Magnus, *De anima*, 2.3.14, p. 120, lin. 53 (no attribution)

f) p. 279:

It is impossible to prove that there are exactly five external senses – ... *nec ego intelligo illud quasi probatum ...*

Albertus Magnus, *De anima*, 2.4.5, p. 154, lin. 71

g) p. 280:

The common sensibles – ... *haec autem sunt dimensiones, numeri ...*

Albertus Magnus, *De anima*, 2.4.6, p. 155, lin. 33 ( ... *Avicenna ... et Hucem Ben Hutuachim plura quam quinque communia ponunt sensata*)

### IV,1

a) pp. 1–5:

The faculty of common sense – *sensus autem qui communis est ...*

Dominicus Gundissalinus, *De anima*, 9, p. 72, lin. 1 – p. 73, lin. 5 (no attribution; leaves out lin. 37–45)  
 cf. Raoul de Longchamps, *In Anticlaudianum*, 65, p. 61, lin. 8 ( ... *de hac virtute loquitur Rhasis in anatomia et multi anitquorum praecipue Arabici*)

Hugh of Saint-Cher, *In quatuor libros sententiarum*, 2.24, f. 65rb (*ab icenus in vi de naturalibus: sensus communis est virtus cui creduntur ... – ... non esset illud*; draws on lin. 6–9)

cf. Grosseteste, *Ecclesia sancta*, p. 176 (no attribution; ... *radicantur in una potentia ex qua hae ramificantur*)  
 Petrus Hispanus, *Scientia libri de anima*, 7.1, p. 300 (no attribution; *et similiter delectatio provenit ...*; draws on lin. 20–26)

cf. Alexander of Hales *et al.*, *Summa theologica*, ii.4.1.2.2.1, pp. 437–8 (*philosophus*)

cf. Albertus Magnus, *De homine*, 35.1, pp. 306 and 308a

—, 35.1, p. 308 (*item non potest ...*; draws on lin. 15–20 and 25–6)

—, 35.1, p. 308 (*praeterea haec ostendunt somnia ...*; draws on lin. 42–52)

—, 35.2, p. 310a (*item Avicenna ...*; draws on lin. 6)

—, 35.2, p. 312 (*tertia ratio ...*; draws on lin. 56–8)

—, 35.2, p. 313 (*ideo etiam dicit ...*; draws on lin. 58–9)

cf. —, 35.4, p. 316a–b

cf. —, 43.1, p. 366 (*forma et perfectio sensuum particularium*)

—, 45.3, p. 416b (*prima obiectio ...*; draws on lin. 50–52)

Albertus Magnus, *Super primum sententiarum*, 17.C.3, p. 470

Vincent of Beauvais, *Speculum naturale*, 25.88, p. 1830 (from *De homine*, p. 312)

- , 25.89, p. 1830 (from *De homine*, p. 306)  
 —, 26.2, p. 1843 (from *De homine*, p. 366)  
 cf. Albert von Orlamünde, *Summa naturalium*, 5.Rec.A.6, p. 52  
 cf. Thomas Aquinas, *De anima*, 2.27, p. 183, lin. 64 (no attribution; ... *ad fontalem radicem* ...)

b) pp. 5–6:

The faculty of imagination and its relation to the common sense – *sed retinere ea* ...

- Dominicus Gundissalinus, *De anima*, 9, p. 73, lin. 6–11 and 14–20 (no attribution)  
 cf. Anonymous (Callus), *De potentiis animae et obiectis*, p. 154, lin. 12 (*dicitur autem sensus communis ... sensus formalis* ...)  
 Roland of Cremona, *Summa theologica*, f. 32vb (no attribution; ... *sensus communis sive imaginatio ut pro eodem accipiat secundum quosdam* ...)  
 —, f. 33ra (no attribution; ... *sensus communis idem est quod imaginativa et hoc est nostra opinio*)  
 Jean de la Rochelle, *Tractatus*, 2.1.3, p. 73 (*nota quod Avicenna quandoque accipit sensum communem, fantasiam, imaginationem pro eodem* ...)  
 Petrus Hispanus, *Scientia libri de anima*, 7.1, p. 301 (no attribution; *habet autem* ...)  
 —, 7.2, p. 312 (no attribution; *dicitur autem ... est autem forte ... virtus una* ...)  
 Albertus Magnus, *De IV coaequaevis*, 4.69, p. 710 (... *imaginatio ab Avicenna dicitur formalis* ...)  
 Albertus Magnus, *De homine*, 37.1, p. 323 (... *formalis et imaginatio* ...)  
 —, 37.1, p. 323 (... *una virtus* ...)  
 —, 37.1, p. 324 (... *retinere ea quae apprehendit* ...)  
 cf. —, 38.4, p. 334 (*quidam auctores ... distinguunt inter phantasiam et imaginativam* ...)  
 —, 43.3.3, p. 379 (... *formalis* ...)  
 Albertus Magnus, *De memoria et reminiscencia*, 1.1, p. 98a (... *vocat formalem vel imaginativam* ...)

c) p. 6:

The imaginative/cogitative faculty – *iam autem scimus* ...

- Dominicus Gundissalinus, *De anima*, 9, p. 73, lin. 21–6 (no attribution)  
 Jean de la Rochelle, *Tractatus*, 2.1.8, p. 76  
 Jean de la Rochelle, *Summa*, 99, p. 243 (*quam virtutem manifestat sic* ...)  
 Vincent of Beauvais, *Speculum naturale*, 27.10, p. 1924 (from Jean, *Summa*, p. 243)  
 Alexander of Hales et al., *Summa theologica*, ii.4.1.2.2.1, p. 435a (*praeterea dicit ... partis rationalis*; mixed with quotation from *CAnon*, ff. 24vb–25ra)  
 Petrus Hispanus, *Scientia libri de anima*, 7.3, p. 315 (no attribution; *dicitur autem cogitativa* ...)  
 —, 8.2, p. 336 (no attribution; *virtus vero dispositiva* ...)

d) pp. 6–9:

Description of the faculty of estimation – *deinde aliquando diiudicamus de sensibilibus per intentiones quas non sentimus* ...

- Dominicus Gundissalinus, *De anima*, 9, p. 73, lin. 36 – p. 75, lin. 13 (no attribution; *aestimatio enim operatur in homine iudicia* ...)

e) p. 8:

Estimation as the leading judging faculty in animals – *quae est domina, iudicans in animali* ...

- Dominicus Gundissalinus, *De anima*, 9, p. 74, lin. 3 (no attribution)  
 Petrus Hispanus, *Notulae super Iohannitii isagoge*, p. 37 (in Alonso's introduction to Petrus' *Scientia*

- (1941), p. 37) (*alia est ratio quae deservit animae sensitivae et haec secundum Avicennam est aestimativa sive virtus aestimativa et haec est communis nobis et brutis*)  
 Petrus Hispanus, *Scientia libri de anima*, 8.2, p. 337 (no attribution; ... *omnium dominatrix* ...)  
 —, 11.1, p. 490 (no attribution; *aestimativae vero circa insensibiles intentiones* ...)  
 cf. Thomas Aquinas, *De veritate*, 25.2, p. 733 (no attribution; *sed vis extimativa ... inest ... secundum quod participat aliquid rationis* ...)  
 cf. Thomas Aquinas, *De anima*, 2.28, p. 190, lin. 196 (no attribution; ... *recte iudicant de agendis per aestimationem naturalem*)  
 cf. Roger Bacon, *Opus maius*, 5.1.4, p. 9 (no attribution; *cogitatio ... domina virtutum sensitivarum et loco rationis in brutis* ...)

f) pp. 8–9:

Memory is the storing-place of connotational attributes ('intentions') (imagination is the storing-place of forms) – *sed unaquaeque istarum habet thesaurum suum* ...  
 This doctrine reappears in chapters V,6 (pp. 145–7) and V,8 (pp. 182–3). Some of the following quotations and adaptations also draw on these chapters, for instance those by Thomas Aquinas. The word *arca* or *archa* instead of *thesaurus* derives from Algazel's *Metaphysica*, p. 170,14.

- Dominicus Gundissalinus, *De anima*, 9, p. 74, lin. 7 (no attribution)  
 Anonymous (Gauthier), *De anima et de potentiis eius*, p. 45, lin. 357 (*unde dicitur arca formarum ab Avicenna*)  
 —, p. 47, lin. 384 (no attribution; ... *thesaurus intentionum* ...)  
 cf. Grosseteste, *In posteriorum analyticorum libros*, 2.6, p. 404 (He opposes *imaginatio/species* and *memoria/intentiones*, which is close also to *De anima*, I,5, pp. 89–90)  
 Michael Scot, *Liber introductorius*, f. 46rb (no attribution; ... *in thesauris memoriae* ...)  
 —, f. 46va (no attribution; ... *per quam species rerum ... servamus. Unde memoria est archa vividae rationis*)  
 William of Auvergne, *De anima*, 7.8, p. 215a (no attribution; ... *ad thesaurum memoriae* ...)  
 Roland of Cremona, *Summa theologica*, f. 33va (no attribution; ... *quia ex virtute formarum relictarum in thesauro memoriae revertuntur boves ad domum possessorum suorum* ...)  
 Jean de la Rochelle, *Tractatus*, 2.1.10, p. 77 (*quia sicut imaginatio* ...)  
 cf. Anonymous (Gauthier 1985), *Lectura in librum de anima*, 2.26, p. 441, lin. 421 (no attribution)  
 cf. Petrus Hispanus, *Scientia libri de anima*, 7.2, p. 313 (no attribution; ... *nocumentum* ...)  
 —, 7.4, p. 320 (no attribution; ... *intentiones ... in memoriae thesauro reponendas* ...)  
 —, 7.5, p. 325 (no attribution; ... *intentiones ... conservat cum sit sicut thesaurus aestimationis* ...) and p. 326 (no attribution; ... *retentio formarum ... retentio intentionum* ...)  
 —, 10.5, p. 435 (no attribution; ... *memoriae thesauro depositas* ...)  
 Albertus Magnus, *De IV coaequaevis*, 4.23.1, p. 471 (... *thesaurus sive theca* ...)  
 Albertus Magnus, *De homine*, 37.1, p. 324b (*expresse dicit* ...)  
 —, 37.3, p. 327b (... *infirmas* ...)  
 —, 38.3, p. 333a (no attribution; ... *corrupta* ...)  
 —, 38.5, p. 335a (no attribution; ... *corrumpitur* ...)  
 —, 40.2, p. 348 (*contra dicunt Avicenna et Algazel quod memoria proprie est conservativa intentionum* ...)  
 cf. —, 57.5, p. 498a (quoting Avicenna's *De anima* V,6, pp. 147–9)  
 Albertus Magnus, *Super tertium sententiarum*, 23.G.14, p. 430 (*sicut dicunt Avicenna et Algazel ... thesaurus ... intentionum particularium* ...)  
 Albertus Magnus, *Super Dionysium de divinis nominibus*, 1, p. 30  
 Albertus Magnus, *Super Ethica*, 6.12, p. 473  
 Albertus Magnus, *De anima*, 2.4.7, p. 157, lin. 59 (*reservatorium ergo formarum sensatarum vocaverunt Peripatetici imaginationem* ...) and p. 158, lin. 16 (no attribution; ... *thesaurus imaginativa* ...)  
 Albertus Magnus, *Summa theologiae*, II.4.14, p. 169 (... *thesaurus formarum sensibilibus* ... The theory is ascribed partly to John of Damascus, partly to Avicenna. The passage is close to *De IV coaequaevis*,

- p. 471)  
 Thomas Aquinas, *Scriptum super sententiis*, i.3.4.1.ad 2, p. 113  
 —, iv.50.1.2.c (... *quae potentiae thesauri dicuntur sicut memoria et imaginatio*)  
 cf. Thomas Aquinas, *De veritate*, 10.2, p. 300 (... *laeso tamen organo* ...)  
 —, 10.2, p. 301 (... *thesaurus formarum* ...)  
 cf. —, 10.6, p. 312 (... *laeso organo* ...)  
 Thomas Aquinas, *Summa contra gentiles*, 2.74, p. 469  
 Thomas Aquinas, *De malo*, 3.4, p. 76 (no attribution; ... *species interius conservatas quasi de quibusdam thesauris educunt* ...)  
 Thomas Aquinas, *Quodlibeta*, 7.1.2.c, p. 252  
 Roger Bacon, *Opus maius*, 5.1.2, p. 5 (... *imaginatio et est arca ac repositorium sensus communis secundum Avicennam*)  
 —, 5.1.4, pp. 8–9 (... *arca* ...; the doctrine is ascribed to Avicenna's *De anima*, book one.)

g) pp. 9–10:

The theory of remembering – *quae virtus vocatur etiam memorialis* ...

- Dominicus Gundissalinus, *De anima*, 9, p. 74, lin. 36 – p. 75, lin. 2 (no attribution)  
 cf. John Blund, *Tractatus de anima*, 20, p. 71, lin. 15 (no attribution)  
 cf. Albertus Magnus, *Summa theologiae*, I.3.15.2, p. 68

h) pp. 10–11:

Comparison between the imaginative faculty and estimation – *et haec virtus* ...

- Dominicus Gundissalinus, *De anima*, 9, p. 75, lin. 2–13 (no attribution)  
 Albertus Magnus, *De anima*, 3.1.3, p. 168, lin. 27 (no attribution)

IV,2

a) p. 12:

The forming faculty (=imagination) is the last one in which the forms of the perceptible things are established – *virtus formalis quae est imaginatio* ...

- Dominicus Gundissalinus, *De anima*, 9, p. 75, lin. 14 (no attribution; Gundissalinus quotes the entire section from p. 12, lin. 55, to p. 19, lin. 62)  
 Albertus Magnus, *De homine*, 35.2, p. 310b (... *est ultima* ...)

b) p. 14:

The occupation of the soul with something prevents it from paying attention to another faculty – *occupatio animae circa aliquam* ...

