

{Main Matter} *Introduction*

Al-Kindī was born into one of the most vibrant periods of human history, the heyday of the ‘Abbāsīd age. The ‘Abbāsīds had seized power in the 750s from the Umayyads, who had reigned in their capital Damascus from 660 to 750. Although the ‘Abbāsīd caliphs hailed from excellent Arab stock, they had assembled a large number of supporters in the East, notably non-Arabs and also some non-Muslims.¹ The ‘Abbāsīds founded a new capital, the ‘City of Peace (*Madīnat as-Salām*)’, better known today as Baghdad. Although they moved their centre of power from a Greek-speaking to a Persian- and Aramaic-speaking environment, they pursued an extremely philhellenic cultural and scientific policy. They partly justified this stance with a mythical story. When Alexander the Great conquered the Achaemenid Empire, he stole Persian wisdom, had it translated into Greek, and stored it in the library of Alexandria. Therefore, when the ‘Abbāsīds sponsored the translation of Greek thought into Arabic, they merely reclaimed their own lost heritage.

The newly founded capital Baghdad quickly expanded and probably grew into the largest metropolis on earth in al-Kindī’s lifetime, boasting perhaps as many as one million inhabitants at a time when in most European cities there lived fewer than one hundred thousand inhabitants.² Baghdad became a melting pot of different cultures, languages, and religions: if you could make it there, you could make it anywhere, to misquote Sinatra. The buzz of this city also attracted al-Kindī from his native Baṣra on the Persian Gulf. He would have encountered there in the 810s and ’20s a vibrant intellectual scene that enjoyed great sponsorship from the ‘Abbāsīd elite. The court became a centre not only of imperial power and politics, but also of intellectual debate.

The so-called *maḡlis* figured prominently in the ‘Abbāsīd court culture. *Maḡlis* literally means ‘place where one sits down’, and the caliph and his entourage regularly organised sessions where he and his boon companions

¹ See Kennedy 2004 for a fascinating narrative of how the ‘Abbāsīds came to power.

² Lapidus 2002, 56.

would invite the intellectual and cultural elite to discuss the prominent topics of the day. Religious controversies such as the Christian doctrine of the trinity, for instance, could be debated, with different exponents arguing for and against the merits of such an idea. At times, medical matters would attract the attention of the court, especially if important courtiers or the caliph himself fell ill. Last, but not least, scientific and philosophical points of debates stirred the curiosity of the nobility, and could, at times, lead to violent disagreements.

The atmosphere at court can best be illustrated through one of the many anecdotes that later sources report. The most famous translator of the 'Abbāsīd age, Ḥunayn ibn 'Ishāq (d. c. 876) was allegedly tricked by one of his rivals at court, the physician Buḥtīšū' ibn Ġibrīl (d. 870). Buḥtīšū' brought a wonderful icon before the caliph al-Mutawakkil (reg. 847–61), and the caliph admired and respected it greatly. Buḥtīšū' then alleged that Ḥunayn was a freethinking heretic who did not respect such holy things as icons. Ḥunayn was summoned by the caliph. Before he got there, however, Buḥtīšū' falsely advised Ḥunayn to show contempt for the icon, insinuating that the caliph did not condole the worship of idols, such as icons. Ḥunayn then displayed his disrespect for the icon by spitting on it. This angered the caliph who had him thrown into jail, and nearly executed. Ḥunayn lingered there for sixth months. Then the caliph fell ill, and, during the night, Jesus Christ appeared to him in a dream. Jesus told the caliph that he had forgiven Ḥunayn his sins, and that the caliph should release Ḥunayn from jail to treat him. When Ḥunayn did so successfully, the caliph reinstated Ḥunayn with even greater power than before.

We should state at the outset that this anecdote, reported by the medical historian Ibn 'Abī 'Uṣaybi'a (d. 1270), is of doubtful historicity.³ But the atmosphere that it illustrates undoubtedly reflects the intrigues and competition for patronage that existed at court in the mid-ninth century. In this case, different doctors vie for the position of personal physician to the caliph that entails not only

³ ed. Müller 1882, vol. i, p. 194, line 2–p. p. 197, line 3. Strohmaier 1965 considered this anecdote to be authentic, as did Bergsträsser 1913, 10, whereas Rosenthal 1937, 18–19 and Cooperson 1996 doubt its historicity.

considerable prestige, but also immense material rewards. Prominent power-brokers such as the Banū Mūsā, the three sons of a famous highwayman turned plutocrat, sponsored many scientific and cultural endeavours, not least many translations from Greek and Syriac into Arabic. Al-Kindī's was also the age when most medical practitioners were still Christians or Jews. The famous litterateur al-Ġāḥiẓ could make fun of a Muslim miserly physician who complained that potential patients expected him to dress and speak like the inhabitants of Gondēšāpūr, a city in South Western Iran then famous for its Christian medics, among them the Buḥtīšū' family.⁴

For a vivid example of the way intellectuals were integrated into the political elite — and the dangers that such integration could involve — we might consider also the case of al-Kindī's protégé as-Saraḥsī (d. 899). Although as-Saraḥsī's philosophical output is largely lost, we know that the titles of his works often duplicated those of al-Kindī's, and their contents most likely did as well. But the parallels do not end here: just as al-Kindī served as the tutor to Aḥmad, son of the caliph al-Mu'taṣim (reg. 833–42), so as-Saraḥsī taught the son of the later caliph al-Mu'taḍid (reg. 892–902). For as-Saraḥsī, this association with the court had an unfortunate end. Although an erstwhile boon companion of the caliph, as-Saraḥsī fell from grace in 896: he was imprisoned and beaten, and eventually executed.⁵ As we will see, al-Kindī, too, was harshly treated by the caliph al-Mutawakkil in a court intrigue.

Beyond the fates and fortunes of these elite figures, the ninth century witnessed a great amount of wider social, political, and religious disagreement and unrest. Certain groups within society strove to reassert their identity, as, for instance, in the Šu'ūbīya movement. The movement, made up of non-Arabs and especially Persians, demanded equality with their Arab overlords, and gave rise to an eventual rebirth of the Persian language in Arabic letters. Owing to political

⁴ Al-Ġāḥiẓ, *Book of Misers (Kitāb al-Buḥalā')*, ed. Vloten 1900, 109–10, ed. al-Ḥāġirī 1958, p. 103; tr. Serjeant, p. 86.

