

Recent Developments in the Study of Arabic Philosophy and Its Impact on the West:  
with special reference to South Italy and Sicily from Alfanus to Frederick II<sup>1)</sup>

Charles Burnett

In respect to Arabic/Islamic philosophy, the time seems to be ripe for making syntheses. As has often been observed before, there is a major problem as to whether the subject that one is dealing with should be called 'Arabic' or 'Islamic'. The choice of adjective reflects different attitudes to the subject matter, as is exemplified in two major works in preparation.

In Turkey Alparslan Acikgenc is writing a history of *Islamic* philosophy, in the conviction that a philosophical attitude and the basics of philosophical terminology are established already in the Meccan surahs of the Qur'an, and was developed in the Medinan surahs. This native Islamic philosophy can be seen in the *kalam* (dialectical theology), and it was the preexistence of lively philosophical interest and discussion that made Arabic scholars inquisitive about Greek philosophy. Greek philosophy, which they referred to as (quoting Acikgenc) 'falsafa' was merely an episode, a subsection, of Islamic philosophy: the word was 'reserved exclusively for the manner of Greek, more specifically, Aristotelian philosophizing' whereas 'within Islamic civilization *kalam* was used to refer to what we call today philosophy'.

On the other hand Richard Taylor and Peter Adamson are preparing 'the Cambridge Companion to *Arabic* philosophy.' This is conspicuous for its lack of contributors from the Islamic world (the nearest are Sajjad Rizvi and Husain Ziai from Pakistan). Arabic philosophy *begins* with the translation of Greek texts into Arabic (covered by Cristina d'Ancona), and deals with the falasifa (the self-styled 'philosophers'), al-Kindi (Peter Adamson), al-Farabi (Ian Netton), Avicenna (Robert Wisnovsky), al-Ghazali (Michael Marmura), Ibn Tufayl and Ibn Bajja (Josep Puig Montada), and Averroes (Richard Taylor), before turning to 'other' movements, such as Isma'ilism (Peter Walker), the Illuminationists (JohnWalbridge), and Mysticism (Saj-

jad Rizvi). The second half of the book is arranged thematically, with chapters on Ethics and Politics (Charles Butterworth), Logic (Tony Street), Science and Natural Philosophy (Marwan Rashed), Metaphysics (Thérèse-Anne Druart), and Soul and Intellect (Deborah Black); and just as the volume begins with a transmission of learning from one culture to another (Greek into Arabic), so it ends with the impact of Arabic philosophy on other cultures: Hebrew (Stephen Harvey) and Latin (myself). Finally, there is a chapter on the long ‘post-Classical’ period of Arabic philosophy, here significantly called ‘Islamic Philosophy’ and dealt with by Husain Ziai (Illuminationists since Mulla Sadra, d. 1640). The editors write: ‘ [The book] aims both to put the Arabic philosophical tradition in its historical context, and to give a sense of what is philosophically interesting and innovative about philosophers who wrote in Arabic. The volume focuses particularly on the “classical” or “formative” period of Arabic philosophy, i. e. from the time of al-Kindi (9th century) to the 12th century, which saw the commentaries of Averroes and also a range of reactions to Avicenna’s thought. However, the volume also includes chapters on post-classical thought, especially the philosophy of Mulla Sadra.’

Other summaries to be mentioned are Thérèse-Anne Druart’s chapter on ‘Philosophy in Islam’, for the *Cambridge Companion to Medieval Philosophy*, ed. by Stephen McGrade, which has just been published (2003). Tony Street has written over a hundred pages on Arabic logic for the first volume (‘Greek, Arabic and Indian Logic’) of the *Handbook of the History and Philosophy of Logic*, edited by Dov Gabbay and John Woods, to which I have added a brief account of the transmission of Arabic logic to the West. Finally, Mahmut Kaya has written a comprehensive account of Arabic philosophy in Turkish (*Islam Filozoflarından: felsefe metinleri*, Istanbul, 2003). This gives, respectively, the philosophical ideas of al-Kindi, Abu Bakr al-Razi, al-Farabi, al-Amiri, the Ikhwan al-Safa’, al-Sijistani, Ibn Mikawayh, Ibn Sina, al-Ghazali, Ibn Bajja, Ibn Tufayl, Ibn Rushd, and Suhrawardi.