- Dominicus Gundissalinus, *De anima*, 9, p. 75, lin. 38 (no attribution)  
 Petrus Hispanus, *Quaestiones libri de anima*, 1.4.3, p. 261  
 —, 1.5.2, p. 277  
 —, 2.6.1, p. 654  
 Petrus Hispanus, *Scientia libri de anima*, 10.9, p. 461 (no attribution; *praesertim quia* ...)  
 Albertus Magnus, *De anima*, 3.1.1, p. 167, lin. 15 (no attribution; *quando intenditur operatio* ...)  
 Albertus Magnus, *Quaestiones de animalibus*, 18.4, p. 299  
 Albertus Magnus, *Summa theologiae*, II.12.70, p. 25  
 Thomas Aquinas, *De veritate*, 12.9, p. 395 (no attribution)

- , 26.10, p. 784 (no attribution)  
 Thomas Aquinas, *De malo*, 3.9, p. 86 (no attribution)  
 John Pecham, *Quaestiones tractantes de anima*, 18, p. 159

c) p. 16:

The imaginative faculty can be distracted from its proper actions in two ways ... – *deinde virtus imaginativa* ...

- Dominicus Gundissalinus, *De anima*, 9, p. 76, lin. 20 (no attribution)  
 Albertus Magnus, *De IV coaequaevis*, 4.69, p. 711

d) pp. 17–18:

If the impediments are removed (like in sleep or madness), unreal forms can be perceived as if they were real – *sed remoto* ...

- Dominicus Gundissalinus, *De anima*, 9, p. 76, lin. 36 (no attribution)  
 Anonymous (Gauthier), *De anima et de potentiis eius*, p. 45, lin. 362 (no attribution)  
 Anonymous (Callus), *De potentiis animae et obiectis*, p. 154, lin. 19 (no attribution; from Anonymous (Gauthier))  
 Albertus Magnus, *De homine*, 43.3.3, p. 378a  
 —, 44.1, p. 404a (*omnes philosophi* ...)  
 —, 44.3, p. 406a  
 —, 44.4, p. 409b (*secundum Alfarabium et Avicennam et Algazelum*)  
 —, 46, p. 420a  
 Albertus Magnus, *Super secundum sententiarum*, 7.F.6, p. 152  
 cf. Albertus Magnus, *De anima*, 3.1.3, p. 169a (no attribution; *ista enim vis* ...)  
 Vincent of Beauvais, *Speculum naturale*, 26.39, p. 1865  
 John Pecham, *Tractatus de anima*, 10, pp. 36–7

e) pp. 18–19:

In some persons, the imaginative faculty and the soul are so powerful that they have visions in waking life – *et haec est propria prophetia virtutis imaginativae*

- Dominicus Gundissalinus, *De anima*, 9, p. 77, lin. 13 (no attribution)  
 Albertus Magnus, *De anima*, 3.1.1, p. 167a (no attribution; *si autem huiusmodi homines abstrahantur a motibus sensuum ... efficiuntur prophetae*)  
 cf. Albertus Magnus, *De somno et vigilia*, 1.1.1, p. 122  
 —, 3.1.1, p. 178 (*Averroes enim hic impugnat Avicennam*)  
 —, 3.1.6, p. 185b (... *in quarum corporibus organum imaginationis optime est complexionatum*)  
 cf. Thomas Aquinas, *De veritate*, 12.3, p. 374 (*determinavit autem Avicenna in vi de naturalibus de prophetia. Ergo prophetia est naturalis.*)  
 —, 12.3, p. 374 (*perfectio virtutis imaginativae*)  
 cf. —, 12.3, p. 376, lin. 235 (no attribution; *ad recipiendam per actionem alicuius superioris causae praescientiam futurorum*)  
 —, 12.9, p. 396 (no attribution; *omnino a sensibus exterioribus abstrahitur*)  
 Thomas Aquinas, *Secunda pars Summae theologiae*, ii.172.1.c, p. 799a (no attribution; *perfectio virtutis imaginativae*)  
 cf. Witelmo, *De causa primaria ... et de natura daemonum*, p. 165 (no attribution; *prophetizant antea futura ... propter reditionem animae in se ipsam*)

f) pp. 24–5:

Often there are confused dreams, which need interpretation – *saepe etiam contingit*

cf. Albertus Magnus, *De anima*, 3.1.3, p. 169a (no attribution; ... *ad hoc indigent interpretatione* ...)

g) p. 25:

Few people have true dreams – *hominum autem quidam* ...

cf. Michael Scot, *Liber introductorius*, f. 50rb (no attribution; *tamen talibus <scil. dormientibus et freneticis> quandoque sunt vera quae videntur* ...)

Albertus Magnus, *De homine*, 50.3, pp. 439a and 440a

cf. Witelo, *De causa primaria ... et de natura daemonum*, p. 164 (no attribution; ... *praedicat futura in somnis ... si not sit impediens virtus imaginativa* ...)

cf. —, p. 165 (no attribution; *somnia nobilia* ...)

John Pecham, *Tractatus de anima*, 10, pp. 36–7

h) pp. 25–6:

Most people have dreams that are interpreted in other dreams, example: Hercules – *pluribus autem contingit* ...

Albertus Magnus, *De homine*, 44.1, p. 403a (no attribution; ... *Herculis* ...)

Vincent of Beauvais, *Speculum naturale*, 26.37, p. 1863 (no attribution; from *De homine*)

i) p. 26:

There are two types of people who see these things when they are awake – *eorum autem* ...

cf. Michael Scot, *Liber introductorius*, f. 50rb (no attribution; *vigilando etiam contingit quandoque* ...)

j) pp. 28–9:

The concepts of all things are in the wisdom of the creator and the angels and may come about in dreams – *dicemus ergo quod omnia* ...

Albertus Magnus, *De homine*, 43.1, p. 365a (*dicat Avicenna et Algazel et Alfarabi* ...)

—, 44.1, p. 403b

—, 50.1, p. 435b

—, 51, p. 441b

cf. Vincent of Beauvais, *Speculum naturale*, 26.86, p. 1895

k) pp. 29–31:

False dreams are influenced by things familiar to us, which are either natural (like sexual desire) or voluntary (like remnants of thoughts) – *primum autem quod* ...

Albertus Magnus, *De homine*, 43.1, p. 364a

—, 47, p. 426a

Albertus Magnus, *De anima*, 3.3.4, p. 213, lin. 80 (no attribution; *sic enim in somniis* ...)

Vincent of Beauvais, *Speculum naturale*, 26.1, p. 1841 ( ... *idem Avicenna dicit* ...)

l) p. 32:

The best time for true dreams is before daybreak – *praeter hoc etiam* ...

Albertus Magnus, *De homine*, 47, p. 424b (*idem <ut Philosophus> dicit Alfarabi et Avicenna*)

—, 49, p. 433 (*ut dicit Avicenna*)

—, 50.3, p. 439a ( ... *in fine enim* ...)

Vincent of Beauvais, *Speculum naturale*, 26.43, p. 1866 (from *De homine*, p. 424)

m) p. 32:

People whose mixture is in equilibrium are most suitable for having true dreams – *illi autem* ...

Albertus Magnus, *De homine*, 47, p. 425a

—, 50.3, p. 440a

Vincent of Beauvais, *Speculum naturale*, 26.43, p. 1866 (from *De homine*, p. 425)

n) p. 33:

Definitions of sleep and waking – *dicemus ergo quod vigilia* ...

Jean de la Rochelle, *Summa*, 100, p. 244

Albertus Magnus, *De homine*, 43.1, pp. 363a and 367a

—, 43.3.1, p. 372b

—, 43.3.2, p. 375a

Albertus Magnus, *De somno et vigilia*, 1.7.1, p. 133

Vincent of Beauvais, *Speculum naturale*, 26.1, p. 1841 (cf. *De homine*, p. 363)

—, 26.4, p. 1844 (from *De homine*, p. 372)

o) pp. 33–4:

The soul turns inside for three reasons: 1) tiredness or (2) worry or (3) disobeying of the organs – *sed hoc quod convertitur* ...

Jean de la Rochelle, *Summa*, 100, p. 244 (*conversio autem ad interiora* ...)

Alexander of Hales et al., *Summa theologica*, II.4.3.1.1, p. 639b

Albertus Magnus, *De homine*, 43.3.1, p. 373a

—, 43.4, p. 385a (no attribution; *et his quatuor a commentatoribus adduntur duae <causae>* ...)

—, 43.4, pp. 388a, 389a, 390a (twice)

—, 43.4, pp. 393–4 (no attribution; *alia causa est quia* ...)

—, 61.1, p. 521a ( ... *lassatio* ...)

Vincent of Beauvais, *Speculum naturale*, 26.11, p. 1849

—, 26.17, p. 1853 (from *De homine*, p. 388)

—, 26.19, p. 1854 (from *De homine*, p. 389)

—, 26.25, p. 1857 (from *De homine*, p. 390)

IV,3

a) pp. 35–6:

Estimation is the main judge in animals – *dicemus ergo quia* ...

Dominicus Gundissalinus, *De anima*, 9, p. 77, lin. 29 (no attribution; Gundissalinus quotes the entire section from p. 35, lin. 94, to p. 44, lin. 23)

b) pp. 37–9:

The first kind of estimation: natural inclination – *unus ex illis est cautela proveniens in omne quod est a divina clementia ...*

- Dominicus Gundissalinus, *De anima*, 9, p. 78 lin. 13 (no attribution)  
 Roland of Cremona, *Summa theologiae*, f. 33rb ( ... *sicut dicunt philosophi ... et ovis etsi non videat quodammodo sentit lupum ...*)  
 Jean de la Rochelle, *Summa*, 101, p. 248 (no attribution; *primus modus ...*)  
 Vincent of Beauvais, *Speculum naturale*, 25.99, p. 1836 (no attribution; from Jean)  
 Petrus Hispanus, *Scientia libri de anima*, 7.4, pp. 320–21 (no attribution; *prima est naturalis cautela ...*) and p. 321 (no attribution; *per has cautelas aestimatio percipit intentiones ...*)  
 cf. Thomas Aquinas, *De veritate*, 22.7, p. 629 (no attribution; ... *secundum naturalem estimationem ...*)  
 cf. —, 24.2, p. 686 (no attribution; ... *ex naturali aestimatione ...*)  
 cf. —, 25.2, p. 733 (no attribution; ... *sicut quod ovis fugit lupum cuius inimicitiam numquam sensit*)  
 Roger Bacon, *Opus maius*, 5.1.4, p. 7 (no attribution; ... *et ovis si numquam viderit lupum ...*)

c) p. 39:

The second kind of estimation: in a way similar to experience – *alius autem modus est sicut hoc quod fit per experientiam*

- Dominicus Gundissalinus, *De anima*, 9, p. 78, lin. 28 (no attribution; ... *qui fit per experientiam ...*)  
 Jean de la Rochelle, *Summa*, 101, p. 248 (no attribution; *secundus modus ...*)  
 Vincent of Beauvais, *Speculum naturale*, 25.99, p. 1836 (no attribution; from Jean)  
 Petrus Hispanus, *Scientia libri de anima*, 7.4, pp. 321–2 (no attribution; *secunda via ...*)  
 cf. Albertus Magnus, *De incarnatione*, 6.1.4, pp. 223–4  
 John Pecham, *Tractatus de anima*, 10, p. 37 ( ... *timet canis ...*)

d) p. 40:

Another kind of estimation: through similarity – *aliquando autem ab aestimatione adveniunt alia iudicia ad modum similitudinis ...*

- Dominicus Gundissalinus, *De anima*, 9, p. 79, lin. 1 (no attribution)  
 Jean de la Rochelle, *Summa*, 101, p. 248 (no attribution; *tertius modus ...*)  
 Vincent of Beauvais, *Speculum naturale*, 25.99, p. 1836 (no attribution; from Jean)  
 Petrus Hispanus, *Scientia libri de anima*, 7.4, p. 322 (no attribution; *tertia via ...*)

e) p. 40:

Memory is to be found also in other animals, but remembering only in human beings – *memoria autem est ...*

- Dominicus Gundissalinus, *De anima*, 9, p. 70, lin. 7 (no attribution)  
 Jean de la Rochelle, *Tractatus*, 2.1.10, p. 77, lin. 273  
 Jean de la Rochelle, *Summa*, 102, p. 249 (*ad quod dicendum ...*)  
 Vincent of Beauvais, *Speculum naturale*, 27.14, p. 1926 (from Jean, *Summa*)  
 Albertus Magnus, *De homine*, 40.1, p. 341a  
 cf. —, 40.4, p. 350b (*secundum Alfarabium rememoratio dicitur reminiscencia et recordatio secundum Avicennam*)  
 —, 41.1, p. 351a ( ... *recordatio est ingenium revocandi ...*)  
 John Pecham, *Quaestiones tractantes de anima*, 29, p. 195

f) p. 41:

Remembering resembles learning in that it leads from the known to the unknown, but without necessity – *recordatio vero est ...*

- Dominicus Gundissalinus, *De anima*, 9, p. 79, lin. 14 (no attribution)  
 cf. John Blund, *Tractatus de anima*, 21, p. 75, lin. 10 (no attribution)  
 Petrus Hispanus, *Scientia libri de anima*, 10.12, p. 485 (no attribution; *actio vero reminiscenciae ...*)  
 Albertus Magnus, *De homine*, 41.1, p. 351a ( ... *recordatio est relatio ... recordatio est inquisitio ...*)  
 —, 41.1, p. 352b  
 Albertus Magnus, *De memoria et reminiscencia*, 2.1, p. 107a  
 Albertus Magnus, *Summa theologiae*, II.4.14, p. 168 (*ad hoc Avicenna ...*)  
 —, II.4.14, p. 169

g) pp. 42–3:

People differ in their abilities to learn, remember and memorize – *sunt autem ...*

- Dominicus Gundissalinus, *De anima*, 9, p. 79, lin. 30 (no attribution)  
 Jean de la Rochelle, *Summa*, 102, p. 250 (*ad quae intelligendum est secundum Avicennam ...*)  
 Vincent of Beauvais, *Speculum naturale*, 27.14, p. 1927 (from Jean)  
 cf. Alexander of Hales et al., *Summa theologiae*, II.4.1.2.3.1.2, p. 450a (no attribution; *sic enim bene retinet ...*)  
 Petrus Hispanus, *Scientia libri de anima*, 7.5, p. 328 (no attribution; *propter hoc autem ...*)  
 cf. —, 10.12, p. 486 (no attribution; *conservationem vero ...*)  
 Albertus Magnus, *De IV coaequaevis*, 4.73, p. 752 (*vis retentiva vigorem suscepit a frigido et sicco*)  
 Albertus Magnus, *De homine*, 35.2, p. 311 ( ... *una ... causatur ab humido et altera a sicco*)  
 —, 40.3, p. 350a  
 —, 57.5, p. 498b (no attribution; ... *humidi enim ...*)  
 Albertus Magnus, *De anima*, 2.4.7, p. 157, lin. 22 (no attribution; *bene tenens perficitur frigido sicco ...*)  
 cf. Albertus Magnus, *Summa theologiae*, I.3.15.2, p. 69  
 —, II.4.14, p. 168 (*ex memorantibus ...*)

h) pp. 43–4:

Judgements of estimation: pain, sorrow, anger, desire, hope, fear, despair – *sed aliquando ex dolore et ira ...*

- Dominicus Gundissalinus, *De anima*, 9, p. 80, lin. 14 (no attribution)  
 Anonymous (Gauthier), *De anima et de potentiis eius*, p. 47, lin. 388 (no attribution; *unde sciendum quod imaginationi et aestimationi laeti vel tristici sequitur ...*)  
 Anonymous (Callus), *De potentiis animae et obiectis*, p. 155, lin. 4 (no attribution; draws on Anonymous (Gauthier))  
 Albertus Magnus, *Super quartum sententiarum*, 16.A.25, p. 595  
 cf. Thomas Aquinas, *Scriptum super sententiis*, III.26.1.2.sc3, p. 816 (cf. Avicenna, *De medicinis cordialibus*, ed. Van Riet, 1968, p. 207)

i) pp. 44–5:

All perceiving faculties perform their actions by means of corporeal instruments – *indicemus ergo nunc ...*

- Albertus Magnus, *De homine*, 42.1, p. 357a



j) pp. 46–54:

Imagine a square with two little squares of equal size attached to it, all imprinted in imagination. Imagination discerns between the two squares because of the matter <in the brain> in which they are imprinted – *removeamus autem formam Socratis et ponamus formam quadrati ...*

Albertus Magnus, *De homine*, 42.1, pp. 357b–358b

Albertus Magnus, *De anima*, 3.1.4, pp. 169–70 (no attribution; the entire chapter 3.1.4 is taken from Avicenna)

Albertus Magnus, *De causis*, 2.2.4, p. 98

Thomas Aquinas, *De veritate*, 26.1, p. 748 (*ut a philosophis probatur*)

#### IV,4

a) pp. 54–9:

The theory of motion and decision – *postquam iam locuti sumus ...*

Dominicus Gundissalinus, *De anima*, 9, p. 80, lin. 24 (no attribution; Gundissalinus quotes the entire section from p. 54, lin. 81 to p. 64, lin. 33, with the exception of 55.97–56.0, 58.23–25, 59.35–36, 62.3–63.13, 64.18–19)

b) pp. 56–7:

The faculty of wish (*al-qūwa aš-šauqiya*) has two branches: the irascible faculty and the faculty of desire ... – *huius autem virtutis voluntatis rami sunt ...*

Dominicus Gundissalinus, *De anima*, 9, p. 81, lin. 4 (no attribution; *huius autem virtutis, scilicet desiderii*)  
cf. John Blund, *Tractatus*, 25.4, p. 105, lin. 24 (no attribution; *sed ira est cum spe habendi victoriam*)

Jean de la Rochelle, *Tractatus*, 2.1.12, p. 79, lin. 358 (no attribution)

—, 2.1.25, p. 101, lin. 97

Jean de la Rochelle, *Summa*, 105, p. 254

—, ed. Domenichelli, 2.40, p. 300 (no attribution; ... *duplex est ...*)

Albertus Magnus, *De homine*, 66.1, p. 554a

John Pecham, *Quaestiones tractantes de anima*, 7, p. 79

c) pp. 58–9:

The accidents (mental states) of the irascible and desiring faculty – *timor autem et dolor ...*

Dominicus Gundissalinus, *De anima*, 9, p. 81, lin. 21 (no attribution)

cf. Alexander of Hales *et al.*, *Summa theologia*, II.4.1.2.2.2, p. 439 (no attribution; *quidam etiam ponunt*)

—, II.4.1.2.2.2, p. 445a–b (no attribution; *primo modo ...*)

d) pp. 59–61:

Interaction between body and soul – *dicemus ergo nunc quod ...*

Dominicus Gundissalinus, *De anima*, 9, p. 81, lin. 40 (no attribution)

Jean de la Rochelle, *Summa*, 109, p. 266 (no attribution; *notandum autem quod quasdam ...*)

Vincent of Beauvais, *Speculum naturale*, 27.72, p. 1968 (no attribution; from Jean)

e) pp. 61–2:

If something frightening or delightful is imagined, the body reacts – *sed ex imaginatione et timore et dolore*

Dominicus Gundissalinus, *De anima*, 9, p. 82, lin. 25 (no attribution)

Thomas Aquinas, *De veritate*, 26.10, p. 782 (no attribution; *ex imaginatione terribilium*)

Roger Bacon, *Epistola de secretis operibus*, 3, p. 530

f) p. 62, lin. 97:

The body reacts to forms which exist in the soul – *ex anima solet contingere ...*

Dominicus Gundissalinus, *De anima*, 9, p. 82, lin. 40 (no attribution)

Albertus Magnus, *De causis*, 2.5.18, p. 184

Roger Bacon, *Epistola de secretis operibus*, 2, p. 528

g) p. 62, lin. 99:

Heat and cold are produced (in the body) without there being a hot or cold body – *calor accidat non ex calido ...*

Dominicus Gundissalinus, *De anima*, 9, p. 83, lin. 2 (no attribution)

Jean de la Rochelle, *Summa*, 108, p. 263 (no attribution; *cum enim anima ...*)

Vincent of Beauvais, *Speculum naturale*, 27.71, p. 1966 (no attribution; from Jean)

Albertus Magnus, *De motibus animalium*, 1.1.2, p. 260

Roger Bacon, *Opus maius*, 4, p. 402

h) p. 64:

Example of the sick person healed because of his belief in health – *attende dispositionem infirmi ...*

Dominicus Gundissalinus, *De anima*, 9, p. 83, lin. 8 (no attribution)

Grosseteste, *Expositio in epistolam sancti Pauli ad Galatas*, iii.3.3, p. 73, lin. 56

Roland of Cremona, *Summa theologia*, f. 89vb (*sicut tu vides in egeno corporaliter, confortatio est magna causa salutis sicut dixit Avicenna medicus arabum*)

Jean de la Rochelle, *Summa*, 108, p. 263 (no attribution; *sicut nos videmus in ...*)

Vincent of Beauvais, *Speculum naturale*, 27.71, p. 1966 (no attribution; from Jean)

Petrus Hispanus, *Scientia libri de anima*, 10.11, p. 476 (no attribution; ... *sanitatis imaginatio ...*)

cf. Thomas Aquinas, *Summa contra gentiles*, 3.103, p. 322

Roger Bacon, *Epistola de secretis operibus*, 2, p. 528

i) p. 64:

Example of the person walking on a trunk – *potest homo ambulare super trabem ...*

Dominicus Gundissalinus, *De anima*, 9, p. 83, lin. 12 (no attribution)

Jean de la Rochelle, *Summa*, 109, p. 264 (no attribution; *et sicut patet in ...*)

Vincent of Beauvais, *Speculum naturale*, 27.71, p. 1967 (no attribution; from Jean)

Petrus Hispanus, *Scientia libri de anima*, 10.11, p. 476 (no attribution; ... *super loca excelsa incedit*)

Thomas Aquinas, *Scriptum super sententiis*, ii.7.3.1.c, p. 194 ( ... *ex imaginatione et timore casus*; the trunk is not mentioned)

Thomas Aquinas, *Summa contra gentiles*, 3.103, p. 322a

Roger Bacon, *Opus maius*, 4, p. 402

j) p. 64–5:

Comparison between the world soul and the individual soul – *si autem fuerit hoc in anima communi* ...

cf. Albertus Magnus, *De motibus animalium*, 1.1.3, p. 261b–262a

Albertus Magnus, *De somno et vigilia*, 3.1.6, p. 185a–b ( ... *sicut intelligentiae mutant orbem ... congruere intelligentiae coelesti* ... )

k) p. 65:

The example of the Evil Eye – *opus oculi fascinantis* ...

Grosseteste, *Expositio in epistolam sancti Pauli ad Galatas*, iii.3.3, p. 73, lin. 56 (*Avicenna autem philosophus dicit in libro suo de anima* ...; he adds Algazel's example of the camel)

Roland of Cremona, *Summa theologiae*, f. 62ra ( ... *ex malo aspectu ... sicut dicit Avicenna qui fuit medicus*; Algazel's example of the camel follows)

Petrus Hispanus, *Scientia libri de anima*, 10.11, p. 476 (no attribution; *sed videtur hoc dissonum veritati*; he also mentions Algazel's example of the camel)

Albertus Magnus, *Super secundum sententiarum*, 7.F. 7, p. 153 (*hoc autem non dico approbans dictum illud*)

Albertus Magnus, *De motibus animalium*, 1.1.3, p. 262a (*sicut fit in fascinatione et praestigiis magorum*)

Albertus Magnus, *De sensu et sensato*, 1.10, pp. 27–8 ( ... *sed cum necromantiis et incantationibus et arte imaginum magis concordat dictum Avicennae* )

Albertus Magnus, *De somno et vigilia*, 3.1.6, p. 185a ( ... *in corpus alterius hominis* ... )

—, 3.2.6, p. 203 (*sed hoc per philosophiam probari vix posset*)

Thomas Aquinas, *Summa contra gentiles*, 3.103, p. 322

Thomas Aquinas, *Prima pars Summae theologiae*, 117.3.ad 2, p. 560b

Thomas Aquinas, *De malo*, 16.9, p. 324

Roger Bacon, *Opus maius*, 4.4.7, p. 143 (*sicut Avicenna docet ... per exempla et experientias varias et certum est hoc*)

—, 4, p. 398

Giles of Rome, *Errores philosophorum*, 6.11, p. 30

John Pecham, *Quodlibet iv*, 30, p. 243

l) p. 65:

People with a pure and powerful soul are able to influence the matter of the world – *inmo cum anima fuerit constans, nobilis* ...

Petrus Hispanus, *Scientia libri de anima*, 10.11, pp. 476–7 (no attribution; ... *cedit mundana machina* ...)

Albertus Magnus, *De motibus animalium*, 1.1.2, p. 260 ( ... *etiam quando non tangunt easdem ut dicit Avicenna licet hoc ultimum habeat dubitationem* )

—, 1.1.3, p. 262a

—, 1.1.5, p. 267

Albertus Magnus, *De somno et vigilia*, 3.1.6, p. 184b

—, 3.1.6, p. 185b ( ... *mirabilia* ... )

Thomas Aquinas, *Scriptum super sententiis*, ii.7.3.1.c, p. 194

Thomas Aquinas, *Summa contra gentiles*, 3.103, p. 322

Thomas Aquinas, *Prima pars Summae theologiae*, 117.3. ad 2, p. 560b

Roger Bacon, *Opus maius*, 4, p. 396 (*non solum recipiunt virtutem a coelo sed ab anima rationali*)

John Pecham, *Quodlibet iv*, 30, p. 243

m) p. 66:

Powerful people can produce rain and fertile seasons – *pro voluntate eius contingunt*

*pluviae et fertilitas* ...

Albertus Magnus, *De motibus animalium*, 1.1.3, p. 262a

—, 1.1.5, p. 267 (*secutus fuit eum in hoc Algazel et Moyses Aegyptius videtur consentire in idem et Avendacid expresse dicit hoc et multi aliorum ... hic sit error*)

Roger Bacon, *Opus maius*, 4, p. 403 (*verum est autem quod gratia dei multum facit* ...)

Roger Bacon, *Opus tertium*, 26, p. 98

John Pecham, *Quodlibet iv*, 30, p. 243

n) p. 66:

Matter reacts on the soul much better than on something material but contrary – *multo amplius oboedit animae quam* ...

Thomas Aquinas, *Scriptum super sententiis*, iii.16.1.3.3, p. 514

cf. Thomas Aquinas, *De veritate*, 12.3, p. 374 ( ... *oboediat* ... )

Thomas Aquinas, *Prima pars Summae theologiae*, 117.3.ad 2, p. 560b

o) p. 66:

This is one of the prophetic properties – *una de proprietatibus virtutum prophetialium*

Albertus Magnus, *De somno et vigilia*, 3.1.6, p. 185 ( ... *de prophetis et prophetiis loquuntur. Sed mirabile videtur si ratione philosophica probari posset quod dicunt* ... )

Thomas Aquinas, *De veritate*, 12.3, p. 374 (*praeterea ad prophetiam non requiruntur nisi tria scilicet claritas intelligentiae et perfectio virtutis imaginativae et potestas animae ut ei materia exterior oboediat ut Avicenna ponit*)

p) pp. 66–7:

About the corporeality of animal faculties – *dicemus autem quod* ...

Dominicus Gundissalinus, *De anima*, 9, p. 83 lin. 26–9

V,1

a) pp. 69–70:

Human beings cannot live alone. If they do, they live a life worse than it could be

– *non posset permanere in sua vita sine societate* ...

cf. John Blund, *Tractatus*, 23, p. 87, lin. 25 (*ut habemus ab Aristotele et aliis auctoribus* ...)