⁵ For a wealth of information about as-Saraḥsī see Rosenthal 1943.

and military tensions, the caliph al-Mu‘taṣim (reg. 833–42) abandoned Baghdad as his capital and settle some 125 kilometres to the North in the city of Sāmarrā’. Its official name became ‘*Surra man rā’ a* (He who saw [it] rejoiced)’ by a fit of popular etymology. Yet, although the administration remained in Sāmarrā’ for the next sixty years (until 892), Baghdad remained the cultural and intellectual centre. On the religious front, various factions debated topics ranging from the createdness of the Koran to the attributes of God, and human free will.⁶ The caliph al-Ma’mūn (reg. 811–33) sided with the Mu‘tazila, a rationalist group of theologians. In 833, shortly before his untimely death, he even declared their doctrine that the Koran was created as official, and instituted an ‘inquisition (*miḥna*)’ to make sure that the major clerics and theologians in his empire adhered to this and other doctrines.⁷ It was in these exhilarating and exciting times that al-Kindī grew up.

The Man

In four of mine four of yours are sweet,
 But I do not know which one causes me agony.
 Is it your face in my eye, your taste in my mouth,
 Your words in my ear, or the love in my heart?

Love verses attributed to al-Kindī⁸

Compared with the pre-Socratics, we know a lot about al-Kindī, or so it would appear. His elder contemporary al-Ġāḥiẓ (776–868), the most prominent prose author of the ‘Abbāsīd age, devoted a chapter to him in his *Book of Misers*, and he has entries in many of the so-called bio-bibliographical dictionaries, beginning

⁶ Van Ess 1991–7, iv. 353–737 offers a masterly overview of the main points of discussion.

⁷ See Van Ess 1991–7, iii. 446–508.

⁸ See *Biogr.* §IV.14.

in the late tenth century with Ibn an-Nadīm's *Catalogue (Kitāb al-Fihrist)*. But just like the episode reported by Ibn ʿAbī Uṣaybiʿa about Ḥunayn and the icon, a lot of the information that we have about al-Kindī is of doubtful historicity.⁹ The second major source for al-Kindī's life is obviously his considerable *œuvre*. These two types of sources—the external evidence in writings about him, and the internal evidence in the works by him—allow us to give a brief sketch about his life, in which a few facts escape all possible doubt.

Al-Kindī hailed from a famous Arab family that traced its origin not only to the Companions of the Prophet, but to no less a personage than the mystical Qaḥṭān, the ancestor of the South Arabian people.¹⁰ His Arab credentials were therefore impeccable. Al-Kindī was probably born in Baṣra, the original centre of the Muʿtazila. Yet he must have found his way fairly quickly to Baghdad where he rose to prominence at the courts of the caliphs. He dedicated a number of his epistles to high-ranking members of the court, not least his most important philosophical work *On First Philosophy* to the caliph al-Muʿtaṣim. As al-Muʿtaṣim moved his court to Samarrāʾ, it is likely that al-Kindī spent some time there. The long list of al-Kindī's works, more than three hundred items, shows that he took an interest in nearly everything. He wrote not only on philosophy, medicine, mathematics, and astrology, but also music, zoology, geology, swordsmanship, perfume-making, sexual hygiene, and theology, to name but a few topics. Moreover, he took an active interest in translating works from Greek into Arabic. He probably did not know much Greek himself, but rather relied on others to produce useful Arabic versions; more on this below.

The verses quoted at the beginning of this section, if they are really by al-Kindī, may illustrate a prominent feature of his character: his fondness for numbers and divisions. He appears to have rationalised even the most human and most intimate feeling of love. The person who quotes these verse rightly exclaimed: 'By God, he even divides philosophically' in poetry and matters of the

⁹ For further details, see our translation in the present volume of reports about his life and works.

¹⁰ See *EP*, art. 'Qaḥṭān', iv. 447b–449a (A. Fischer, rev. A.K. Irvine).

heart. Al-Ġāḥiẓ portrays al-Kindī also as having a great fondness for numbers, especially when they relate to money. In his *Book of Misers*, a parody of greedy behaviour, al-Kindī appears as a landlord eager to squeeze every penny out of his tenants. Once, the head of a family of six who rented from al-Kindī mentioned that two guests would be staying with him for a month. Al-Kindī promptly increased the rent by thirty-three per cent (or two sixths, for the additional ‘tenants’). The head of the family asked al-Kindī about the reason for the increase; after all, his guests would occupy the same space. Al-Kindī retorts by writing a long epistle, in which he demonstrates by various means that the increase is justified (additional water usage; waste production, and so on). In conclusion, he says¹¹:

We have shown to you that temporary guests should be treated in the same way as tenants, and that each visitor has to bear part of the expense.

Al-Ġāḥiẓ also relates al-Kindī’s advice on how to resist the temptation of buying fruit early in the season when it is still very expensive. He discusses the state of the soul, saying that it is prone to temptation and novelty¹²:

Things that have freshly arrived bring sweetness and joy, and new things happiness and desire. When you resist it [the soul], it will retreat (*irtaddat*); and when you hold it back, it will be restricted (*irtada’at*).

Both these anecdotes reflect aspects of al-Kindī’s writing. In the long letter, he proves a minor point in many different ways; and in his discussion of the buying of fruit, he gives advice about how to counter the affections of the soul.

Previous scholars have argued about the question whether or not al-Ġāḥiẓ’s Kindī is the same as the philosopher of the Arabs, that is, the author of the present philosophical works. But this question rather misses the point: al-Ġāḥiẓ’s *Book of Misers* is a work of ‘*Adab*’, of carefully constructed prose literature, aiming more to entertain than to inform. Al-Ġāḥiẓ undoubtedly had our al-Kindī in

¹¹ ed. van Vloten 1900, p. 94, lines 13–14.

¹² ed. van Vloten 1900, p. 98, lines 2–4.

mind when he wrote his parody of the miserly landlord who writes long epistles about why it is meet to charge for guests, and gives advice on how to avoid the temptation of buying fruits early in the season. Yet, this account should not be taken at face value, nor as a true representation of al-Kindī's behaviour and character. It is certainly a fictitious account, but one that may well contain a grain of truth. More importantly, al-Kindī appears to have been notorious enough to merit the witty sarcasm of the most prominent author of Arabic prose.