Professor Sayyid Zillur Rahman, President of the Ibn Sina Academy of Medieval Medicine and Sciences at Aligarh has informed me about a

project to deal with the development of Islamic religion and philosophy in India. These articles are to be first discussed in a seminar and later to be published as proceedings. The first seminar, sponsored by the project coordinator, Prof. Bhuvan Chandel, was held at Aligarh on 20th-21st June 2002.

Tzvi Langermann is preparing, with Charles Malekin and Heinrich Biesterfeldt, an updated, English version of Moritz Steinschneider's *Die hebraeischen Übersetzungen des Mittelalters*, which will be available on-line and fully searchable. This will provide information on Hebrew translations of Arabic and Latin scientific and philosophical texts. This should complement Mauro Zonta's impressive survey: *La filosofia antica nel Medioevo ebraico* (Brescia, 1996), of which we badly need an English translation.

Next one may mention a new series: Glen Cooper is Directing Editor of the Graeco-Arabic Sciences and Philosophy series (GrASP), and particularly keen on Greek-Arabic lexica. So far the texts included are medical works of Maimonides prepared by Gerrit Bos. But the same publisher (Brigham Young University Press) is also publishing a bilingual (Arabic with English translation) 'Islamic Translation Series: al-Hikma', which, so far, has included the *Tahafut al-falasifa* of al-Ghazali (Michael Marmura, 1997), the *Hikmat al-Ishraq* (the Philosophy of Illumination) of Suhrawardi (John Walbridge and Husain Ziai, 1999), and Averroes's *Decisive Treatise and Epistle Dedicatory* (Charles Butterworth, 2001).

Three large-scale projects are underway:

- 1) The European Science Foundation is supporting the project 'Late Antiquity and Arabic Thought: patterns in the constitution of European culture', 3 years, May 2001-2004. This focuses on the transformation of the philosophical ideas developed by Plato, and the circulation of these ideas within medieval Europe, fostered by the two crucial movements of the Graeco-Arabic transmission (8th-10th century) and the Arabic-Latin transmission (12th-13th century). Central to this project is the study of Plotinus, *the Theology of Aristotle* and al-Kindi. The chair of the coordination committee is

Cristina d'Ancona, and the centre of operations is Padua, where the *Theology of Aristotle* is being translated into Italian and commented upon in publications that will include the relevant sections of the *Enneads* (starting from IV 8 (6): 'On the descent of the soul into bodies').

- 2) The second is a huge project planned by Alain de Libera, under the title 'Translatio studii', and directed by him between Geneva and Paris. This will involve editing and translating into French the works of Avicenna, al-Ghazali and Averroes that were most important for Western philosophy and assessing their impact. Marc Geoffroi is the Arabic expert on the project.
- 3) Finally, Tony Street is collaborating with John Marenbon on a project called Aristotelian 'Logic East and West: 500 to 1500', based in Cambridge, England. Each year a different work of the 'Old logic' (Organon) will be studied, from the point of view of its transmission in Latin, Syriac and Arabic: Porphyry's *Isagoge*, Aristotle's *Categories*, *De interpretatione*, and *Prior Analytics*, etc.

We may now turn to individual Arabic philosophers and scientists.