Albertus Magnus, *De sacramentis*, 8.8.1, p. 152

Albertus Magnus, *De bono*, 4.1.3, p. 230 (*ut dicit philosophus*)

Albertus Magnus, *Super quartum sententiarum*, 33.A.1, p. 289 (*sed homo naturaliter est politicus*)

—, 33.A.1, p. 290

Albertus Magnus, *Super Ethica*, 1.7, p. 34

—, 8.1, p. 593

—, 10.13, p. 761

Albertus Magnus, *Postilla super Isaiam*, 5.8, p. 74

Albertus Magnus, *Politica*, 1.1, p. 12 (*dicit Avicenna in suo libro De animalibus*)

Albertus Magnus, *Ethica*, 8.1.1, p. 516

—, 8.3.8, p. 550

Thomas Aquinas, *De regno ad regem cypri*, 1, pp. 449–50 (no attribution)

Roger Bacon, *Opus maius*, 7.3.1, p. 254

b) p. 70:

Man has to add clothes and special nutrition to nature – *homini autem necessarium est ...*

Thomas Aquinas, *Contra impugnantes*, 5.455, p. 90

Thomas Aquinas, *De regno ad regem cypri*, 1, pp. 449–50 (no attribution)

c) p. 72:

In the case of human beings sounds signify by positing because of the infinite aims that they have – ... *ad placitum eo quod humani appetitus quasi infiniti sunt*

Albertus Magnus, *De homine*, 25.1, p. 243b

Albertus Magnus, *De IV coaequaevis*, 4.60, p. 632

Thomas Aquinas, *De veritate*, 9.4, p. 287

Thomas Aquinas, *De regno ad regem cypri*, 1, pp. 449–50 (no attribution)

d) p. 73:

In other animals there is invention as well, but by instinct. Example of the birds – *et praecipue aves habent artes, construunt enim casas vel nidos*

Albertus Magnus, *De IV coaequaevis*, 4.69, p. 707

Vincent of Beauvais, *Speculum naturale*, 25.56, p. 1811

Thomas Aquinas, *De regno ad regem cypri*, 1, pp. 449–50 (no attribution)

e) p. 74:

Teaching, learning, justice, conventions and invention are typical for human beings – *cetera animalia non habent hoc*

Albertus Magnus, *Politica*, 1.1, p. 14

Albertus Magnus, *Ethica*, 2.1.2, p. 152

—, 2.1.5, p. 157

Albertus Magnus, *Topica*, 4.3.1, p. 380

f) pp. 75–6:

Fear and hope are produced by instinct in animals. Example of the ants – *hoc fit instinctu naturae; hoc enim quod dum formica ...*

Albertus Magnus, *De IV coaequaevis*, 4.69, p. 707

cf. Albertus Magnus, *De homine*, 40.1, p. 345a ( ... *instinctu* ...)

—, 42.2, p. 361b

Petrus Hispanus, *Scientia libri de anima*, 10.12, p. 485 (no attribution; *verum videtur ceteris animalibus ... investigationes naturales inesse* ...)

Thomas Aquinas, *De veritate*, 12.3, p. 375 (no attribution; *sicut patet de formicis*)

g) pp. 76–8:

The most specific property of human beings is that they form universal intentions

abstracted from matter – *quae autem magis propria ex proprietatibus hominis ...*

Dominicus Gundissalinus, *De anima*, 10, p. 84, lin. 4–19 (no attribution)

h) p. 77:

The human faculty which deals with particular things is concerned with knowing what is honest and dishonest – *et aliam quae propria est ad cogitandum de rebus singularibus ...* (a parallel passage is p. 74, lin. 65 ff. )

Albertus Magnus, *De IV coaequaevis*, 4.69, p. 707

Albertus Magnus, *Super quartum sententiarum*, 29.B.3, p. 206

Albertus Magnus, *Quaestio de luxuria*, 3, p. 151

Albertus Magnus, *Super Ethica*, Prologus, p. 1

—, 1.15, p. 76

i) p. 78:

Definition and comparison of the theoretical and practical intellect – *ergo prima virtus humanae animae est ...*

Dominicus Gundissalinus, *De anima*, 10, p. 85, lin. 5–15 and lin. 20–33 (no attribution)

Albertus Magnus, *De homine*, 63.3, p. 545b

Albertus Magnus, *De bono*, 4.1.2, p. 226 (*ethicus ex probabilibus procedit*)

—, 5.1, p. 260

Albertus Magnus, *Super tertium sententiarum*, 23.D.7.4, p. 416

Albertus Magnus, *Super ethica*, 6.16, p. 491

Albertus Magnus, *Ethica*, 6.1.5, p. 402

j) p. 79:

To both intellects belong firm opinion and ambiguous opinion. Definition of both terms – *unaquaeque autem harum virtutum habet sententiam et opinionem* (cf. Isaac Israeli, *De definitionibus*, p. 340)

Dominicus Gundissalinus, *De anima*, 10, p. 85, lin. 9 and lin. 18 (no attribution)

Alexander of Hales, *Glossa in quatuor libros sententiarum*, 3.24, p. 286, lin. 16 (no attribution)

Albertus Magnus, *De homine*, 53.1, p. 447b (no attribution; *opinio vero* ...)

Albertus Magnus, *Super primum sententiarum*, In prologum expositio, p. 12

Vincent of Beauvais, *Speculum naturale*, 27.54, p. 1955 (no attribution; *opinio vero* ...)

Bonaventura, *In quatuor libros sententiarum*, 3.24.2.3, p. 520 (no attribution)

Petrus Hispanus, *Scientia libri de anima*, 10.10, p. 469 (no attribution)

Thomas Aquinas, *Scriptum super sententiis*, prologus, p. 24 (*sententia secundum Avicennam est* ...)

Thomas Aquinas, *De veritate*, 14.1, p. 436 (no attribution; *cum formidine alterius*)

—, 14.1, p. 437 (*ut dicit Isaac et Avicenna*)

—, 14.9, p. 464 (no attribution)

Thomas Aquinas, *De anima*, 1.4, p. 21, lin. 184 (no attribution)

Thomas Aquinas, *De malo*, 3.9, p. 85 (no attribution)

Thomas Aquinas, *Expositio libri posteriorum*, 1.1, p. 6 (no attribution)

k) p. 80:

The practical intellect needs the body, the theoretical not always – *intellectus vero*

*activus eget corpore*

Albertus Magnus, *De bono*, 3.5.2, p. 198 (*practicum autem indiget corpore*)  
 Albertus Magnus, *De causis*, 2.2.20, p. 113 (misquotes Avicenna: *practicus corpore non indiget*)  
 cf. Albertus Magnus, *De causis*, 2.5.19, p. 184  
 Vincent of Beauvais, *Speculum naturale*, 27.58, p. 1958  
 Roland of Cremona, *Summa theologiae*, f. 28ra (*intellectus speculativus (?) non habet instrumentum corporalem a quo recipiat formas quia apprehendit formas absque appenditiis*)  
 Thomas Aquinas, *De unitate intellectus*, 2.109, p. 302

l) p. 80:

The soul has the capacity to perfect itself from the theoretical intellect and to protect itself from the practical intellect – *sed substantia humanae animae ...*

John Blund, *Tractatus*, 22, p. 82, lin. 7 (no attribution)

V,2

a) pp. 81–2:

There is a substance in human beings which grasps the intelligibles: it is not a body nor subsisting in a body as a form or faculty – *quod in homine est aliqua substantia ...*

Dominicus Gundissalinus, *De anima*, 2, p. 37, lin. 33 (no attribution)  
 cf. John Blund, *Tractatus*, 22, p. 80, lin. 4 (no attribution)  
 Albertus Magnus, *De homine*, 2.2, p. 15a (*et quasdam rationes etiam istarum ponit <Toletanus> et addit unam quae sumpta est ab Avicenna*)  
 Albertus Magnus, *De anima*, 3.2.14, p. 196 (*volumus tamen in hoc capitulo breviter decem inducere ex quibus hoc probaverunt Peripatetici et praecipue Avicenna in .vi. naturalium*)  
 Albertus Magnus, *De natura et origine animae*, 2.2, p. 20, lin. 28 – p. 21, lin. 42 (*Avicenna autem ex multis et per alia media concludit idem ...*)  
 Petrus Hispanus, *Quaestiones libri de anima*, 2.3.4, p. 592 (*hoc autem est contra Aristotelem et contra Avicennam et contra omnes auctores*)  
 —, 2.6.1, p. 652  
 Thomas Aquinas, *Scriptum super sententiis*, ii.19.1.1.c, p. 481  
 Matthew of Aquasparta, *Quaestiones disputatae de anima*, 4, p. 58

b) pp. 82–5, lin. 34:

Reason: the intelligible form would be located in either something indivisible or divisible. Refutation of the first alternative – *si enim subiectum intelligibile ...*

Dominicus Gundissalinus, *De anima*, 2, p. 38, lin. 2–16 (no attribution)  
 Albertus Magnus, *De homine*, 2.2, p. 15  
 Albertus Magnus, *De anima*, 3.2.14, p. 197, lin. 66 (attribution on p. 196; *octavum autem ...*)

c) pp. 85–9:

Refutation of the second alternative – *restat ergo ...*

Dominicus Gundissalinus, *De anima*, 2, p. 38, lin. 18 – p. 39, lin. 5 (no attribution)  
 Albertus Magnus, *De homine*, 2.2, p. 15

Albertus Magnus, *De anima*, 3.2.14, p. 197b (attribution on p. 196; *si autem reciperetur ...*)

d) p. 89:

Another proof: Abstracted intelligibles do not exist locally – *quod possumus etiam probare ...*

Dominicus Gundissalinus, *De anima*, 2, p. 39, lin. 6–14 (no attribution)  
 cf. Jean de la Rochelle, *Tractatus*, 2.1.14, p. 82 (no attribution; *operatio virtutis intellectivae ...*)  
 cf. Jean de la Rochelle, *Summa*, 112, p. 269 (no attribution; *operatio virtutis intellectivae ...*)  
 cf. Vincent of Beauvais, *Speculum naturale*, 27.33, p. 1941 (no attribution; from Jean's *Summa*)

e) p. 92:

Another proof: The intelligibles are infinite in potentiality – *item etiam probatum ...*

Dominicus Gundissalinus, *De anima*, 2, p. 39, lin. 17–20 (no attribution)  
 cf. John Pecham, *Quaestiones tractantes de anima*, 2, p. 22

f) p. 93:

Another argument: The faculty of the intellect would not have knowledge of itself – *dicimus igitur quod virtus intellectiva ... oporteret ut non intelligeret seipsam ...*

Albertus Magnus, *De natura et origine animae*, 2.2, p. 20  
 Albertus Magnus, *Summa theologiae*, II.13.77, p. 104a (*secundum ...*)  
 Petrus Hispanus, *Quaestiones libri de anima*, quaest. praefamb., 1.7, p. 71  
 Thomas Aquinas, *De veritate*, 8.6, p. 237 (also draws on p. 96)

g) p. 96:

Sense perception and imagination do not perceive their organs and themselves – *item sensus non sensit ...*

Jean de la Rochelle, *Tractatus*, 2.1.14, p. 82 (no attribution; *nulla virtus incorporata ...* Also draws on p. 93)  
 Jean de La Rochelle, *Summa*, 112, p. 269 (no attribution; *nulla virtus incorporata ...*)  
 Vincent of Beauvais, *Speculum naturale*, 27.33, pp. 1941–2 (no attribution; from Jean's *Summa*)  
 Thomas Aquinas, *De veritate*, 1.9, pp. 29–30  
 Matthew of Aquasparta, *Quaestiones disputatae de anima*, 9, p. 156  
 —, 13, p. 214  
 Bernardus of Trilia, *Quaestiones disputatae de cognitione animae separatae*, 3, p. 91

h) pp. 97–8:

Faculties that use bodily organs become tired through continuous action – *item quod hoc probat sufficienter ...*

Dominicus Gundissalinus, *De anima*, 2, p. 39, lin. 24–37 (no attribution)  
 Albertus Magnus, *De homine*, 61.1, p. 519b ( *... sed ex frequenter ...*; cf. p. 518a: *addimus hic decem rationes sumptas ab Avicenna et Algazele*)  
 Albertus Magnus, *De natura et origine animae*, 2.2, p. 20 (*intellectus autem a maxime intelligibilibus non laeditur*)  
 Albertus Magnus, *Summa theologiae*, II.13.77, p. 104b (*quintum ...*)

i) p. 98:

All parts of the body become weaker after the age of forty, but the intellect becomes stronger – *item omnium partium corporis debilitantur virtutes ...*

Dominicus Gundissalinus, *De anima*, 2, p. 39, lin. 20–23 (no attribution)  
 Albertus Magnus, *De anima*, 3.2.14, p. 197, lin. 48 (attribution on p. 196; *post sexaginta annos*)  
 Albertus Magnus, *De natura et origine animae*, 2.2, p. 20  
 Albertus Magnus, *Summa theologiae*, II.13.77, p. 104b (*sexum ... post annos sexaginta*)  
 Petrus Hispanus, *Scientia libri de anima*, 10.4, p. 425 (no attribution; *et cum organa ...*)  
 John Pecham, *Quaestiones tractantes de anima*, 2, p. 23

j) p. 98–101:

Arguments against the objection that the intellect can be affected by an illness of the body – *quod autem facit nos dubitare ...*

Albertus Magnus, *De homine*, 61.1, p. 521 (*solutio: secundum sententiam Avicennae et Algazelis duae sunt causae ...*. Mainly drawn from Algazel, *Metaphysica*, p. 177)

k) p. 99:

The soul has two activities: governing the body and perceiving the intelligibles – *dicemus ergo quod substantia animae habet duas actiones ...*

Dominicus Gundissalinus, *De anima*, 10, p. 85, lin. 33 – p. 86, lin. 8 (no attribution)  
 John Pecham, *Quaestiones tractantes de anima*, 2, p. 25

l) p. 101:

Conclusion: The soul is not imprinted in the body – *possemus autem hoc latius exponere ...*

John Pecham, *Quaestiones tractantes de anima*, 12, p. 101

V,3

a) pp. 102–104:

The animal faculties assist the rational soul in that they provide particulars which deliver four things – *virtutes animales adiuvant animam rationalem in multis ...*

Albertus Magnus, *De homine*, 59.2, p. 514a–b  
 Vincent of Beauvais, *Speculum naturale*, 27.32, pp. 1940–41 (from *De homine*)  
 Petrus Hispanus, *Scientia libri de anima*, 10.10, pp. 464–5 (no attribution; *ad rerum vero ...*)  
 Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 136ra, p. 403  
 cf. Thomas Aquinas, *De veritate*, 18.4, p. 538  
 Matthew of Aquasparta, *Quaestiones disputatae selectae*, 4, p. 302

b) p. 105:

After acquiring the universals, the animal faculties rather distract than assist.  
 Example of the riding animal which is of no use anymore – *cum autem proficit ...*

Albertus Magnus, *De anima*, 3.2.8, p. 188, lin. 77  
 —, 3.2.19, p. 206, lin. 52  
 Thomas Aquinas, *Scriptum super sententiis*, IV.50.1.1.sc3  
 Thomas Aquinas, *De veritate*, 18.8, p. 557  
 Thomas Aquinas, *De anima*, 3.7, p. 236, lin. 90 (*patet ... falsum esse quod Avicenna dicit*)  
 John Pecham, *Quaestiones tractantes de anima*, 30, p. 197  
 John Pecham, *Tractatus de anima*, 7, p. 25 (*... sicut nauta ...*)

c) p. 105, lin. 41:

The human souls are one in species and definition – *animae enim humanae ...*

Dominicus Gundissalinus, *De anima*, 4, p. 47, lin. 24 (no attribution)

d) pp. 105–106:

The human soul does not exist before the body. First argument: It cannot exist as many souls before the body – *si autem posuerimus ...*

Dominicus Gundissalinus, *De anima*, 5, p. 48, lin. 6–19 (*Rationes autem, quamvis debiles, quibus philosophi sententiam hanc destruere conati sunt, apponere non recusam. Dixerunt enim ...*)  
 Albertus Magnus, *De homine*, 5.3, pp. 76–7 (*in contrarium sunt rationes Avicennae, quas ponit etiam <Toletanus> ... si vero dicatur quod est multa ...*)  
 Thomas Aquinas, *Scriptum super sententiis*, II.17.2.2.c, p. 432

e) p. 107:

Second argument: It cannot exist as one soul – *dicemus etiam esse impossibile ...*

Dominicus Gundissalinus, *De anima*, 5, p. 48, lin. 25–7 (no attribution)  
 Albertus Magnus, *De homine*, 5.3, p. 77a (*si unum, tunc oporteret ...*)  
 Thomas Aquinas, *Scriptum super sententiis*, II.17.2.2.c, p. 432

f) p. 107:

Third argument: The individuation of the soul, which is due to dispositions and attributes, has a beginning in time together with the body – *dicemus etiam aliter ...*

Albertus Magnus, *De homine*, 5.3, p. 78a (*postea ponit Avicenna unam per se solum ... quod est contra Platonicos*)  
 Albertus Magnus, *Summa theologiae*, II.12.72, p. 49 (*singularitas uniuscuiusque ...*)  
 Thomas Aquinas, *De ente et essentia*, 5, p. 379, lin. 68 (Summarizing pp. 107–110)  
 Thomas Aquinas, *Scriptum super sententiis*, I.8.5.2.ad6, p. 231 (*sed quamvis individuat animarum ...*)  
 —, II.17.2.1.c, pp. 424 and 427  
 Siger of Brabant, *Quaestiones in tertium de anima*, 9, p. 27  
 Siger of Brabant, *De anima intellectiva*, 7, p. 107  
 Matthew of Aquasparta, *Quaestiones disputatae de anima*, 12, p. 199

g) p. 108:

In the substance of the soul there is a certain inclination towards reigning over a specific body – *sed in substantia animae ...*

John Pecham, *Tractatus de anima*, 4, p. 13

h) p. 109:

The soul has the principles of perfection through the medium of the body – *anima autem habet ...*

Albertus Magnus, *Super Dionysium de divinis nominibus*, 6, p. 333  
 Alexander of Hales *et al.*, *Summa theologiae*, II.4.3.1.2, p. 674b  
 —, II.4.3.2, p. 717b  
 Vincent of Beauvais, *Speculum naturale*, 24.41, p. 1741  
 Matthew of Aquasparta, *Quaestiones disputatae de anima*, 12, p. 197

i) pp. 109–110:

The souls do not become one soul after death since they have different dispositions – *potest autem aliquis dicere quod ...*

Albertus Magnus, *De homine*, 5.3, p. 78 (*sed quia Avicenna ...*)  
 Albertus Magnus, *Super ethica*, 6.8, p. 453 (*aliter dicendum sicut etiam dicit Avicenna ...*)  
 Albertus Magnus, *Summa theologiae*, II.12.72, p. 49 (*si quis autem obiiciat Avicennae quod ...*)  
 —, II.13.77.3, p. 75  
 Thomas Aquinas, *Scriptum super sententiis*, I.8.5.2.ad6, p. 231 (*sed quavis individuatio animarum ...*)  
 —, II.17.2.1.c, pp. 424 and 427  
 Matthew of Aquasparta, *Quaestiones disputatae de anima*, 10, pp. 172–3  
 —, 12, pp. 196–7 (*... concludit ...*)

j) pp. 110.7 – 111.18:

If the soul were one, it would be knowing and ignorant in all bodies – *si enim esset una in omnibus ...*

Dominicus Gundissalinus, *De anima*, 4, p. 47, lin. 11–20 (no attribution)

k) p. 111:

The soul is not one, but numerically many. Its species is one – *ergo anima non est una ...*

Albertus Magnus, *De anima*, 3.2.13, p. 195, lin. 66  
 Thomas Aquinas, *De unitate intellectus*, 5.344, pp. 313–14

l) p. 111:

The soul is individuated by something: a certain disposition, faculty, accident, but we do not know these – *sed sine dubio aliquid est ...*

Albertus Magnus, *De anima*, 3.3.14, p. 227, lin. 70

V,4

a) p. 113:

The soul does not die with the death of the body – *quod anima non moriatur ...*

Dominicus Gundissalinus, *De anima*, 8, p. 61, lin. 4–5 (*a philosophis sic probatur ...*)  
 William of Auvergne, *De anima*, 6.9, p. 165b (*multi de expositoribus Aristotelis et sequacibus ipsius in hoc consenserunt ...*)  
 Albertus Magnus, *De homine*, 61.2, p. 523 (*probat pluribus rationibus quod ...*)  
 Petrus de Hibernia, *De longitudine et brevitate vitae*, 4, p. 110, lin. 295 (*ad hoc probandum quod non corrumpitur sufficient rationes Avicennae*)

b) p. 114:

Everything passes away because of a dependency of some kind – *quia quicquid ...*

Dominicus Gundissalinus, *De anima*, 8, p. 61, lin. 5–8 (no attribution)  
 Albertus Magnus, *De homine*, 61.2, p. 527a  
 Albertus Magnus, *Super secundum sententiarum*, 19.A.1, p. 329a (*aut igitur dependet ...*)  
 Albertus Magnus, *Super Ethica*, 6.2, p. 407  
 Albertus Magnus, *De anima*, 3.3.13, p. 225, lin. 82  
 Albertus Magnus, *De natura et origine animae*, 2.2, p. 21, lin. 62  
 Albertus Magnus, *Summa theologiae*, II.13.77, p. 105a  
 Petrus de Hibernia, *De longitudine et brevitate vitae*, 4, p. 110, lin. 296

c) p. 114:

The soul does not depend upon the body in the way of coexistence – *si autem anima sic pendet ex corpore sicut ex eo cum quo habet simul esse ...*

Dominicus Gundissalinus, *De anima*, 8, p. 61, lin. 8–13 (no attribution)  
 Albertus Magnus, *De homine*, 61.2, p. 527a (*si primo modo, aut simul ...*)  
 Albertus Magnus, *Super secundum sententiarum*, 19.A.1, p. 329a (*si tamquam ab eo quod est simul in ...*)  
 Albertus Magnus, *De anima*, 3.3.13, p. 225, lin. 87  
 Albertus Magnus, *De natura et origine animae*, 2.2, p. 21, lin. 67  
 Petrus de Hibernia, *De longitudine et brevitate vitae*, 4, p. 110, lin. 300

d) p. 114:

The soul does not depend upon the body in being posterior to it – *si autem anima sic pendet ex corpore veluti eo posterius ... causae autem quatuor sunt*

Dominicus Gundissalinus, *De anima*, 8, p. 61, lin. 14–33 (no attribution)  
 Albertus Magnus, *De homine*, 61.2, p. 527b (paraphrase; *sicut ex priori ut causa ...*)  
 Albertus Magnus, *Super secundum sententiarum*, 19.A.1, p. 329a (paraphrase; *sicut ex priori causa ...*)  
 Albertus Magnus, *De anima*, 3.3.13, p. 226, lin. 19 (paraphrase; *sicut ex priori ... per causam ...*)  
 Albertus Magnus, *De natura et origine animae*, 2.2, p. 21, lin. 77 (paraphrase; *sicut ad id quod est prius ...*)  
 Petrus de Hibernia, *De longitudine et brevitate vitae*, 4, p. 110, lin. 306 (*si ... tamquam a priori ...*)

e) pp. 115–17:

When the bodily matter is prepared to receive the soul, the separate causes create it – *cum enim creatur materia corporis ...*

Dominicus Gundissalinus, *De anima*, 5, p. 48, lin. 21–3 (no attribution)

—, 5, p. 49, lin. 1–4 (no attribution)

—, 8, p. 61, lin. 33–4

Albertus Magnus, *De homine*, 17.3, p. 149a (two quotations)

—, 17.3, p. 152 (*et istae rationes sunt ad hoc quod necesse sit ponere datorem formarum*)

cf. Albertus Magnus, *Super Dionysium de divinis nominibus*, 4, p. 137

cf. Vincent of Beauvais, *Speculum naturale*, 24.85, p. 1773

cf. Thomas Aquinas, *Scriptum super sententiis*, II.17.2.2.ad4, p. 433

cf. Matthew of Aquasparta, *Quaestiones disputatae de anima*, 12, p. 198

cf. —, 12, p. 203

f) p. 118:

That which causes the emanation of existence into the soul is something immaterial – *attribuens autem esse animae ...*

Albertus Magnus, *De homine*, 17.3, p. 149a (*item, ibidem ...*)

g) p. 118:

The soul does not depend upon the body in being prior to it – *sed tertia pars ...*

Dominicus Gundissalinus, *De anima*, 8, p. 61, lin. 35 – p. 62, lin. 31 (no attribution)

Albertus Magnus, *De homine*, 61.2, p. 527b (paraphrase; ... *sicut ex posteriori ...*)

Albertus Magnus, *Super secundum sententiarum*, 19.A.1, p. 329b (*tamquam ex posteriori ...*)

Albertus Magnus, *De anima*, 3.3.13, p. 226, lin. 37 (paraphrase; *sicut ex posteriori ...*)

Albertus Magnus, *De natura et origine animae*, 2.2, p. 22, lin. 1 (paraphrase; *sicut a posteriori ...*)

Petrus de Hibernia, *De longitudine et brevitate vitae*, 4, p. 111, lin. 332 ( ... *tamquam a posteriori ...*)

h) p. 120:

Another reason why the soul does not perish: Simple things do not combine the actuality to persist and the potentiality to perish – *dicemus igitur quod ...*

Dominicus Gundissalinus, *De anima*, 8, p. 62, lin. 33 – p. 63, lin. 40 (no attribution)

Albertus Magnus, *Super secundum sententiarum*, 19.A.1, pp. 328–9 (*una ratio est Avicennae quae melius est omnibus ...*)

Albertus Magnus, *De anima*, 3.3.13, p. 225, lin. 51

Albertus Magnus, *De natura et origine animae*, 2.2, p. 21, lin. 49

Petrus de Hibernia, *De longitudine et brevitate vitae*, 4, p. 111, lin. 347

John Pecham, *Quaestiones tractantes de anima*, 2, p. 18

Matthew of Aquasparta, *Quaestiones disputatae de anima*, 10, p. 165

i) p. 122:

In the substance of the soul there is no potentiality to pass away – *in substantia ...*

cf. Anonymous (d'Alverny), *Peregrinationes*, p. 284 (no attribution; *sicut corpus postquam exiit ...*)

John Blund, *Tractatus*, 24, p. 91, lin. 5 (no attribution)

V,5

a) pp. 126–7:

An intellect in actuality causes the human soul to change from knowing in potentiality towards knowing in actuality – *dicemus quod anima humana ...*

William of Auvergne, *De anima*, 7.3, p. 205a ( ... *sequaces Aristotelis ... , eius (= intellectus agentis) actione educuntur formae ...*)

Jean de la Rochelle, *Tractatus*, 2.1.19, p. 88 ( ... *probat ab Avicenna ...*)

Jean de la Rochelle, *Summa*, 115, p. 277

Vincent of Beauvais, *Speculum naturale*, 27.38, p. 1945 (from Jean, *Summa*)

Grosseteste, *Commentarius in de divinis nominibus*, p. 150, lin. 45 (no attribution; ... *intelligibilia ... quae coniunctae intellectui faciunt eam actu intelligentem ...*)

Petrus Hispanus, *Scientia libri de anima*, 10.7, p. 445 (no attribution; *causa igitur dandi ...*)

Albertus Magnus, *Super secundum sententiarum*, 1.C.12, p. 34

Albertus Magnus, *Ethica*, 10.2.2, p. 625

Albertus Magnus, *Summa theologiae*, II.1.3, p. 27

—, II.1.4, p. 63

—, II.1.4.2.3, p. 86

—, II.13.77.3, p. 75

Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 135va, p. 401 (no attribution; *intellectus agens est ...*)

Thomas Aquinas, *De veritate*, 10.8, p. 325 (*quidam ... posuerunt, ... semper actu intelligit ...*)

—, 11.1, p. 350 (*etiam ponunt ...*)

Thomas Aquinas, *Summa contra gentiles*, 3.87, p. 267 ( ... *facit ... intellecta in actu*)

Thomas Aquinas, *Prima pars Summae theologiae*, 1.84.4.c, p. 320 ( ... *ponit <species> in intelligentia agente*)

John Pecham, *Quaestiones tractantes de anima*, 5, p. 60 ( ... *intelligentia in effectu dat formas intelligibiles ...*)

Matthew of Aquasparta, *Quaestiones disputatae de anima*, 7, p. 125

Bernardus of Trilia, *Quaestiones disputatae de cognitione animae separatae*, 1, p. 24 ( ... *intelligit per impressionem quam recipit ab intellectu agente ...*)

b) p. 127:

The relation of this intellect to our souls is like that of the sun to our vision – *cuius comparatio ...*

Dominicus Gundissalinus, *De anima*, 10, p. 88, lin. 11 (no attribution)

cf. John Blund, *Tractatus*, 25.3, p. 102, lin. 19 (no attribution)

Anonymous (Gauthier), *De anima et de potentiis eius*, p. 51, lin. 446 (no attribution; *talis comparatio ...*)

—, p. 51, lin. 453 (*in hoc erravit Avicenna quia posuit ... separatim ... sicut sol est separatus a visu*)

Anonymous (Callus), *De potentiis animae et obiectis*, p. 156, lin. 3 ( ... *quidam philosophorum ... separatam*)