We find other interesting anecdotes about al-Kindī in later literature. One is the canal episode that also features two prominent courtiers, Muḥammad and Aḥmad, two of the three Banū Mūsā. It is a story of rivalry and envy, and vying for influence that resembles in some respect that related above about Ḥunayn. The caliph al-Mutawakkil (reg. 847–61) commissions the two Banū Mūsā to build a canal. But rather than doing the job themselves, they entrust the task to a sub-contractor. The latter commits a serious error in the construction of the canal. Previously, the two brothers had developed an enmity against al-Kindī, as the latter used astrology to predict the future. They even managed to get al-Kindī beaten (and probably also jailed). This allowed them to purloin his extensive library. But now, al-Mutawakkil hears of the problems with the canal project, and gets very angry about the great expense and insufficient progress. He sends out one Sind ibn 'Alī to inspect the construction. When he comes, the two Banū Mūsā beg Sind not to report the truth about the canal project. Sind, however, is so appalled by how the Banū Mūsā treated al-Kindī that he refuses to help them unless they restore al-Kindī's library to him. They comply. Sind then agrees to conceal the real extent of the problems, but warns them that in two months' time the floods will recede and the truth will then come out. But, he adds, the astrologers predict that al-Mutawakkil will die very soon. If they are right, the Banū Mūsā will live, otherwise, they shall perish. Like al-Ġāḥiẓ's portrayal of al-Kindī, or Ibn Abī 'Uṣaybi'a's report about Ḥunayn, this anecdote is carefully constructed. The Banū Mūsā reject astrology at the beginning of the narrative, but are saved by it in the end. It is difficult to ascertain the historical truth of it. But irrespective of this, this anecdote illustrates the kind of competitive climate in

which al-Kindī operated at court.¹³

The birth of philosophy

[P]hilosophy died ... around 610 ...; and it was resurrected, perhaps around 830, by the Arab al-Kindī in Baghdad.

Dimitri Gutas¹⁴

Everything comes out of water; and the magnet has a soul. With these statements, in a way, begins Greek philosophy, as they are nearly the only doctrines that can safely be attributed to the first Pre-Socratic philosopher, Thales of Miletus.¹⁵ Unlike Greek philosophy, one could well say that Arabic philosophy was born in the full light of history. The person who helped bring it into this world more than any other was al-Kindī: he represents the exciting beginnings of a tradition that was to revolutionise thinking not only in the Arab and Muslim world, but also the Latin West, Renaissance Europe, and beyond. As we have seen, al-Kindī is very much a child of his time: the interest in all things Greek had been accruing for decades by the time that al-Kindī became a student. And yet, he appears to have created philosophy in Arabic through a combination of overseeing translations of Greek texts, and writing treatises on philosophical topics that interested him and his entourage.

The massive Graeco-Arabic translation movement of the ninth century is associated with two 'circles' or 'schools' in particular, namely that of al-Kindī and Ḥunayn ibn ʿIshāq (d. 873 or 877). Yet already before the early ninth century, an important number of translations of Greek works had been produced. They mostly belonged to the study of the stars (that is, both astrology and astronomy), basic logic, and mathematics. Especially the *Elements* by Euclid (d. c. 300 BC)—

¹³ See also Rosenthal 1942.

¹⁴ Gutas 2004, 195.

¹⁵ For a new interpretation of his fragments, see now Wöhrle 2009.

perhaps the most fundamental work on mathematics in thirteen books dealing with plain geometry (books 1–6), arithmetic (7–9), and stereometry (11–13)—appeared to have exercised a singular fascination on al-Kindī. Euclid erected a complex construction built on definitions, axioms, and postulates: from them he derived the mathematical theories. It appears that the *Elements* were first translated into Arabic by the somewhat elusive al-Ḥağğāğ ibn Yūsuf ibn Maṭar who seems to have been active one generation before al-Kindī.¹⁶ Another mathematician who exerted influence over al-Kindī is Nicolaus of Gerasa (2nd c. AD), one of the most important figures in the history of Pythagoreanism.¹⁷ Both Endress and Gutas have suggested that an interest in mathematics led al-Kindī to engage in philosophical pursuits.¹⁸

This indebtedness to mathematics can, for instance, be seen in al-Kindī's argumentative style. Quite often, he will set up a number of alternatives (say A, B, and C), which are then further divided into alternatives (Aa, Ab; Ba, Bb; Ca, Cb, Cc). Al-Kindī then proves that each of these alternatives is wrong (not Aa, not Ab, etc. until not Cc), and then concludes that the original proposition must have been wrong. In other words, he uses the technique of *reductio ad absurdum*, frequently employed in mathematics. All that is missing in al-Kindī's conclusion is Euclid's famous phrase 'which was to be proven (ὅπερ ἔδει δεῖξαι)', better known in its Latin form *quod erat demonstrandum* (or *q.e.d.*). To put it yet in another way, al-Kindī transferred the method of geometric proof from mathematics to philosophy. In this, he followed the Neo-Platonic philosopher Proclus (d. 485) who had adopted a similar approach in his *Elements of Theology*; and this texts became available in Arabic through al-Kindī's efforts.

As a result of his interest in mathematics, al-Kindī thus adapted Greek philosophy to questions which partly arose from the religious texts of the Muslim tradition, and first and foremost, the Koran. One of its most important messages

¹⁶ Brentjes 1994.

¹⁷ Endress 2007.

¹⁸ Gutas 2004; Endress 2003.

is the affirmation that God is One (*tawḥīd*). That God is One, of course, is also a fundamental doctrine for Neo-Platonists and Neo-Pythagoreans. From the third century AD, figures such as Plotinus (d. 270), Porphyry (d. c. 305), and Iamblichus (d. c. 325) followed earlier Platonists of the Imperial Roman period, fusing Plato's philosophy with the Pythagorean idea that the One is the origin of all existence. To account for the multiplicity of the world of ideas and its 'shadow', the sublunary world, they postulated a hierarchical system of entities below the One: for Plotinus these were a universal Intellect, followed by Soul, and finally the material world. Moreover, both Plotinus and his successors identified the One with the highest good, or God. The profession of the Muslim faith begins with the statement that 'there is no god but God (*lā 'ilāha 'illā llāhu*)', and in the Koran God is described as the 'one god (*'ilāhun wāḥidun*)' 29 times.¹⁹ Moreover, the one God of the Koran is also the creator of everything. These affinities between Neo-Platonic philosophy and Muslim revealed religion will undoubtedly have fascinated al-Kindī and piqued his curiosity. For this and other reasons he constituted what Fritz Zimmermann has called 'al-Kindī's metaphysics file'.²⁰

This metaphysics file consisted of some key Neo-Platonic texts, notably the so-called *Theology of Aristotle* (*'Uṭlūḡiyā 'Aristūṭālīs*) and *Aristotle's Explanation of the Pure Good* (*al-'Īdāḡ li-'Aristūṭālīs fī l-Ḥayr al-maḡḡ*)²¹, known mostly by its Latin title of *Book of Causes* (*Liber de Causis*). Despite these titles, the two works do not go back to Aristotle, but rather to Plotinus and Proclus (d. 485) respectively. Both these texts, along with other Neo-Platonic material, were translated from Greek into Arabic by translators working in al-Kindī's circle. Let us take the *Theology of Aristotle*, the most important text in al-Kindī's metaphysics file, as an example. It is a paraphrastic Arabic translation of parts of Plotinus' *Enneads*, books iv to vi. These books of the *Enneads* contain discussions of questions such as metaphysics, cosmology, psychology, and ethics. Especially

¹⁹ art. 'Tawḥīd' *EP*, x. 389a–b (D. Gimaret).

²⁰ Zimmermann 1986, 131.