### **Aristotle's *Theologia***

Dimitri Gutas is preparing a critical edition of the short version of the Arabic *Theology of Aristotle* (Plotinus, *Enneads* IV-VI). This will be an *editio minor*, based on the most important manuscripts, intended to help scholars who until now had to deal with the inadequate Dienerici and Badawi editions. (The *editio major*, if a need for that will still be felt, will have to await the full edition of the long version of the *Theology*, either by Paul Fenton, as promised, or by another scholar.<sup>2)</sup>) An English translation, based on the one by Geoffrey Lewis (this translation, up to now, being the best 'edition' of the text), will accompany Gutas's edition. The edition will have a detailed philological annotation, intended to analyse precisely the connection of the Arabic text with the Greek. There will also be a Graeco-Arabic glossary, which will eventually be incorporated into the *Greek and Arabic Lexicon* ('GALex') currently being prepared by Gutas and Gerhard Endress. Peter Adamson, has just published his thesis on *The Arabic*

*Plotinus: A Philosophical Study of the 'Theology of Aristotle'* (London, 2002), which explores the transmission of the *Enneads* into Arabic and its influence, especially on al-Kindi. Peter Adamson is also preparing, with Peter Pormann, a two-volume study of the philosophy of al-Kindi, of which one volume will be entirely of English translations of his philosophical essays. These essays have recently been translated into Turkish by Mahmut Kaya (Kindi, *Felsefî Risaleler*, Istanbul, 2002).

### **Alexander of Aphrodisias.**

Al-Kindi was also influenced by Alexander of Aphrodisias, the second century interpreter of Aristotle. Research on the Arabic texts of this philosopher has been carried out by Anna Gannagé (now Professor of Philosophy at the Université de St Joseph in Beirut), who has completed a thesis on the author, and Charles Genequand, who has recently published the Arabic translations of Alexander's *On the Cosmos* which is lost in Greek (Leiden, 2000).

Avicenna has become quite popular recently. David Reisman has just published an important book on Avicenna's teaching methods, as indicated by his *Mubahathat*, in his book *The Making of the Avicennan Tradition* (Leiden, 2002), and the same author has published a collection of papers entitled 'Before and after Avicenna' (Leiden, 2003; the first set of proceedings of the now annual meetings of the Avicenna Study Group), which include 'new insights into Avicenna's revision of Aristotle and Plotinus, specific areas of his theories of psychology and metaphysics, his intellectual interaction with theologians of his period, the historical and social context in which Avicenna worked, the reception of his thought among Syriac-writing authors, among later Ishraqi ('illuminationist') philosophers, and in Shi'ite Peripatetic philosophy. Dimitri Gutas is working on an annotated translation of Avicenna's writings on the soul. With the *De anima* from the *Shifa'* as its basis, he will offer parallel translations of all of Avicenna's authentic writings on the soul, whether individual treatises or sections in longer works. The first volume, which is more than half complete, will treat the internal senses (*De anima*, Book IV). Philological notes relating to the extant editions and medieval Latin translations, and brief substantive notes including bibliographical information will accompany the translation. Tony

Street has written 'An Outline of Avicenna's Syllogistic', *Archiv für Geschichte der Philosophie*, 84, 2002, pp. 129-60 (this presents all of Avicenna's modal syllogistic with divided premises, all the proofs, and all the terms of art); and 'Fakhraddin ar-Razi's Critique of Avicennan Logic', in *Logik und Theologie. Das Organon im arabischen und im lateinischen Mittelalter*, eds. Dominik Perler and Ulrich Rudolph (in the press). I should also note two PhD theses which I have supervised, and which are now published: Dag Nikolas Hasse's study of the book of Avicenna's *Shifa'* dedicated to philosophy of the soul: *Avicenna's De anima in the Latin West*, London, 2000; and Oliver Gutman's edition of the Pseudo-Avicennan *De celo et mundo* which has plausibly been identified with a lost Arabic text by Hunayn ibn Ishaq called '16 questions on Aristotle's *De caelo*', which was published in Leiden, 2003. Volumes of *Avicenna latinus* (the Latin translations of portions of the *Shifa'*) continue to be prepared: the Physics, in the anonymous translation of the twelfth century, with its continuation by Juan Gonzalves de Burgos and Salomon (Jules Janssens, continuing the work of Simone van Riet), and the *Logic* (Françoise Hudry, continuing the work of Marie-Thérèse d'Alverny). The book on music from the *Shifa'* has been published in Arabic with a facing Turkish translation by Ahmet H. Turabi (Istanbul, 2004).