William of Auvergne, *De anima*, 5.8, p. 123a (*solem animarum nostrarum ... esse posuerunt Aristoteles et sequaces eius ...*)

—, 7.3, p. 205a (*philosophi ... , ... comparationem lucis ...*)

—, 7.5, p. 210a (*Aristoteles ... intelligentiam agentem separatam ... posuit tamquam solem quandam ...*)

Jean de la Rochelle, *Tractatus*, 2.1.17, p. 87 (*sicut dicit Aristoteles et alii philosophi, intellectus agens se habet ad fantasmatum ut lux ad colores*)

cf. Alexander of Hales et al., *Summa theologiae*, II.4.1.2.3.1.2, p. 452b (no attribution; ... *ab agente primo illuminatur ...*)

Bonaventura, *In quatuor libros sententiarum*, II.24.1.2.4, p. 568a (no attribution: *quidam namque dicere voluerunt quod intellectus agens sit intelligentia separata ... sed iste modus dicendi falsus est*)

Petrus Hispanus, *Scientia libri de anima*, 10.7, p. 446 (no attribution; *ut lux solis ...*)

cf. Albertus Magnus, *De homine*, 55.3, p. 463 (*in hac tamen sententia expresse est Avicenna in .vi. de naturalibus*)

Albertus Magnus, *Super Ethica*, 6.8, p. 451 (*aliter dicendum quod sicut dicit Avicenna ... intellectus agens est pars humanae animae essentialis, non quod intellectus agens et possibilis sint diversae essentialiae ...*)

Albertus Magnus, *Summa theologiae*, II.1.4.2.3, p. 86



Vincent of Beauvais, *Speculum naturale*, 27.42, p. 1947  
 Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 135va, p. 401 (no attribution; *a quibusdam dicitur quod sit aliquid separatam ...*)  
 cf. Thomas Aquinas, *De veritate*, 11.3, p. 357 (*errorem ... philosophorum qui ponunt ... separatam ...*)  
 cf. Thomas Aquinas, *Summa contra gentiles*, 2.76, p. 480 (*nec intellectus agens est unus in omnibus*)  
 Thomas Aquinas, *De anima*, 3.4, p. 220, lin. 89 (no attribution; *separatam ... istud autem non videtur esse verum*)  
 Ps.-Henry of Ghent, *Quaestiones in librum de causis*, 21, p. 55  
 cf. Anonymous (Vennebusch), *Quaestiones in tres libros de anima*, 3.67, p. 293 (*... positio et Avicennae qui ponebant agentem substantiam separatam ...*)  
 John Pecham, *Quaestiones tractantes de anima*, 5, p. 60 (*cuius operatio est ... sicut ...*)  
 cf. —, 6, p. 73 (*melius posuit Avicenna qui posuit ... separatam ...*)  
 cf. Roger Bacon, *Opus maius*, 2.5, p. 39 (*intellectus agens ... est substantia separata, ... Avicenna quinto de anima et decimo Metaphysices idem docet ...*)  
 cf. Anonymous (Van Steenberghen), *Quaestiones de anima*, 3.16, p. 332 (*aliqui ponebant intellectum agentem esse substantiam separatam, ut Themistius et Theophrastus et etiam Avicenna*)  
 Bernardus of Trilia, *Quaestiones disputatae de cognitione animae separatae*, 1, p. 24 (*quem posuit substantiam separatam*)

c) p. 127:

Abstract forms flow from the active intellect upon the human soul which is disposed for this through its consideration of the particulars stored in imagination – *virtus enim rationalis cum considerat singula ...*

Dominicus Gundissalinus, *De anima*, 10, p. 88, lin. 17 (no attribution)  
 —, 10, p. 88, lin. 27–32 (no attribution)  
 Anonymous (de Vaux), *De causis primis*, 10, p. 130 (no attribution; *dicamus ergo quod ...*)  
 cf. Alfred of Shreshill, *De motu cordis*, 15, p. 83 (no attribution; *bruta ... cum intellectus activi non illustrentur acumine, ad rationis apicem non ascendent*)  
 Grosseteste, *In posteriorum analyticorum libros*, 1.7, p. 140 (no attribution; *... intellectus humanus ... recipit irradiationem a luce creata quae est intelligentia ...*)  
 William of Auvergne, *De anima*, 5.5, p. 119a (no attribution; *idoneitas recipiendi formas intelligibiles*)  
 Jean de la Rochelle, *Tractatus*, 2.1.22, p. 93  
 Jean de la Rochelle, *Summa*, 117, p. 280  
 Petrus Hispanus, *Scientia libri de anima*, 10.7, p. 447 (no attribution; *aestimantur autem ...*)  
 Albertus Magnus, *De homine*, 37.4, p. 329 (*et tunc praeparat imagines ...*)  
 cf. Albertus Magnus, *Super Dionysium de caelesti hierarchia*, 2, p. 38 (*fluunt formae ab intellectu agente ...*)  
 Vincent of Beauvais, *Speculum naturale*, 27.42, p. 1947  
 Thomas Aquinas, *De veritate*, 10.6, pp. 311–12 (*... non videtur rationabilis*)  
 Thomas Aquinas, *Summa contra gentiles*, 2.74, p. 470 (*non igitur est verisimile ...*)  
 —, 2.76, p. 481 (*non videtur esse conveniens ...*)  
 Thomas Aquinas, *Prima pars Summae theologiae*, 1.84.4.c, p. 320 (*hoc quidem non sufficit ...*)  
 Thomas Aquinas, *Quaestio de anima*, 15.c, p. 171

d) p. 128:

Comparison between the forms perceived through light and the abstracted forms received through mediation of the light of the active intellect – *imaginabilia vero sunt ...*

Dominicus Gundissalinus, *De anima*, 10, p. 88, lin. 32 – p. 89, lin. 4 (no attribution)  
 Petrus Hispanus, *Scientia libri de anima*, 10.7, p. 447 (no attribution; *sed cum emanant ...*)

e) p. 128:

The first thing to be discerned by the intellect is the distinction between essential and accidental – *primum autem quod percipit de eis ...*

Dominicus Gundissalinus, *De anima*, 10, p. 89, lin. 27–31 (no attribution)  
 Petrus Hispanus, *Scientia libri de anima*, 10.10, p. 463 (no attribution; *primas vero differentias ...*)

f) p. 129:

The intellect is able to multiply concepts out of one and to reduce them to one – *ergo intellectus habet potestatem ...*

Dominicus Gundissalinus, *De anima*, 10, p. 89, lin. 31 – p. 90, lin. 4 (no attribution)  
 Petrus Hispanus, *Scientia libri de anima*, 10.10, p. 463 (no attribution; *intellectus enim ...*)  
 Albertus Magnus, *De homine*, 59.2, p. 515a (*... modi adunandi intelligibilia ...*)

g) pp. 129–30:

If the intellect has to deal with two concepts of the same species, it does not derive two forms from them, but one. Example of 'humanity' – *cum autem aliquam ...*

Dominicus Gundissalinus, *De anima*, 10, p. 90, lin. 6–18 (no attribution)

h) pp. 130–31:

The second concept does not add anything to the first – *quod autem de hoc ...*

Dominicus Gundissalinus, *De anima*, 10, p. 90, lin. 36–40 (no attribution)  
 cf. Anonymous (Giele), *Quaestiones de anima*, 1.9, p. 43

i) p. 131:

The intellect necessarily perceives time – *intellectus autem ...*

Dominicus Gundissalinus, *De anima*, 10, p. 90, lin. 40 – p. 91, lin. 3 (no attribution)

j) pp. 131–2:

The intellect is not able to conceive and abstract fully because it is hindered by the body – *quod autem intellectus non potest formare ea ...*

Dominicus Gundissalinus, *De anima*, 10, p. 91, lin. 4–13 (no attribution)  
 cf. John Blund, *Tractatus*, 25.3, p. 101, lin. 15 (*ut habetur ab Augustino et Ieronimo et aliis auctoribus ...*) and lin. 19 (no attribution)  
 Bernardus of Trilia, *Quaestiones disputatae de cognitione animae separatae*, 4, p. 116 (*sicut oculus ...*)

k) p. 132:

Definition of natural science – *doctrinae naturalis non est proprium speculari nisi ...*

John Blund, *Tractatus*, 2.2, p. 6, lin. 17 (no attribution)

l) pp. 132–3:

The intellect's conception varies according to its objects – *sed dicemus quod formatio intellectus differt ...*

Dominicus Gundissalinus, *De anima*, 10, p. 91, lin. 14–19 (no attribution)  
Bernardus of Trilia, *Quaestiones disputatae de cognitione animae separatae*, 4, p. 116

V,6

a) p. 134:

The soul comprehends by grasping the form of the abstracted intelligibles ... – *anima intelligit eo quod apprehendit ...*

Dominicus Gundissalinus, *De anima*, 10, p. 89, lin. 5–14 (no attribution)  
Albertus Magnus, *De homine*, 55.5, p. 472a (*quaedam sunt per se intelligibilia ut dicit Avicenna*)  
—, 57.2, p. 491a (no attribution; *omnia intelligibilia denudata sunt a materia ... vel nuda per se ipsa*)  
—, 58.1, p. 499a,b (two quotations)  
—, 58.1, p. 501a  
Vincent of Beauvais, *Speculum naturale*, 27.44, p. 1948 (from *De homine*, p. 472)

b) pp. 134–8:

Refutation of the claim that the soul becomes identical with the forms which it comprehends – *in eo vero quod intelligit ceteras formas ...*

Dominicus Gundissalinus, *De anima*, 10, p. 89, lin. 4–5, lin. 16–18, lin. 14–15  
Thomas Aquinas, *Scriptum super sententiis*, IV.49.2.1.ad 10  
cf. Albertus Magnus, *De homine*, 57.2, p. 491b (*... scientia et intellectus esse unum*)  
cf. Vincent of Beauvais, *Speculum naturale*, 27.50, p. 1953 (from *De homine*)

c) pp. 138–41:

There are three different kinds of conceptualizing – *dicemus quod formari intelligibilia fit tribus modi*

Dominicus Gundissalinus, *De anima*, 10, p. 91, lin. 20 (no attribution; p. 91, lin. 20 to p. 96, lin. 15 is a long quotation of the rest of this chapter)  
Albertus Magnus, *De homine*, 59.2, pp. 514b–515a (*... tribus modis ...*)

d) p. 143:

There is no ordering or multiplication of forms in the pure <separate> intellect – *debes etiam scire quod in nostro (mistake) puro intellectu ...*

Dominicus Gundissalinus, *De anima*, 10, p. 92, lin. 34 (no attribution)  
Petrus Hispanus, *Scientia libri de anima*, 10.7, pp. 448–9 (no attribution; *in anima igitur ...*)

e) p. 146:

Question: Are comprehended intelligibles stored in some kind of storing-place? –

*dicemus nunc de humanis animabus ...*

Dominicus Gundissalinus, *De anima*, 10, p. 93, lin. 27 (no attribution)  
Petrus Hispanus, *Scientia libri de anima*, 10.7, p. 447 (no attribution; *at vero formae nuda ...*)  
Albertus Magnus, *De homine*, 57.5, p. 495b (*haec est quaestio Avicennae*)

f) p. 146:

Refutation of two possible answers – *iam autem diximus quod corpus ...*

Dominicus Gundissalinus, *De anima*, 10, p. 93, lin. 32 (no attribution)  
Petrus Hispanus, *Scientia libri de anima*, 10.7, pp. 447–8 (no attribution; *verum eas ...*)  
Thomas Aquinas, *Summa contra gentiles*, 2.74, p. 469 (*primum autem horum trium ...*)  
Simon of Faversham, *Quaestiones super tertium de anima*, 9, p. 332 (*... in alia virtute habente organum ...*)

g) pp. 146–7:

Another refuted answer: The soul is like a mirror – *Aut dicemus quod ...*

Dominicus Gundissalinus, *De anima*, 10, p. 93, lin. 36 (no attribution)  
Petrus Hispanus, *Scientia libri de anima*, 10.7, p. 448 (*tamquam speculo offerantur ...*)  
Albertus Magnus, *De homine*, 57.5, p. 497a (*et tunc resultant in ipso sicut in speculo ...*)  
Albertus Magnus, *De anima*, 3.3.10, p. 220, lin. 87 (no attribution)  
Thomas Aquinas, *Summa contra gentiles*, 2.74, p. 469 (*oportet quod formae ...*)  
Simon of Faversham, *Quaestiones super tertium de anima*, 9, p. 332 (*... formae per se subsistentes ...*)

h) p. 147:

The answer is that the form emanates from the active intellect at the will of the soul – *aut ex principio agente emanet ... dicemus ergo ... esse veram*

Dominicus Gundissalinus, *De anima*, 10, p. 94, lin. 1 (no attribution)  
Petrus Hispanus, *Scientia libri de anima*, 10.7, p. 448 (no attribution; *censetur igitur ...*)  
Albertus Magnus, *De homine*, 57.5, p. 496b (*... non manent ...*)  
Albertus Magnus, *De anima*, 3.3.9, p. 219, lin. 59  
—, 3.3.11, p. 222, lin. 95  
Thomas Aquinas, *Summa contra gentiles*, 2.74, p. 469 (*vel oportet quod species ... fluant ... unde concludit tertium ...*)  
Thomas Aquinas, *Prima pars Summae theologiae*, 1.84.4.c, p. 320 (*... postquam desinit actu intelligere ...*)  
John Pecham, *Quaestiones tractantes de anima*, 27, p. 187  
Bernardus of Trilia, *Quaestiones disputatae de cognitione animae separatae*, 5, p. 134 (*... fluxibiles ad modum passionis ...*)  
Simon of Faversham, *Quaestiones super tertium de anima*, 9, p. 332 (*reliquitur ergo tertiam ... Opinio Avicennae veritatem non habet ...*)

i) p. 147:

The essence of the soul does not store intelligibles – *et impossibile est etiam ...*

Dominicus Gundissalinus, *De anima*, 10, p. 94, lin. 9 (no attribution)  
Albertus Magnus, *De homine*, 57.5, p. 498a (*sententia autem Avicennae in hoc quod non est habere memoriam animam rationalem est eadem nobiscum*)  
Vincent of Beauvais, *Speculum naturale*, 27.11, p. 1924 (from *De homine*)  
Thomas Aquinas, *Prima pars Summae theologiae*, 1.79.6.c, p. 270 (*unde non poterit poni memoria in parte intellectiva ... , ... repugnat dictis Aristotelis ...*)