²¹ This is at least the title of the oldest manuscript, Leiden, Universiteitsbiblioteek, MS Or. 209; see de Jong and de Goeje 1865, 312.

the relation between Plotinus' transcendent One, the emanations, and their relation to the material world come under discussion. Yet, following the trends of late antiquity, we find a clear tendency to harmonise the doctrines of Plato and Aristotle. For instance, when discussing 'the immortality of the soul' in *Ennead* iv. 7, Plotinus also mentions its tripartite character (ch. 14): he implies that pure souls will only retain the rational part (*logistikón*), whilst shedding the two baser ones, namely the appetitive (*epithymetikón*) and spirited (*thymoeidés*).²² In the *Theology of Aristotle*, however, the three parts of the soul are listed as 'vegetative, animal, and rational (*nabāṭiya wa-ḥayawānīya wa-nuṭqīya*)'.²³ This, of course, is the division that Aristotle develops in his treatise *On the Soul*, classifying the different types of souls inherent in different living beings such as plant, animals, and humans. In this way, Platonic concepts are fused with Aristotelian ideas.

Another striking example of subtle, yet significant change comes from *Ennead* v. 2. This short chapter deals with the hierarchy of beings after the One; it explains concisely the theory of emanations mentioned above. At the beginning of the *Ennead*, Plotinus says somewhat cryptically²⁴:

Τὸ ἐν πάντα καὶ οὐδὲ ἓν· ἀρχὴ γὰρ πάντων, οὐ πάντα, ἀλλ' ἐκείνως πάντα· ἐκεῖ γὰρ οἶον ἐνέδραμε· μᾶλλον δὲ οὕτω ἐστίν, ἀλλ' ἔσται.

The One is all things and not a single one of them: it is the beginning [*arché*] of all things, not all things, but all things are thus; for there they have occurred, as it were; or rather they are not [there] yet, but they will be.

This statement that the One [i.e., God] is all things and nothing clashes with the monotheistic idea that God is one, that is to say, not many, nor nothing. In the *Theology of Aristotle*, this idea is therefore paraphrased quite differently:

The pure One is the cause (*'illa*) of all things, not like any of the things;

²² Although Plotinus does not spell out the three parts of the soul here, he clearly has the Platonic division of *Republic* 440e8–441a2 in mind; see Adamson 2002a, 59–60.

²³ ed. Badawī 1955, p. 20, line 12.

²⁴ v.2.1, tr. Armstrong 1966–88, v. 59 [slightly modified].

rather he is the beginning (*bad'*) of the things. He is not the things, but all the things are in Him; he is not in anything, for all things pour forth (*inbağasat*) from Him; through Him they exist and subsist, and to Him they return (*'ilayhi marğa'uhā*).

The paraphrase eliminates the provocative suggestion that the One is somehow to be identified with 'all things'. Instead the idea of causation, not explicitly found in the Greek source, is introduced in the first line, as is the notion of all things flowing out of the One. The result is a rather different text from what we find in Plotinus — albeit one with which Plotinus could perhaps agree. One might see in this, and in many other passages of the *Theology*, a tendency to correct or at least interpret the source text even as it is being translated. Moreover, the author of this paraphrase introduces Koranic phraseology. For in the second surah, called *The Cow* (*Sūrat al-Baqara*, v. 28), we find the following verse:

How do you deny God, although you were dead, and He brought you to life; moreover, He will make you dead [again], and bring you to life [again], then you shall be made to return to Him [*tumma 'ilayhi turğa'ūna*]?

The verse obviously talks about God's power to create and destroy, to let live and let die. The last two words, expressing the idea that all men return to their creator became particularly famous. Neoplatonists frequently speak of a process of procession of each thing from its cause, followed by a 'reversion (*epistrophé*)' towards this same cause. It is striking that in the *Theology of Aristotle*, this idea is recast in Koranic language.

These two examples illustrate to key characteristics of the Arabic translations of Greek philosophical texts that were produced in al-Kindī's circle. First, they reflect the philosophical tendencies of Late Antiquity, and notably the fusion of Aristotelian and Platonic thought. Second, they include subtle instances of giving the philosophical message an Islamic overtone. We shall return to both these points below, as they deserve further investigation.

Gutas said that philosophy died in Alexandria and was resurrected in

Baghdad.²⁵ And indeed, a famous story, the ‘from Alexandria to Baghdad’ narrative, tells of the transfer of knowledge from Egypt to Iraq. According to this story, an uninterrupted chain of philosophers transmitted philosophy from the capital founded by Alexander to that of the ‘Abbāsids.²⁶ Although the story belongs rather in the realm of myth,²⁷ it does hint at a historical truth, namely that the schools of Alexandria, both medical and philosophical, had a tremendous impact on later developments in Baghdad.²⁸

In Late Antique Alexandria, thinkers eagerly discussed a number of topics that were to acquire significant importance in the medieval Muslim world. Aristotle and later Neo-Platonists such as Proclus held that the world is eternal. Jews and Christians agreed that God created the cosmos, as they shared the book of Genesis as the beginning of their respective holy scriptures. But against them was arrayed almost the entire pagan philosophical tradition. Aristotle had argued extensively that the world is eternal. Apart from a few authors in the time before Plotinus (such as Atticus and Plutarch, both 2nd c. AD), Platonists were united in finding agreement on this point between Aristotle and Plato’s dialogue on the generation of the world, the *Timaeus*. Even the Stoics, while accepting that the world exists in temporary cycles, thought the sequence of cycles to be endless and thus were far from accepting a creation out of nothing with a first moment in time. The Christian philosopher John Philoponus (d. 575) wrote tracts against both Aristotle and Proclus regarding the question of whether the world is created.²⁹ He tore apart Aristotle’s arguments, which were based on the purportedly indestructible nature of the heavens. And he questioned the Platonist consensus which read the *Timaeus* as endorsing an eternal world.

²⁵ See the quotation opening this section on p. ---.

²⁶ Meyerhof 1930.

²⁷ Strohmaier 1987; Lameer 1997; Gutas 1999.

²⁸ It is important to note that there was not just one ‘School of Alexandria’ in late antiquity; see Vinzent 2000, and Pormann 2010b.

²⁹ *Against Proclus On the Eternity of the World*, tr. Share 2004–10; *Against Aristotle, on the Eternity of the World*, tr. Wildberg 1987.

Like the Jewish author Philo of Alexandria (d. ca. AD 50) and many Christians apologists, Philoponus thus strived to reconcile revealed religion with philosophical truth. But these tensions were not confined to the question of the world's eternity. For instance, could human autonomy be safeguarded once we ascribe omnipotence and omniscience to God? If God is almighty, He determines everything; and if He is omniscient, he knows what we will do in advance of our acting. Boethius (d. AD 526) and Augustine (d. AD 430) both struggle with this problem in the Latin tradition.³⁰ The same issue will arise after al-Kindī in the Muslim tradition.³¹ Faith and philosophy also threatened to clash when it came to characterising God's nature. God is depicted in the Hebrew Bible and its Greek translation, the Septuagint, as having the form of a human being; after all, man is created in God's image.³² A good deal of ingenuity is required to reconcile such ideas with Aristotle's vision of God as a disembodied intellect which engages in no activity other than thought.