### **Ikhwan as-Safa'.**

Nader El-Bizri currently holds a fellowship at the Ismaili Institute in London to coordinate the publication of a critical edition and annotated English translation of the *Letters of the Brethren of Purity* (Ikhwan as-Safa'). Yayha Michot in Oxford continues to supervise bilingual French-Arabic versions of the individual treatises, while Carmela Baffioni is translating the whole encyclopedia into Italian.

### **Suhrawardi (d. between 1190 and 1192).**

Recently, much interest has been expressed in Suhrawardi, the founder of Islamic Illuminationism, who was executed in Aleppo by Saladin. Thanks to the writings of Henri Corbin it had been thought that he represented an Oriental tradition in Islamic philosophy, since Suhrawardi himself claims that the philosophy of Plato and Hermes 'was the basis of the Eastern

doctrine of light and darkness, which was the teaching of Persian philosophers such as Jamasp, Frashostar, Bozorgmehr, etc.', but John Walbridge, in his edition (with Husain Ziai) of his major work, *Hikmat al-Ishraq* (see above), and his analysis of Suhrawardi's thought (*The Leaven of the Ancients: Suhrawardi and the Heritage of the Greeks*, Albany, 2000), has pointed rather to the Greek origins of his philosophy. Most recently, in his perceptive 'Essay Review' of Walbridge's book (*Arabic Sciences and Philosophy*, 13, 2003, pp. 303–9), Dimitri Gutas has shown that Suhrawardi owes very little to the Greek philosophers he alleges as his authorities, but rather is indebted to a passage of Plotinus's *Enneads* (on out-of-body experience), and to Avicenna (especially for his 'flying man' metaphor for the existence of the soul).

### **Averroes.**

Two series of editions are under way:

- 1) Full critical editions of Averroes' works: specifically William of Luna's translation of the Middle Commentary on the *Categories* (Roland Hissette) and the Long Commentary on the *Physics* (60 MSS), perhaps translated by Michael Scot, undertaken by Horst Schmieja.
- 2) 'Semi-critical editions' of the medieval Latin translations of Averroes' Long Commentaries on Aristotle's *Physics*, *De caelo*, and *Metaphysics* (initiated by Carlos Steel and Jan Aertsen, coordinated by Rüdiger Arnzen, supported by the De-Wulf-Mansion center at Leuven, Peeters Publishers and the Thomas-Institut). The *De caelo* (prepared by Arnzen and Gerhard Endress, and based on Francis Carmody's collation of 40 Latin manuscripts), has just been published. The *Physics* (prepared by Guy Guldentops) will be based only on the Latin evidence, since the Arabic text is lost, and the *Metaphysics* (prepared by Dag Niklaus Hasse) will include comparison of the extant Arabic original.

Thérèse-Anne Druart is sub-editor of the English translation of Richard Taylor's translation of Averroes' Long Commentary on the *De anima*, which will shortly be published by the Yale University Press.

In addition the Arabic text of the first four books of Averroes's Long Commentary on the *Physics* has been published with a facing Turkish translation by Muhittin Macit (Istanbul, 2004).