## j) pp. 147–8:

Comparison of the intellect with imagination and memory, the storing animal faculties. The intellect does not store, but apprehend – *formas autem memoratas ...*

- Dominicus Gundissalinus, *De anima*, 10, p. 94, lin. 13 (no attribution)  
 Albertus Magnus, *De homine*, 57.5, p. 498a (*et ipse distinguit ...*)  
 cf. Albertus Magnus, *De anima*, 3.3.10, p. 220, lin. 80 (no attribution)  
 Vincent of Beauvais, *Speculum naturale*, 27.11, p. 1924 (from *De homine*)  
 Thomas Aquinas, *Scriptum super sentiis*, IV.50.1.2.c (*per quem modum aliquid ...*)  
 Thomas Aquinas, *De veritate*, 10.2, p. 301  
 —, 19.1, p. 564 (*sed sicut in quodam ...*)  
 Thomas Aquinas, *Summa contra gentiles*, 2.74, p. 469 (*vires autem quae conservant ...*)  
 Thomas Aquinas, *Prima pars Summae theologiae*, 1.79.6.c, p. 270  
 Thomas Aquinas, *De sensu et sensato*, 2.2, p. 108 (*non est sicut in potentiis sensitivis ...*)  
 Anonymous (Van Steenberghe), *Quaestiones de anima*, 2.19, p. 227  
 —, 2.19, p. 228 (*sed conservare imagines ...*)  
 Bernardus of Trilia, *Quaestiones disputatae de cognitione animae separatae*, 5, pp. 129–30  
 Simon of Faversham, *Quaestiones super tertium de anima*, 9, p. 331

## k) p. 148:

That the intelligibles are in the soul, is identical with comprehending them – *hoc autem ...*

- Dominicus Gundissalinus, *De anima*, 10, p. 94, lin. 23 (no attribution)  
 Petrus Hispanus, *Scientia libri de anima*, 10.7, p. 449 (no attribution; *censetur igitur ...*)  
 Albertus Magnus, *De homine*, 57.5, p. 496a  
 —, 57.5, p. 498b (*ad hoc autem quod obiicit Avicenna ... dicendum quod hoc falsum est*)  
 Albertus Magnus, *De anima*, 3.3.9, p. 219, lin. 73  
 —, 3.3.11, p. 223, lin. 11  
 Vincent of Beauvais, *Speculum naturale*, 27.11, p. 1925 (from *De homine*, p. 498; *... falsum est ...*)  
 Thomas Aquinas, *Scriptum super sentiis*, IV.50.1.2.c (*... nisi ut in vi apprehendente ... nec in hoc opinionem Avicennae sequimur*)  
 Thomas Aquinas, *De veritate*, 10.2, p. 301 (*... vero non permanet species ...*)  
 —, 19.1, p. 564 (*... nihil conservetur nisi ...*)  
 Thomas Aquinas, *Summa contra gentiles*, 2.74, p. 469 (*non remanent species ...*)  
 Thomas Aquinas, *Prima pars Summae theologiae*, 1.79.6.c, p. 270 (*unde oportet intelligi ...*)  
 Thomas Aquinas, *De sensu et sensato*, 2.2, p. 108 (*posset ... aliquis dicere quod ... non manent ...*)  
 Thomas Aquinas, *Quodlibeta*, 12.12.c, p. 434 (*... non remanent ... , quod est falsum*)  
 Anonymous (Van Steenberghe), *Quaestiones de anima*, 2.19, p. 228  
 —, 3.11, p. 324 (*de isto contradicebant Aristoteles et Avicenna ...*)  
 Bernardus of Trilia, *Quaestiones disputatae de cognitione animae separatae*, 5, pp. 129–30  
 Simon of Faversham, *Quaestiones super tertium de anima*, 9, p. 331

## l) pp. 148–9:

Answer: Acquisition of knowledge depends on someone's preparedness to make contact with the active intellect from which the forms emanate – *discere non sit nisi inquirere perfectam aptitudinem ...*

- Dominicus Gundissalinus, *De anima*, 10, p. 94, lin. 26 (no attribution)  
 cf. William of Auvergne, *De anima*, 5.5, p. 119a (no attribution; *idoneitas recipiendi formas intelligibiles*)  
 Petrus Hispanus, *Scientia libri de anima*, 10.7, p. 449 (no attribution; *addiscentia consistat in ...*)  
 Albertus Magnus, *De homine*, 51, p. 442b (*... formae universales simplices ...*)

- , 57.5, p. 496b (*efficitur intellectus possibilis apertus sufficienter ...*)  
 —, 57.5, p. 497a (*ad hoc respondet Avicenna ...*)  
 Albertus Magnus, *De anima*, 3.3.9, p. 219, lin. 39–56  
 —, 3.3.9, p. 219, lin. 85  
 —, 3.3.10, p. 220, lin. 53  
 —, 3.3.10, p. 220, lin. 68  
 Vincent of Beauvais, *Speculum naturale*, 26.57, p. 1874 (from *De homine*, p. 442)  
 Thomas Aquinas, *Scriptum super sentiis*, III.33.1.2.sol 2, p. 1028 (*... disponitur ...*)  
 —, IV.50.1.2.c (*quidam habilitatio*)  
 Thomas Aquinas, *De veritate*, 10.2, p. 301 (*... quaedam habilitas ...*)  
 —, 12.1, p. 368 (*habilitas animae nostrae*)  
 Thomas Aquinas, *Summa contra gentiles*, 2.74, p. 469 (*respondet quod addiscere ...*)  
 Thomas Aquinas, *Prima pars Summae theologiae*, 1.79.6.c, p. 270 (*habilitas ... convertendi se ...*)  
 cf. Thomas Aquinas, *Secunda pars Summae theologiae*, 2.1.63.1.c, p. 406 (*scientiae ... ex influentia intelligentiae agentis ...*)  
 John Pecham, *Quaestiones tractantes de anima*, 5, p. 65  
 John Pecham, *Tractatus de anima*, 5, p. 20 (*... aptitudinem ...*)  
 Anonymous (Van Steenberghe), *Quaestiones de anima*, 2.19, p. 229 (*addiscere non est aliud ...*)

## m) p. 149:

The preparedness which precedes the acquisition of knowledge is imperfect – *aptitudo autem quae praecedit discere ...*

- Dominicus Gundissalinus, *De anima*, 10, p. 94, lin. 29 (no attribution)  
 Petrus Hispanus, *Scientia libri de anima*, 10.7, p. 449 (no attribution; *sed haec aptitudo ...*)  
 Albertus Magnus, *De homine*, 57.5, p. 497b (*dicat etiam ...*)  
 Anonymous (Van Steenberghe), *Quaestiones de anima*, 2.19, p. 229 (*ante addiscere ...*)

## n) p. 149:

About turning away from the active intellect. Example of the eye which is cured – *si vero avertitur ... sicut curatio oculi ...*

- Dominicus Gundissalinus, *De anima*, 10, p. 94, lin. 34 (no attribution)  
 cf. William of Auvergne, *De anima*, 7.8, p. 214b (no attribution; *videmus enim cum volumus ...*)  
 Petrus Hispanus, *Scientia libri de anima*, 10.7, p. 449 and p. 450 (no attribution; *aversio vero aspectus ... unde videtur eius notitia ...*)  
 Thomas Aquinas, *Scriptum super sentiis*, IV.50.1.2.c (*et cum desinit ... , sicut ... in oculo ...*)  
 cf. Anonymous (Van Steenberghe), *Quaestiones de anima*, 3.Comm.2, p. 309  
 cf. —, 3.11, p. 324 (*quando divertit se intellectus ...*)  
 cf. Matthew of Aquasparta, *Quaestiones disputatae de anima*, 7, p. 135  
 Bernardus of Trilia, *Quaestiones disputatae de cognitione animae separatae*, 5, pp. 129–30 (*relicta est in eo quaedam habilitas ... sed ista positio non potest stare ...*)

## o) p. 150:

The intelligible form which emanates into us most truly is the acquired intellect – *quae forma est intellectus adeptus verissime ...*

- Dominicus Gundissalinus, *De anima*, 10, p. 95, lin. 10 (no attribution)  
 Petrus Hispanus, *Scientia libri de anima*, 10.7, p. 450 (no attribution; *forma ab ea emanans ...*)  
 cf. Albertus Magnus, *De anima*, 3.2.15, p. 199, lin. 31 (*quidam vocant adeptum*)  
 —, 3.2.19, p. 206, lin. 50  
 —, 3.3.13, p. 225, lin. 5 (no attribution)

Albertus Magnus, *De quindecim problematibus*, 1, pp. 32–3 (*adeptum esse dicebant*)

p) p. 150:

When the soul is freed from the body, it will connect with the active intellect in a perfect way and will encounter eternal joys – *cum autem anima liberabitur ...*

Dominicus Gundissalinus, *De anima*, 10, p. 95, lin. 14 (no attribution)  
cf. Anonymous (d'Alverny), *Peregrinationes*, p. 291 (no attribution; ... *intelligentia agens ... ad cuius societatem cum pervenerit anima iam ei assimilata est et aequata ...*)  
William of Auvergne, *De anima*, 5.2, p. 112b (*et quoniam perfecta communicatio ...*)  
Petrus Hispanus, *Scientia libri de anima*, 10.7, p. 450 (no attribution; *post separationem ...*)  
Albertus Magnus, *De homine*, 61.2, p. 523 (*cum ergo liberatur ...*)  
Albertus Magnus, *De natura et origine animae*, 2.7, p. 30, lin. 11 (*Avicenna autem et Algazel et alii*)  
Giles of Rome, *Errores philosophorum*, 6.18, p. 34 (*ulterius erravit circa beatitudinem ...*)

q) p. 151:

Acquisition of knowledge is of varying degrees – *sapientia ... non aequaliter ...*

Dominicus Gundissalinus, *De anima*, 10, p. 95, lin. 18 (no attribution)  
Petrus Hispanus, *Scientia libri de anima*, 10.10, p. 467 (no attribution; *in acquisitione ...*)  
Albertus Magnus, *De homine*, 60, p. 517b ( ... *habet tres gradus*)  
Albertus Magnus, *Super ethica*, 10.17, p. 779 (application of the theory to the discussion of education and morals)  
Albertus Magnus, *De intellectu et intelligibili*, 1.3.3, p. 501b  
Albertus Magnus, *De somno et vigilia*, 3.1.6, p. 185a (*gradus esse in huiusmodi anima intellectuali*)  
Albertus Magnus, *De causis*, 1.2.7, pp. 32–3  
Matthew of Aquasparta, *Quaestiones disputatae de anima*, 11, p. 183

r) p. 151:

The sacred intellect – *debet vocari intellectus sanctus*

Dominicus Gundissalinus, *De anima*, 10, p. 95, lin. 26 (no attribution)  
Albertus Magnus, *De homine*, 60, p. 518a  
Albertus Magnus, *Super Ethica*, 1.3, p. 19 (*sanctum et purum intellectum*)  
—, 2.1, p. 93  
—, 10.17, p. 779 (*quem Avicenna vocat sanctum*)  
Albertus Magnus, *De anima*, 3.3.11, p. 223, lin. 24 (*intellectus vocatus sanctus a philosophis*)  
Albertus Magnus, *De intellectu et intelligibili*, 1.3.3, p. 501b  
Albertus Magnus, *Summa theologiae*, ii.4.14, p. 196 (*quem intellectum Avicenna vocat sanctum et divinum*)

s) p. 152:

Definition of intuition (ability to find the middle term) and of acumen – *ingenium autem est actus rationis ...*

Dominicus Gundissalinus, *De anima*, 10, p. 95, lin. 35 (no attribution)  
Roland of Cremona, *Summa theologiae*, f. 33vb (*Secundum philosophos non est ingenium vis aliqua animae. Immo diffiniunt ita ingenium quod est actus rationis ex cuius propria vi invenitur medius terminus in syllogismo. Non sollertia est vis animae, immo est subtilitas ingenii.*)  
Petrus Hispanus, *Scientia libri de anima*, 10.10, p. 467 (no attribution; *verum ingenium ...*)  
Albertus Magnus, *De homine*, 41.1, p. 351b  
—, 60, p. 517a

Albertus Magnus, *De anima*, 3.3.11, p. 223, lin. 27 (no attribution)  
—, 3.3.12, p. 225, lin. 10 (no attribution)  
cf. Anonymous (Van Steenberghen), *Quaestiones de anima*, 2.18, p. 227 (*sylogizare enim ...*)

t) p. 152:

The origin of instruction is intuition – *principium autem doctrinae est ingenium*

Dominicus Gundissalinus, *De anima*, 10, p. 95, lin. 37 (no attribution)  
Petrus Hispanus, *Scientia libri de anima*, 10.10, p. 467 (no attribution)

u) p. 152, lin. 1:

The force of intuition varies quantitatively and qualitatively in people – *sed differunt homines ...*

Dominicus Gundissalinus, *De anima*, 10, p. 96, lin. 1 (no attribution)  
Petrus Hispanus, *Scientia libri de anima*, 10.10, p. 467 (no attribution; ... *et in his ...*)  
Matthew of Aquasparta, *Quaestiones disputatae de anima*, 11, p. 183

v) p. 153:

To make contact to the active intellect at will is the highest kind of prophethood: the sacred faculty – *possibile ergo est ...*

Dominicus Gundissalinus, *De anima*, 10, p. 96, lin. 7 (no attribution)  
William of Auvergne, *De anima*, 5.7, p. 122 (no attribution; ... *in animabus prophetarum ab intelligentia agente ...*)  
Petrus Hispanus, *Scientia libri de anima*, 10.10, p. 467 (no attribution; *intellectus communis dicitur et excelsus*)  
Albertus Magnus, *De anima*, 3.3.11, p. 223, lin. 33 (no attribution; *efficiuntur prophetantes*)  
Albertus Magnus, *De somno et vigilia*, 3.1.6, p. 185a (*invenitur anima quae omnia scit per seipsam ut dicunt et est quoad intellectum quasi Deus incarnatus ...*)  
cf. Thomas Aquinas, *De veritate*, 12.3, p. 374  
Giles of Rome, *Errores philosophorum*, 6.16, pp. 32 and 34 (*ulterius erravit circa prophetiam ...*)