Likewise, a significant shift happened in the teaching of medicine and philosophy in Late Antique Alexandria. From the sixth century onwards, professors of medicine in particular focussed on a number of works by the medical authorities Hippocrates and Galen (who lived respectively in the fifth century BC and the second century AD), in addition to four fundamental logical works from Aristotle's *Organon*.³³ At the same time, they wrote abridgments on those particular Galenic works that were core curriculum for the students. These abridgments, called *Alexandrian Summaries* (*Ġawāmi' al-'Iskandarānīyīn*), have a number of characteristics that reflect the didactic situation for which the professors wrote them. First, they often contain information derived from sources other than the Galenic work which they summarise. Second, the information is often arranged hierarchical and through divisions. For instance, medicine is

³⁰ See Marenbon 2003; Zagzebski 1991; Augustine, *On Free Choice of the Will*, tr. Williams 1993.

³¹ For al-Fārābī on the famous deterministic argument presented in Aristotle's *On Interpretation* 9, see Adamson 2006c; more generally, see Adamson 2010b.

³² Genesis 1.26: 'And God said, Let us make man in our image, after our likeness'.

³³ Iskandar 1976, and Gutas 1999.

divided into theory and practice, but there are many other divisions and subdivisions.³⁴ This feature of division, called *dihairesis* in Greek, also appears in branch diagrams such as the so-called Viennese Tables.³⁵ Third, on the content level, the *Alexandrian Summaries* overlap significantly with so-called *apò phōnês* commentaries, that is, commentaries based on notes taken by students ‘from the voice’ of the professor.

This short excursion into medicine may look out of place in a book on al-Kindī’s philosophical works. Al-Kindī did also write on medicine, and some of his ideas have philosophical implications.³⁶ But more importantly, the medical curriculum of late antique Alexandria had an important impact on al-Kindī’s philosophical thought. Division is an obvious example: al-Kindī used this technique repeatedly in his arguments. Another aspect is his knowledge of the Aristotelian *Organon*: he appears to have been familiar with those texts of the *Organon* that became core curriculum for medical students, such as the *Categories*. Apart from medicine, the debates and discussions that raged among philosophers and theologians in Late Antique Alexandria also occupied al-Kindī’s mind, as we shall see shortly when we turn to discuss a number of concrete philosophical questions.

More generally, al-Kindī, like his Greek-speaking Jewish and Christian predecessors in Alexandria, had to face the powerful problem of how to justify philosophical enquiries against the background of a revealed religion, Islam. By al-Kindī’s birth, Islam could already look back at a long and sophisticated history of exegesis.³⁷ Suffice it here to name only three ‘sciences (*‘ulūm*)’ that dominated the study of the Koran. The first investigated the text of the Muslim Holy Writ, and notably the collection of variant readings that various reciters recorded; it is called the ‘science of readings (*‘ilm al-qirā’ āt*)’. The second interpreted its text,

³⁴ Pormann 2004, 12–13.

³⁵ Gundert 1998.

³⁶ See Adamson 2007a, 161–6.

³⁷ van Ess 1991–7.

including the many ambiguous passages that required further elucidation; it became known as *tafsīr* (exegesis) or *ta'wīl* (hermeneutics). One type of work, such as the famous *Commentary (Tafsīr)* by aṭ-Ṭabarī (d. 923), considers each verse of the Koran separately. The author often adduces divergent interpretations, and argues for one on the basis of evidence (*šawāhid*) that he quotes. And finally, the third science considered the meaning of the Koran not merely in the narrow confines of textual interpretation, but rather the more general points of what it had to tell about God and his creation; this was what one may call 'speculative theology (*kalām*)'. One group, the Mu'tazilites (originally hailing from Baṣra), became particularly prominent during al-Kindī's lifetime, although more conservative elements, for instance certain scholars in Kūfa, attacked their teaching. The Mu'tazilites argued, for instance, that God created the Koran; that distinct attributes such as 'the knowing (*al-ʿālim*)' and 'the powerful (*al-qādir*)' do not subsist in him; and, importantly, that man's reason constitutes an important source in the understanding of God's will and creation. For instance, they held that God cannot justly punish humans without granting them free will — this restriction on divine justice is knowable to human reason.

To be of any value, the new Hellenic science emerging in the translation movement had to find a place alongside these Koranic sciences and other indigenous intellectual pursuits, such as the study of grammar. Within a generation or two of al-Kindī's death attitudes will harden: famously, the grammarian as-Sirāfī (d. 979) argued that the study of Greek logic is pointless and pretentious, since grammar can discern the nature of 'correct' speech.³⁸ But philosophy also had its detractors in al-Kindī's day, as we can see from a celebrated passage in his major work *On First Philosophy* (§§II–III), an impassioned plea for the dispassionate pursuit of knowledge, no matter where it comes from. Truth, he argues, can be found among any and all nations, and one should not disdain it. Responding to certain unnamed conservatives who rejected the idea that foreign peoples like the Greeks had anything substantial to offer, al-

³⁸ See Margoliouth 1905.

Kindī claims that their view does not in fact constitute a defence of true religion, but rather undermines it. Here he seems to foreshadow the view of the great Aristotelian commentator Averroes (Ibn Rušd, d. 1198) in his famous *Decisive Treatise* (*Faṣl al-maqāl*): since religion is true and urges the faithful to seek out truth, it cannot clash with any pursuit which is likewise devoted to truth.³⁹

But al-Kindī elsewhere goes still further, suggesting that philosophical and religious truth are one and the same, even if prophetic and philosophical knowledge about it differ fundamentally. This is a bolder claim than the mere assertion of the compatibility of Islam and philosophy. (After all, geometry does not contradict biology, but neither does it convey the same truths.) In the rather unexpected context of an enumeration of Aristotle's works, al-Kindī takes up the question of how human knowledge relates to prophetic inspiration. He says, basically, that prophecy is much more immediate. Human beings actually require the tools of logic and other propaedeutic subjects in order to arrive at truth, whereas the prophets such as Moses, Jesus or Muḥammad know it without any intermediary, having received it directly from God.⁴⁰

Al-Kindī applies this idea on a number of occasions by using philosophy to expound the Koran itself. This occurs most prominently in his treatise *On the Bowing of the Outmost Sphere*. At the beginning of this epistle, al-Kindī insists that one should interpret the Godly message contained in the Koran through reason (*‘aql*). The problem is how to understand that the stars and trees prostrate themselves in front of God (*yaṣḡudān*). Al-Kindī resorts to an allegorical explanation: prostration here means obedience in the sense that the stars, living beings endowed with reason, heed God's command and maintain his creation through their action. Interestingly, al-Kindī uses the methods of *tafsīr*, that is, of the Islamic commentary tradition, to make his points.⁴¹

Another religious topic that al-Kindī discusses in his extant philosophical

³⁹ See R. C. Taylor 2000.