One can identify two trends in recent scholarship on Arabic philosophy: 1) the study of commentaries: from the book on *Glosses and Commentaries on Aristotelian Logical Texts*, ed. C. Burnett (London, 1994), to which Sebastian Brock contributed an article on Syriac commentaries, and Dimitri Gutas on Arabic commentaries; through the work currently been done on Averroes' commentaries; to the proceedings of an important conference in honour of Richard Sorabji in 2002: *Philosophy, Science and Exegesis in Greek, Arabic and Latin Commentaries* (ed. Peter Adamson, Han Baltussen and Martin Stone). 2) The introduction of astrology into the purview of philosophy, due largely to the progressively more specifically astrological interpretation of Aristotle's broad statements concerning the celestial causes of all generation and corruption, via Alexander of Aphrodisias and al-Kindi to Abu Ma'shar. This can be seen in the new edition of the Arabic text of Alexander of Aphrodisias's *On the principles* by Genequand, of which the main thesis is 'the motion of the heavenly bodies and their influence on the physical world', and in Peter Adamson's research, especially his 'Abu Ma'shar, al-Kindi and the Philosophical Defense of Astrology', *Recherches de philosophie et théologie médiévales*, 69, 2002, pp. 245-70.

\* \* \*

My own contributions to the study of Arabic philosophy lie entirely in the area of its transmission to the West.<sup>3)</sup> A synthesis of this research will appear in the *Cambridge Companion to Arabic Philosophy*, under the title 'Arabic into Latin: the Reception of Arabic Philosophy into Western Europe'; this will include a comprehensive table of the Arabic texts on philosophy translated into Latin. A more detailed investigation has been made into the introduction of Arabic philosophy via Sicily and Southern Italy, and it is to this route (rather than the better-known one through al-Andalus and Toledo) that I would like to devote the remaining part of this article.

One thing that I have been doing recently is to investigate the *earliest*

evidence for the use of Arabic sources by Western scholars. We know of the occurrence of Arabic material on the astrolabe and astrology in Latin writings in Northern Spain and Catalonia in the late tenth century. But the first use of Arabic texts on natural science and medicine is found in Southern Italy in the eleventh century.<sup>4)</sup> In the early Middle Ages there was a tradition of studying medicine from texts translated from Greek (Hippocrates, Galen, Oribasius, Soranus) and Latin works based on these Greek texts (Demetrius, Copho and others). This was centred on Salerno, where there was a school of medicine, whose teachers also wrote medical works, some of which have survived. But the level of this medical knowledge was not very high. There is a story that, in ca. 1070, Constantine the African, who had been brought up in the lively Arabic cultural atmosphere of Qayrawan in present-day Tunisia, happened to arrive in Salerno, and was so concerned by the low level of medical knowledge there that he returned to his native land and brought back some Arabic medical books, which he proceeded to translate for his Salernitan colleagues. The very fact that Constantine was encouraged to do this, indicates that there already was a strong interest among Latin doctors to improve the state of their knowledge at that time. Constantine's patrons were, respectively, Alfanus, archbishop of Salerno from 1058 to 1085, and Desiderius, abbot of Montecassino, the motherhouse of the Benedictine order (who became Pope Victor III in 1087). Probably already before Constantine's arrival in Italy, Alfanus had translated certain works from Greek, including Hippocrates' *Airs, Waters and Places*, and Nemesius's *On the Creation of Man*. The last work is not a medical work, but is rather a convenient summary of (in Alfanus's words) 'the principles of physics as manifest in the "little universe" (microcosm) of man'.<sup>5)</sup> Hence Alfanus, using Greek words, calls the work 'Premnon physicon' – 'the trunk of physics'. There is clear evidence that Alfanus and his contemporaries were looking for texts on medicine and natural science, which were after all closely related subjects. Alfanus found Greek texts, perhaps due to the fact that he had visited Constantinople. But others, although searching for the learning of the ancient Greeks, were only able to find Arabic texts. Nor did they have to go to the Southern shores of the Mediterranean, for Sicily too had been under the rule of the Arabs for two hundred years before the Norman conquest of the 1060s, and Arabs still

formed a large part of the population. Unnamed scholars translated Hippocrates, *Aphorisms*, *Prognostics* and (again) his *Airs, Waters and Places*, from Arabic, in the latter case including some fragments of Galen's commentary on the work, which has been lost in Greek. And this is how the first Arabic texts on natural science arrived in Europe. For, among these Arabic-Latin translations was a chapter from Nemesius's *On the Creation of Man*, specifically the one on elements.