V,7

a) p. 154:

Some people say that the soul is one essence and that it performs all its actions by itself through the different instruments – *quaedam enim ex illis est dictio ...*

cf. John Blund, *Tractatus*, 5, p. 14, lin. 24 (*dicunt plures auctores quod omnes vires animae sunt una vis*)  
cf. Albertus Magnus, *De anima*, 3.5.4, p. 248, lin. 67 (*nonnulli dicunt ...*)

b) pp. 156–7:

Some maintain that there are different souls in one living being – *qui autem dixerunt animas esse multas ...*

cf. Alexander Nequam, *Speculum*, 3.85, p. 350 (*dixere igitur philosophi ...*)  
Albertus Magnus, *De homine*, 4.5, p. 50b (*et hic fuit quidam error antiquorum quam tangit Avicenna ...*)

—, 7.1, p. 94b and p. 97a (*et hic fuit error quorundam Pythagoricorum ... et iste error improbat est ab Avicenna ...*)

cf. Albertus Magnus, *De anima*, 3.5.4, p. 248, lin. 86 (no attribution; *sunt autem nonnulli ...*)

Albertus Magnus, *De spiritu et respiratione*, 1.2.1, p. 232 (*contra autem ista dicta fuit Aristoteles cum toto Peripateticorum coetu quem sequuntur Avicenna et Averroes ... et Platonis dogma improbant*)

c) pp. 157–8:

It has been shown already that different actions come from different faculties and that the faculties have their own primary action – *dicemus igitur ex praemissis ...*

Dominicus Gundissalinus, *De anima*, 9, p. 64, lin. 13–18 (no attribution)

d) pp. 158–60:

The faculties hinder each other which indicates that there is a common link between them – *his ergo propositis, dicemus ... habeant vinculum ...*

Dominicus Gundissalinus, *De anima*, 9, p. 65, lin. 24 – p. 66, lin. 1 (no attribution)

Albertus Magnus, *De homine*, 7.1, p. 90 (*praeterea est obiectio Avicennae ...*)

Anonymous (Van Steenberghen), *Quaestiones de anima*, 2.7, p. 206

John Pecham, *Quaestiones tractantes de anima*, 12, p. 101

John Pecham, *Tractatus de anima*, 7, p. 25

Matthew of Aquasparta, *Quaestiones disputatae de anima*, 6, p. 109

Bernardus of Trilia, *Quaestiones disputatae de cognitione animae separatae*, 12, p. 317

e) p. 159:

Example: We become angry or desiring because of some perception – *quomodo enim hoc esset, cum nos ...*

Albertus Magnus, *De homine*, 64.1, pp. 546–7

Vincent of Beauvais, *Speculum naturale*, 27.60, p. 1959 (from *De homine*)

f) pp. 159–60:

This link cannot be the body. Reasons – *hoc autem impossibile est corpus ...*

Dominicus Gundissalinus, *De anima*, 4, p. 66, lin. 1–6 (no attribution)

g) pp. 160–61:

Further reasons for this thesis – *si quis autem dubitaverit ...*

Dominicus Gundissalinus, *De anima*, 9, p. 66, lin. 10–12 (no attribution)

h) p. 162:

Repetition of the thought-experiment of the Flying Man – *repetamus autem id ...*

Albertus Magnus, *De homine*, 24.1, p. 233a (only: *cum ergo idem non potest simul sciri et ignorari*)

Matthew of Aquasparta, *Quaestiones disputatae de anima*, 12, p. 199 ( ... *quod est tamquam vestis*)

i) p. 167:

Conclusion: There is something conjoining for the faculties, which is not a body – *manifestum est ergo ...*

Dominicus Gundissalinus, *De anima*, 9, p. 66, lin. 12–14 (no attribution)

j) p. 167:

It is possible that first there is only the faculty of generation which generates the organs, which in turn are prepared to receive the faculties – *postquam autem iam ...*

Albertus Magnus, *De homine*, 17.2, p. 145b (*sicut dicit Avicenna in ultimo capitulo libri sexti de naturalibus*)

—, 17.3, p. 154a

k) pp. 171–2:

Even if we assume that the vegetative and animal faculties in animals differ in species, they still can be two different faculties related to one essence. Comparison with moist and heat – *praeter hoc etiam ponamus quod ...* (cf. I.3, pp. 64–5)

Dominicus Gundissalinus, *De anima*, 4, p. 45, lin. 21–6 (no attribution)

John Blund, *Tractatus*, 4, p. 10, lin. 28

cf. Petrus Hispanus, *Quaestiones libri de anima*, 2.8.1, p. 705 ( ... *differunt ... in genere potentiae ...*)

cf. —, 2.9.4, p. 724 (*differunt per essentiam in genere potentialium ...*)

cf. Thomas Aquinas, *De veritate*, 10.1, p. 296 (*potentia animae est proprietas eius ...*; cf. I.1, p. 15: *affectiones*)

cf. —, 27.6, p. 813 (*potentiae sunt naturales proprietates animae ...*)

l) p. 172:

Explanation and comparison: When the elements lose their extremity, they become more similar to the heavenly bodies, from which they receive a life-giving faculty – *modus autem intelligendi hoc est ...*

Petrus Hispanus, *Quaestiones libri de anima*, 2.1.9, pp. 532 and 534

—, 2.2.3, p. 545

—, 2.3.1, p. 576

—, 2.7.1, pp. 677, 678 and 680 (cf. also: *De medicinis cordialibus*, ed. Van Riet, 1968, p. 190)

—, 2.7.6, p. 685

Albertus Magnus, *Super primum sententiarum*, 44.B.2, p. 392 ( ... *et per hoc patet solutio ad totum*)

Albertus Magnus, *De ecclesiastica hierarchia*, 5.11, p. 705

cf. Albertus Magnus, *Super Ethica*, 1.15, p. 80 (*sicut lux ignis ...*)

Albertus Magnus, *Ethica*, 1.6.6, p. 92

Albertus Magnus, *Summa theologiae*, II.1.4.2.3, p. 86

—, II.13.77.3, p. 75

Alexander of Hales et al., *Summa theologiae*, II.4.2.1.1, p. 511b (*ut volunt philosophi*)

Bonaventura, *In quatuor libros sententiarum*, 2.17.2.2, p. 421 (cf. also: *De medicinis cordialibus*, p. 190)

Thomas Aquinas, *Scriptum super sententiis*, II.15.2.2.7, p. 380

Thomas Aquinas, *Quaestio de anima*, 8.ad 2, p. 132

John Pecham, *Quaestiones tractantes de anima*, 13, pp. 107–8

cf. Matthew of Aquasparta, *Quaestiones disputatae de anima*, 4, p. 68 (*Algazel et Avicenna in hoc errant ...*)

—, 12, p. 196

**m) pp. 172–3:**

Comparison: sun or fire = separate substance, sphere = body, etc. – *cuius reiponamus exemplum in naturalibus ...*

Dominicus Gundissalinus, *De anima*, 4, p. 46, lin. 21–33 (no attribution)  
 Petrus Hispanus, *Quaestiones libri de anima*, 1.4.2, p. 259 (*hoc est exemplum Avicennae*)  
 Albertus Magnus, *De homine*, 17.3, p. 158a (Summary)  
 Albertus Magnus, *Super primum sententiarum*, 44.B.2, p. 392 ( ... *et per hoc patet solutio ad totum*)  
 cf. Albertus Magnus, *De spiritu et respiratione*, 1.1.4, p. 221  
 Albertus Magnus, *Summa theologiae*, II.1.4.2.3, p. 86  
 Vincent of Beauvais, *Speculum naturale*, 24.87, p. 1774 (from *De homine*)  
 Matthew of Aquasparta, *Quaestiones disputatae de anima*, 12, p. 196

**V,8**

**a) p. 175:**

The principle transporter of the animal faculties is the spiritus – *primo igitur dicemus quod ... vehiculum est corpus subtile, spirituale ... quod est spiritus*

cf. Anonymous (Gauthier), *De anima et de potentiis eius*, p. 36, lin. 200 (no attribution; *indiget obiecto, medio, organo et spiritu*)  
 Roland of Cremona, *Summa theologiae*, f. 32vb (*Avicenna dixit quod spiritus sunt vehicula virtutum*)  
 —, f. 33ra (no attribution; *quilibet autem istorum sensuum habet proprium spiritum qui est instrumentum eius sive vehiculum*)  
 Albertus Magnus, *Summa theologiae*, II.11.53, p. 560 (*sicut dicit Galenus et Avicenna*)  
 John Pecham, *Tractatus de anima*, 7, p. 26

**b) p. 176:**

Since the soul is one, there has to be something from which the body is reigned; this is the heart – *unde si anima una est ...*

Petrus Hispanus, *Quaestiones libri de anima*, 2.3.1, pp. 578, 579 and 584  
 cf. Thomas Aquinas, *Expositio super Isaiam*, 1.5, pp. 11–12 (no attribution; *cor enim primo recipit vitam ab anima ...*)  
 Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 134ra, p. 389 (no attribution; *eius organum*)

**c) p. 178:**

The nerves are created at the brain and the venes at the liver. The power of generation is transmitted from the heart to the brain – *quapropter creati sunt ...*

Alfred of Shreshill, *De motu cordis*, 16, p. 94 (no attribution; *a cerebro igitur duo nervi sunt aperti ... ut ... fiat irradiatio ... spiritus generativae*)  
 Petrus Hispanus, *Scientia libri de anima*, 12.7, p. 541 (no attribution; *nervi igitur ... putantur a corde ad cerebrum ...*)

**d) p. 178:**

We do not have to decide the question of whether the nerves originate in the brain or in the heart – *non debet autem nos hoc constringere ...*

Albertus Magnus, *De homine*, 43.3.5, p. 383a (*et est sententia trium philosophorum scilicet Aristoteles ... et Avicennae ... et Averrois ...*)

**e) p. 179:**

The faculties of sense-perception and movement are transmitted from the heart through the nerves to the brain – *unde cum creati sunt sibi nervi ...*

Albertus Magnus, *De somno et vigilia*, 2.2.3, p. 142  
 Albertus Magnus, *De motibus animalium*, 1.2.2, p. 271 ( ... *Averroes ... et Avicenna ... et alii quamplures cor et non caput primum movens ... esse tradiderunt*)  
 cf. Anonymous (Van Steenberghe), *Quaestiones de anima*, 2.6, p. 205

**f) p. 180:**

There is not only a transmission from one organ to the other, but also a retransmission with some profit – *redibimus autem ad aliud dicentes ...*

Petrus Hispanus, *Scientia libri de anima*, 7.1, p. 302 (no attribution; ... *cum ... lucro ...*)  
 Albertus Magnus, *De homine*, 35.3, p. 314b ( ... *postea reddit ad ipsum cum lucro ... aliter tamen solvit Avicenna dicens ...*)  
 —, 36.1, p. 320a ( ... *cum lucro*)  
 —, 43.3.3, p. 377a ( ... *cum lucro*)  
 —, 43.3.5, p. 383a (*et licet hepar ...*)  
 Vincent of Beauvais, *Speculum naturale*, 25.93, p. 1833  
 —, 25.96, pp. 1834–5 (from *De homine*, p. 320)

**g) p. 180:**

The sensibility of the heart (especially touch) is stronger than that of the brain – *sensus ipsius cordis ...*

Albertus Magnus, *De homine*, 35.3, p. 314a (*sensus cordis ...*)  
 Vincent of Beauvais, *Speculum naturale*, 25.93, pp. 1832–3 (from *De homine*)

**h) p. 181:**

Conclusion: The heart is the first principle from which the animal faculties emanate into the brain and the nutritive faculty into the liver – *ergo cor est principium ...*

Alfred of Shreshill, *De motu cordis*, 16, p. 88 (no attribution; *a corde enim vita omnibus ...*)  
 Alexander of Hales et al., *Summa theologiae*, IV.1.3.1.2, p. 149a (no attribution; *sicut ergo ...*)  
 Albertus Magnus, *De homine*, 43.4.5, p. 383a (*et licet virtus nutritiva ...*)  
 Albertus Magnus, *De spiritu naturali et operibus eius et ori, 1.2.2, p. 234 (in veritate spiritus naturalis derivatur a corde ...)*  
 Roger Bacon, *De multiplicatione specierum*, 2.2, p. 102 (*species omnium sensibilibus vadunt ad cor quia ibi est radicaliter virtus sensitiva sicut Aristoteles et Avicenna determinant*)  
 Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 134rb, p. 392 (no attribution; *organum primum ...*)

**i) pp. 181–2:**

Enumeration of the faculties located in the brain: the external senses – *de virtutibus*

*autem cerebri ...*

cf. Anonymous (Gauthier), *De anima et de potentiis eius*, p. 37, lin. 228 (no attribution; ... *continens spiritum visibilem* ...)

Albertus Magnus, *De homine*, 35.3, p. 314a (in .vi. de naturalibus in fine)

—, p. 314b (*cum ergo nervi sentiendi nascantur* ...)

Anonymous (MS Siena), *Quaestiones super librum de anima*, f. 134va, p. 393 (no attribution; *sciendum ergo quod ab ista anteriori parte cerebri* ...)

—, f. 134va, p. 394 (*et quod virtus gustativa* ...)

j) pp. 182–3:

The internal senses – *virtus vero formalis* ...

Alfred of Shareshill, *De motu cordis*, 3, p. 12 (no attribution; *cerebrum vero ... aestimationis ... regimen tenet*)

—, 15, p. 81 (no attribution; *horum autem proprietatibus* ...)

Albertus Magnus, *De homine*, 35.3, p. 314a (in .vi. de naturalibus in fine)

—, 35.5, p. 314b (... *sensus communis sit ad quem terminantur sensus proprii* ...)

cf. Thomas Aquinas, *Scriptum super sententiis*, IV.49.3.1.2.2 (*subiectum delectationis est speciei corporalis* ...)

cf. Thomas Aquinas, *De veritate*, 18.8, p. 558 (no attribution; ... *cerebro* ... , *in quo vis imaginativa et extimativa et ... sua organa habent*)

k) p. 183:

How is it possible to conceive of a mountain with the little organ of imagination?

Answer – *potest hic autem aliquis opponere dicens* ...

Albertus Magnus, *De homine*, 42.1, p. 359a

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