⁴⁰ *Aristotle's Books* §§VI.1–2.

⁴¹ Cf. Janssens 2007.

œuvre is prophetic dreams. He explains why some dreams correctly foretell the future by drawing on Greek philosophy, especially Aristotle's short works on psychology, the so-called *Parva Naturalia*.⁴² And yet, when doing so, he clearly also has the Koranic text in mind, and notably the story of Joseph, told in the eponymous surah (*Sūrat Yūsuf*). Al-Kindī explains the etymology of a Koranic term there, namely 'a hotchpotch of dreams ('*aḡgātu* ' *aḥlāmin*)'.⁴³

These examples show that religion occupied a position of prominence in al-Kindī's thought. Theological questions are also paramount in his conception of philosophy itself. For al-Kindī 'first philosophy', the highest kind of philosophy and the topic of Aristotle's *Metaphysics*, deals with questions about God. One can therefore clearly discern an endeavour to address theological problems on the basis of late antique philosophy in Arabic translation. This is shown by many aspects of al-Kindī's work, and even in his activity as a coordinator of translations — consider the so-called 'metaphysics file', which brought together Greek wisdom on the divine, and related issues such as providence and the soul. This concern with the one God, with monotheism, also appears in al-Kindī's refutation of the Trinity. His close collaboration with Christian translators did not stop him from scorning the Christian doctrine as patently absurd. God cannot be eternal and multiple at the same time, as the Christians claim. He refutes them by using the tools of Aristotelian logic, especially as they had been exposed in Porphyry's *Introduction (Eisagōgē)*, a text that he expects them to know. This illustrates again an important aspect of al-Kindī's programme: to demonstrate religious truth by philosophical means.

But we can say something more specific than merely observing that Islam is central to al-Kindī's thought — this much is, after all, not very surprising. He was drawn to themes and theological positions associated particularly with the aforementioned Mu'tazilite strand of speculative theology (*kalām*). Their emphasis on God's divine unity finds an echo in al-Kindī's thought, as we shall

⁴² Cf. Hansberger 2008.

⁴³ See our introduction to the treatise in the present volume.

see now.

Philosophical topics

The philosophical corpus that have come down to us from al-Kindī is a fortuitous one: we know most of these works from a single manuscript, now held in Istanbul.⁴⁴ As will be clear from only a glance at our translation of the list of his works in this volume, a great deal of al-Kindī's output, on both philosophical and other topics, is lost. Nonetheless, thanks to the precious Istanbul manuscript, enough remains to testify to al-Kindī's work in most fields of philosophy. We have divided the volume into works on god and the world's eternity; psychology (that is, the study of the soul); cosmology; and ethics, with a somewhat miscellaneous group at the end which display al-Kindī's efforts at organising the Greek intellectual tradition to which he was heir. The following brief overview of these works is divided into the same areas, although we will here discuss cosmology before psychology.

God and Eternity

The central theme of al-Kindī's greatest work, *On First Philosophy*, is the oneness of God. This is most obvious from sections three and four of the extant 'first part', in which al-Kindī argues that all things in our world are characterised by both unity and multiplicity, and that there must be a cause of the unity that these things possess. This cause will be external to the one-and-many things around us — a transcendent 'true One.' In what way this cause is transcendent is then revealed, as al-Kindī explains that the true One outstrips all 'terms' or 'utterances' (literally 'sayables,' *maqūlāt*, which somewhat confusingly was a standard Arabic translation of Aristotle's 'categories'). For, any type of term we choose — and al-Kindī provides what he apparently takes as an exhaustive list of

⁴⁴ Aya Sofia 4832, which also contains works by the mathematician and philosopher Ṭābit ibn Qurra.

such terms — implies that it possesses both multiplicity and unity. For example any term which designates a class of items (in al-Kindī's terminology, a genus or species) implies that numerous class members exist. Thus the term 'man' implies that many men exist.

Here one might conceivably object that some terms only designate one class member — what about 'sun' for example? Al-Kindī might here respond that, in principle, more than one object like the sun could exist; if this were the case, then the term 'sun' would refer to these other objects equally well.⁴⁵ Proper names represent an even greater challenge to this view, since they seem to be 'terms' only designating one object (e.g., 'Sean Connery', or 'The Bodleian Library'). This raises the intriguing possibility that God might be fittingly called by names but not described with any terms that could also apply to other things; yet, al-Kindī does not explore this idea.

In any case, the upshot of al-Kindī's treatment of God as the 'true One' is a fairly rigorous apophatic or negative theology, meaning that his account demonstrates that human language (or most human language) cannot apply to God. This reflects the spirit of contemporary Mu'tazilite discussions of divine attributes.⁴⁶ Agreement with the Mu'tazila could also help to explain the apparently unrelated discussion which comes earlier, in section two of *On First Philosophy*. Here al-Kindī, drawing on the arguments of the aforementioned John Philoponus, argues that the world is not eternal; rather, eternity is the prerogative of God alone.

This question of the world's eternity was very important to al-Kindī. He returned to it numerous times, in a pair of works, *On the Oneness of God* and *On the Quiddity of What Cannot be Infinite*, both of which have extensive direct parallels to section two of *On First Philosophy*. They may in fact be preparatory sketches or just short works whose material was then incorporated into the fabric

⁴⁵ The point is made already by Aristotle, *Metaphysics* vii. 15, 1040a27–b4, and found for instance in Avicenna, *The Healing: Demonstration (al-Šifā': al-Burhān)*, ed. 'Affī, Madkūr 1956, 360.

⁴⁶ For this parallel see Adamson 2003.

of al-Kindī's masterpiece. A third short work lends support to a key premise of al-Kindī's anti-eternity arguments, namely that no body can be actually infinite in magnitude. This work probably stems from a later time than al-Kindī's other treatments of infinity (note the back reference to discussions in other works, at §9); it notably approaches the problem in explicitly geometrical terms. All three shorter works on infinity, as well as *On First Philosophy* itself, share a feature which may seem curious: al-Kindī spends most of his effort proving that the world cannot be infinite in magnitude, which seems to mean simply that the body of the world cannot be infinitely big. In this, al-Kindī and Aristotle share common ground. Al-Kindī disagrees with Aristotle, however, by arguing that a finite body cannot possess *any* infinite features: if the world is finitely large, it cannot contain anything infinite.