Nemesius, a bishop of Emesa in the fourth century, had provided a handy summary of the doctrines of Greek philosophers concerning elements, the nature of the body and the soul, the five senses, imagination and reason, and other subjects. This summary proved popular amongst the Arabs, and was translated twice: one version was incorporated into an early ninth-century Arabic cosmology attributed to Apollonius of Tyana, and including Hermetic material, called *On the Secrets of Nature*.<sup>61</sup> The second translation was made by one of the principal translators of scientific works from Greek into Arabic in late ninth-century Baghdad, Ishaq ibn Hunayn. At some time the chapter on elements from this translation became an independent work, and all Christian and Hebrew references were taken out (one must remember that both Nemesius and Ishaq ibn Hunayn were Christians). The creative force, instead of being described directly as God the Creator, becomes Nature herself, or 'the Wisdom of God'. It was this chapter on the elements that was translated into Latin anonymously, but apparently in Italy in the late eleventh century. It describes an element in the world as the smallest part of the whole body. The earth, water, air and fire we see are not pure elements, but already mixed. Each element has two qualities, to allow one element to change into another (e. g. via the shared quality of coldness earth can pass into water). The author goes on to refer to Aristotle's distinction between two kinds of 'air', one resulting from the vapour of water, the other from the smoke of fire. He then gives Plato's account of the four elements as the four simple shapes: the cube, the pyramid, the octahedron and the eikosahedron, and varying according to their sharpness, thickness and movement. He prefers Plato's doctrine that the heavens are made from earth and fire to Aristotle's theory that they are made of a fifth essence. He then refers to the theory 'in certain books' (here he is disguising his Biblical

source) that the heavens and earth were made from chaos. Finally, he dismisses the theories of Thales, Anaximenes, Heracleitos and Hipparchos of Metapontos, that everything originated from one element, whether that element was water, air, or fire. One may say that there is nothing specifically Islamic about the changes made to this text in regard to Nemesius's original, but it is notable that at one stage in its passage through Arabic, an attempt was made to make the text a vehicle of Greek philosophy that was independent of any of the three revealed religions. Philosophy (*Falsafa*) is a universal rational endeavour that embraces and surpasses particular religious cultures.

In the same context as this text on the elements, other texts appear to have been introduced from Arabic: a text on the origin of, and distinctions between, different metals (which also refers to the creative 'wisdom of God'),<sup>7)</sup> and two texts by known Arabic authors: Qusta ibn Luqa's *On physical ligatures*, and Hunayn ibn Ishaq's *Introduction to Medicine*. Qusta ibn Luqa's text describes the reason why magic (especially in the form of amulets hung round the neck) can be effective as a cure, and he quotes Plato, Socrates and Aristotle as well as medical authorities. Hunayn's work, once again, starts with the qualities and elements, and shows how they make up the humours in the body. But the Arabic origin of all these works was disguised. Qusta ibn Luqa's name became 'Constabulus' and Hunayn's 'Johannitius', and Arabic terminology was replaced by Greek. Nevertheless, the Italaian scholars must have been aware of their debt to Arabic scholarship.

One indication of this are the words of Adelard of Bath, who, in the early years of the twelfth century, spent some time in Sicily (where he dedicated a work to the archbishop of Syracuse), and mentions a conversation with a Greek philosopher in 'Magna Graecia' (i. e. Southern Italy) and a visit to Salerno. In his major original work, the *Natural Questions*, he says that he is providing the results of his 'Arabic studies'.<sup>8)</sup> One of his sources was Nemesius, and the work as a whole recalls the interest in medicine and natural science of the Italians in the later eleventh century; the *Natural Questions* was copied into the same manuscripts as their works. Adelard

discusses physical problems such as that of infinite movement and the reason why winds move around the earth and not upwards, and whether animals have immortal souls. It is not implausible that he was drawing on real conversations that he had had with philosophers using Arabic materials in the Sicily and Southern Italy.