This leaves the question of why al-Kindī lavished so much attention on the issue of the world's eternity. In his refutation of the Christian doctrine of the Trinity (mentioned above), al-Kindī saw eternity and oneness as tantamount to one another. The rigorous opposition of the 'created' and 'eternal' ought to remind us of contemporary theological debates, and in particular the dispute over the createdness or eternity of the Koran itself.⁴⁷ In *On the Oneness of God* and *On First Philosophy*, al-Kindī linked the proof for the world's finiteness in time to that of God's oneness. Al-Kindī thus deployed anti-Aristotelian arguments, taken largely from the Christian Philoponus, in order to show how Greek philosophy is in agreement with, and can lend support to, the tenets of Islam.

Cosmology

To judge from a fragment belonging to the lost portions of *On First Philosophy*, al-Kindī may have gone on from his demonstration of God's unity to a treatment of

⁴⁷ See Adamson 2007a, 98–105, and on the topic see, for instance, Patton 1897 and van Ess 1965.

divine providence.⁴⁸ In addition to this fragment, al-Kindī's extant works provide ample evidence that al-Kindī had a keen interest in this topic. We have already mentioned *On the Bowing of the Outermost Sphere*, in which al-Kindī interprets the Koranic phrase that the heavens prostrate themselves before God in cosmological terms. The motion of the heavens is ordained by a divine command, and transmits God's order to the sublunary world. In other words, God exerts his providence on our lower world indirectly, through the action of the stars.

In another treatise al-Kindī further expands on this idea. He explains that the heavens are the 'proximate agent cause of generation and corruption'. With this theory al-Kindī draws on the Aristotelian tradition. Aristotle himself provides authority for the view that the heavens have a special causal relationship to God. He draws a connection between celestial motion and God in both the *Physics* and the *Metaphysics*. Indeed Aristotle even uses the eternity of the world as part of a proof for God's nature, contending that God must be immaterial if He is to cause infinite motion, because no material body has infinite power. Of course, as al-Kindī denies the world's eternity, he cannot agree with this argument. In fact he employs materials from Philoponus to turn the tables on Aristotle: as finite bodies, the heavens cannot possess eternity by their own nature.⁴⁹ Furthermore, al-Kindī speaks at least sometimes as if God has a direct relationship with each created object and brings it into being without any intermediary. Yet there are conflicting indications on this point. In the digression on creation at *On the Quantity of Aristotle's Books*, §§ VI.5–8, al-Kindī seems to envision that God created each thing directly, whereas he states explicitly in *On the True Agent* that God acts through the mediation of His effects (but al-Kindī does not identify which effects are meant).

Be that as it may, al-Kindī clearly thinks that God's providence, if not his

⁴⁸ The fragment, reported by Ibn 'Abd Rabbih al-'Andalusī, is translated in this volume at the end of the chapter containing *First Phil.*

⁴⁹ See Davidson 1969, and for al-Kindī's use of arguments from the finiteness of the world's body, *First Phil.* VI–VII.

originating creative act, is mediated by heavenly motion. He gets this notion not only from Aristotle but also from Aristotle's most faithful ancient exegete, Alexander of Aphrodisias (2nd c. AD). Alexander composed a treatise *On Providence* which is lost in Greek but was translated two times into Arabic, notably once in al-Kindī's circle; both resulting Arabic versions survive today.⁵⁰ This treatise exerted a strong influence on al-Kindī,⁵¹ even if al-Kindī apparently departed from Alexander on one crucial point. For Alexander, as we know from both *On Providence* and a work *On Fate* (preserved in Greek), heavenly providence produces a regular order in nature. But it does not concern itself with particular events, since that would imply that the divine directs its attention to things that are inferior to it, which would be unfitting. This amounts to the claim that providence ensures the cyclical preservation of natural *species* but does not bring about events concerning *individuals* which belong to those species. Al-Kindī's position comes closer to that of Plotinus: especially in *Enneads* iii. 2–3, his great treatise on providence, the latter accepts that the divine forces do bring about the best possible order down to the level of individuals. Al-Kindī's extensive output on astrology is eloquent testimony that he accepted this idea. Al-Kindī firmly believed that man could predict and discern particular events and facts by looking to the stars.⁵²

How, then, do the heavens bring about this providential order of the sublunary world? The exact mechanism seems to vary from one Kindian work to another.⁵³ Particularly difficult to integrate into his more 'Aristotelian' works is *On Rays*, a text preserved only in Latin. Here he makes heavenly influence the result of 'rays' projected by astral bodies to sublunary bodies — only one example of a general phenomenon, in which all bodies emit mutually influencing rays. In *On Rays* heavenly influence is major topic, but the theory is also applied to sensory

⁵⁰ See Ruland 1976.

⁵¹ See Fazzo, Wiesner 1993.

⁵² See Adamson 2002b.

⁵³ On this problem see Adamson 2007a, 184 and 194.

phenomena like colour, and to the efficacy of talismans, magic and the like (our translation in this book, however, is a partial one and deals only with the opening, more theoretical parts of the work).

In any case, al-Kindī consistently holds that the heavens affect our world by affecting the elements. Following Aristotle and Plato (and before them Empedocles), al-Kindī accepts the common ancient theory of four sublunary elements: air, earth, fire and water. If left to their own devices, the elements would sift apart into four concentric spheres, with the heaviest element, earth, at the centre of the cosmos, surrounded in order by water, then air, then fire. The elements do not separate, because the heavens move over them and mix them together, resulting in the compound bodies populating the world we see around us. The heavens are made of an incorruptible fifth element which is distinguished by circular motion rather than the rectilinear motion typical of these four sublunary elements. Al-Kindī argues for this in *On the Nature of the Celestial Sphere*, very much in the spirit of Aristotle's physical treatises. But he shows his syncretism by elaborating a Pythagorean theory of the five elements in a treatise which explains why 'the ancients' (that is, Plato in the *Timaeus*) associated the elements with the five Platonic solids, that is, cube, pyramid and so on. Here the correspondences are explained in numerically symbolic terms. For example the earth is associated with the cube because the cube has six faces and six is a 'perfect' number, which befits the way the earth sits unmoving at the centre of the cosmos (§6).

Al-Kindī applies the theory in some detail when he comes to consider phenomena in the world below the heavens. Here one of the best examples is meteorology, a subject to which al-Kindī devoted considerable attention. He wrote treatises on such phenomena as fog and rain, for example.⁵⁴ In this volume we have translated only one of these works, which explains why the air in the upper atmosphere is colder than that close to the ground (a phenomenon which would be clear to anyone who ventured into mountainous regions). Al-Kindī

⁵⁴ For his works in this area see Lettinck 1999; Adamson 2007a, ch. 8.

explains that vapours ascend from the ground because astral bodies, especially the sun, heat the earth. This treatise should be read alongside al-Kindī's epistle on the reason for the sky's blue colour, which we have included in the psychology section along with his account of which sublunary element is the cause of colour in bodies.