\* \* \*

Sicily continued to be an important source for Arabic learning throughout the twelfth century. The level of Arabic culture under the Normans is indicated by the great work of geography written by al-Idrisi in Arabic for his patron, King Roger II, and the presence of the Psalms in Arabic alongside the Latin and Greek versions, in the 'Harleian Psalter' written in Palermo in the time of the same king. A translation of Ptolemy's *Optics* was made from Arabic, and Arabic astronomical tables were used in Palermo. It is in Sicily that we see the first employment of Arabic numerals on coinage: specifically that of Roger II, as well as in works of astronomy.<sup>9</sup> It was in Palermo that Frederick II, the first of the Hohenstaufen kings of Sicily, was born in 1194.<sup>10</sup> He is said to have been brought up speaking Arabic, and he retained a great interest in Arabic philosophy throughout his life. On his infamous crusade, in 1229, in the course of negotiations with the Sultan of Egypt, al-Malik al-Kamil, concerning the transfer of Jerusalem, he gave the Sultan a list of difficult philosophical, geometric and mathematical questions which the Sultan passed on to Shaikh 'Alam al-Din Qaysar and other scholars at his court. He sent further letters concerning medicine, philosophy and mathematics to Kamal al-Din ibn Yunus in Mosul, who was the foremost Muslim scholar and teacher of the day. Frederick continued to correspond with the Sultan al-Malik and his two successors, the second of which, al-Malik al-Salih (1240-49), sent to Frederick in Sicily one of the most distinguished students of Kamal al-Din, Siraj al-Din al-Urmawi, who wrote a book on logic for him. Another student of Kamal al-Din was Theodore of Antioch, who was the Emperor's 'philosophus' from at least 1238 until his death just before 1250. Frederick also got in touch with the Sultan of the Almohads, the Islamic dynasty that, from its base in Marrakesh, had subdued a large part of the Maghreb and Southern Spain. The Emperor had heard that a certain Ibn Sab'in, who lived within the Almohad

kingdom, was the man most likely to answer adequately his questions on metaphysics and the soul. The eventual result was a substantial text by Ibn Sab'in on these questions, called in Arabic *The Sicilian Questions*. Ibn Sab'in is often regarded as the last of the Arabic followers of Averroes, and uses liberally the same sources that Averroes used in his commentaries: Alexander of Aphrodisias and Themistius.

It is with the translation of the works of Averroes that Frederick is associated most closely. In 1232 Jacob Anatoli translated the Middle Commentaries of Averroes on the *Organon*, 'with the material support of Frederick' in Naples. At approximately the same time in Naples, William of Luna was translating the same texts from Arabic into Latin. This is significant because Naples is the place where Frederick set up a university in 1224. Jacob Anatoli also appears in the company of Michael Scot, discussing questions arising out of Maimonides' *Guide to the Perplexed*. Michael Scot and Theodore, the Emperor's philosopher, both spent some time in the employment of the Emperor, the former as his astrologer, the latter as his Arabic secretary. They both translated works on the subjects that were of the greatest interest to the Emperor: zoology and, in particular, falconry. But they were also involved in translating the works of Averroes. The positive information we have on this is that Michael Scot translated the Long Commentary on Aristotle's *On the Heavens*, on the request of Stephen of Previs, who was the leader of a papal commission appointed in 1231 to investigate the orthodoxy of the works of Aristotle. Theodore, in turn, translated the preface to the Long Commentary on the *Physics*, on the request of students at Padua. Other Long Commentaries were translated at about this time, namely those on *Metaphysics* and *On the Soul*, since the former was already known to Grosseteste in England, and the latter was being used by scholars in Paris in the 1230s. More significantly, by 1239 at the latest, Peter of Ireland was teaching at the Emperor's university of Naples, and used the Long Commentaries on the *Metaphysics* and *On the Soul*, as well as three short commentaries (Epitomes) on Aristotle's *Parva naturalia*. Whether these commentaries on the *Metaphysics* and on natural science were translated by Michael Scot and/or Theodore of Antioch still needs to be ascertained. But the implication that they were translated with

the encouragement and perhaps financial support of Frederick II is strong. At any rate, a generation later Frederick was held to be intimate with the inheritance of Averroes, since 'his sons were with the Emperor' (This is a statement of Giles of Rome, dating from 1287). It is tempting to believe that the sons of Averroes, one of whom composed a short tract on the conjunction of the human intellect with the active intellect, were in the court of Frederick, and had brought the writings of their father with them. This hypothesis has recently received some support from the research of the Israeli scholar Ruth Glasner on the Long Commentary on the *Physics*. She has found that the Hebrew translation from Arabic differs from the Latin translation in that the Hebrew text is more coherent and 'tidy', whereas the Latin translation appears to incorporate Averroes' notes and further reflexions on particular topics-i. e. exactly the kind of material you would expect to find in the author's personal copy preserved by his sons.<sup>11)</sup>

One of my future tasks will be to try to determine the authorship of the Latin translations of the commentaries of Averroes, by analysing the Latin style and terminology, noting the pattern of diffusion of the text, and looking for the earliest references to the translation. This project will dovetail into a larger project (for which I shall have to rely on collaborators, and perhaps successors) on compiling a comprehensive glossary of the Latin words used to translate Arabic words in the Middle Ages, which will complement the Greek-Arabic glossary known as GALex, which I have already mentioned.

#### note

- 1) What I am giving you here is a considerably updated version of the report I prepared for the meeting of the International Society for the Study of Medieval Philosophy in Porto in August, 2002, published in *Bulletin de Philosophie Médiéval*, 44, 2002, pp. 19-22. This account is inevitably biased towards the work that I have personal experience of.
- 2) Satoshi Horie of Keio University, who has made a Japanese translation of the *Theologia*, has undertaken this task.
- 3) This topic has also been written about in Turkish: Bekir Karliga, *Islam Düşüncesinin batı Düşüncesine Etkileri*, Istanbul, 2004.
- 4) The following argument is fully documented in C. Burnett, 'Physics before the

*Physics*: Early Translations from Arabic of Texts Concerning Nature in MSS British Library, Additional 22719 and Cotton Galba E IV', *Medioevo, Rivista di Storia della filosofia medievale*, 27, 2002, pp. 53-109.

- 5) Alfano, *Premnon physicon*, ed. C. Burkhard, Leipzig, 1917, pp. 3-4.
- 6) Edited by U. Weisser, Aleppo, 1979.
- 7) Edited in 'Physics before the *Physics*', pp. 104-6.
- 8) Edited and translated by C. Burnett in *Adelard of Bath, Conversations with His Nephew*, Cambridge, 1998; see pp. 83 and 91.
- 9) See Burnett, 'The Use of Arabic Numerals Among the Three Language Cultures of Norman Sicily', *Römisches Jahrbuch der Bibliotheca Hertziana*, 2004. and P. Pormann, 'The *Parisinus* Graecus 2293 as a Document of Scientific Activity in Swabian Sicily', *Arabic Sciences and Philosophy*, 13, 2003, pp. 137-61.
- 10) For the details in the following sentences see Burnett, 'The "Sons of Averroes with the Emperor Frederick" and the Transmission of the Philosophical Works by Ibn Rushd', in *Averroes and the Aristotelian Tradition*, eds. G. Endress and J. A. Aertsen, Leiden, 1999, pp. 259-99.
- 11) Personal observation by Ruth Glasner, Hebrew University, Jerusalem.