As with atmospheric phenomena, al-Kindī analyses the sublunary bodies on the surface of the earth in traditionally Aristotelian terms: natural physical objects are substances which endure over time by virtue of having an essence or substantial form. These substances then serve as the subject for further features, which are accidental (these can change without the substance being destroyed).⁵⁵ Texts like *Proximate Agent Cause* strongly suggest that all these forms result from elemental combination and the recombination of already compounded bodies, yielding steadily increasing complexity. Al-Kindī even goes so far as to state, echoing Galen, that the dispositions of soul depend on the mixtures of the body.⁵⁶ For example a certain level of heat in the body will cause a man to be more irascible. This would fit well with what he claims elsewhere, for instance that a lute player can affect people's souls (their emotions, for instance) by playing in such a way as to manipulate the elemental components of their body.⁵⁷

Soul and Intellect

Yet, when al-Kindī turns his attention to the human soul itself, it becomes hard to see how he could think any of this. The soul, as he states or proves in several works, is a separate, immaterial, simple substance. This is the opening principle which underlies the doxographical survey of ancient theories in his *Discourse on the Soul*. He proves this with arguments drawn, surprisingly, from Aristotelian

⁵⁵ See for instance *First Phil.* §VI.9, §§X.2 and 5.

⁵⁶ *Prox. Agent Cause* §VII.1.

⁵⁷ See Adamson 2007a, 174; this is again related to Galenism, since al-Kindī invokes the four humours.

logic in *That There are Incorporeal Substances*.⁵⁸ For al-Kindī, the soul can certainly outlive the body, and it would seem that its relationship to the body is a rather casual one. It projects its activities through bodily organs, but al-Kindī makes little provision to explain how the body could affect it, as required by the theory of physically-grounded dispositions in *Proximate Agent Cause*. (Al-Kindī takes up questions about the soul's relation to heavenly and sublunary bodies in the fragmentary *Brief Statement about the Soul*.) But al-Kindī's view is more coherent than it seems at first. For him, the distinctive activity of the separate soul is really thinking. He ascribes even the 'lower parts' of the soul, the irascible and appetitive faculties, more to the body than to the soul, because the soul opposes, and is opposed by, bursts of anger, for instance.⁵⁹ Since the soul and the irascible faculty are opposed, they must be distinct—an argument that al-Kindī ultimately borrows from Plato's *Republic*.

Al-Kindī locates fairly advanced psychological capacities in the ensouled body, rather than the soul itself, as his account of dreams demonstrates. He situates dreams, as well as other functions of the imaginative faculty, in the brain: in this, he follows the ancient precedent of authors like Galen and Nemesius of Emesa (fl. ca. 400 AD).⁶⁰ But al-Kindī's *On Sleep and Dream* gives a gratifyingly detailed account of how exactly the higher, rational soul relates to this embodied faculty. On the one hand, the imagination deals with sensible forms and has an organ, namely the brain (§III.7). On the other hand, the soul can entertain forms in the absence of their bearers, for instance by picturing a friend who is absent. When we sleep and are not distracted by senses, the imaginative faculty has free rein to conjure images, and these images are dreams. The soul taken by itself and without body is able not only to engage in intellection, but also to foresee future events and 'announce' these by producing dream-images in the imaginative faculty while we sleep; it often does so symbolically, which is why

⁵⁸ Our translation of this work, along with further commentary, was published already as Adamson and Pormann 2009.

⁵⁹ *Discourse Soul II*.

⁶⁰ For Galen, see Rocca 2003, and Donini 2008; for Nemesius, see Sharples, van der Eijk 2008.

dreams require interpretation (§IX). The purer the soul and the purer the organ in which the dream is realised, the more accurate the foretelling (§IX.2). (Purity of soul is a theme also emphasised in *Discourse on the Soul*, yielding a tight connection between al-Kindī's psychology and his ethics).

In both this treatise and other psychological works, al-Kindī insists that the soul becomes *identical* to its object. As he says in *On Sleep and Dream*, the soul and the form grasped by the soul are one and the same, whether the form so grasped is sensible or intelligible (§VIII). The soul's ability to become identical to both kinds of form shows that for al-Kindī, as for Plotinus before him, the soul is intermediate between the sensible and intelligible worlds. On the other hand, the soul is becoming identical with forms, not bodies; its psychological capacities can be realised even though it is an immaterial substance. In the area of sensation, vision most interests al-Kindī. He wrote numerous technical works on optics and catoptrics (that is, the study of mirrors), which have come under ample scholarly scrutiny and are not included in the present volume.⁶¹ We do, however, include two short treatises on the subject of colour. In one of these, mentioned above, al-Kindī discusses the blueness of the sky. In the other, he engages with the ancient debate about which element is responsible for colour; he comes to the conclusion that it is earth, whose solidity allows it to 'block' vision.⁶²

The highest of the soul's faculties is of course neither sensation nor imagination, but intellection. This is explored in one of al-Kindī's best known works apart from *On First Philosophy*, a brief but dense epistle *On the Intellect*.⁶³ Here al-Kindī again focuses on the soul's ability to become identical with its objects in form (§3). But where do the forms come from when they are intellectual rather than sensory forms? In order to answer this question al-Kindī postulates a 'first intellect', which seems to play the role in intellection that sensible objects can play in sense-perception (§5). In other words, the first

⁶¹ See Rashed 1997.

⁶² See further Adamson 2006b.

⁶³ On this text see especially Jolivet 1971.

intellect is a seat of intelligible forms from which the soul can receive forms into itself, so as to grasp them — the way it might receive the form of redness from an apple when seeing an apple. The intelligible forms that al-Kindī has in mind here are species and genera (§3). This would seem to mean, rather surprisingly, that although the soul can get a sensible form like *red* from seeing an apple, it cannot get the species form *apple* by looking at an apple. But it is hard to believe that we could come to an intellectual understanding of this species form without having ever seen any apples. Presumably the sensible encounter with apples is thus necessary—but not sufficient—for bringing the soul to grasp the relevant intelligible species.

Another text on epistemology, called *On Recollection*, sheds more light on this. Here al-Kindī, following a tradition which goes back to Plato's *Meno* and *Phaedo*, argues explicitly that the human soul requires more than sensation to understand intelligible objects. Such objects possess no body, time or place (§IV. 2). Therefore, our impression that we learn about them on a given occasion and at a given location must be an illusion. Rather, when we learn we are actually remembering what the soul already knew before entering into a body. This would certainly solve the problem of how sensible experience helps us to know intelligibles: it plays the relatively minor role of prompting our memory. If this is al-Kindī's considered view he departs from the more empiricist epistemology of Aristotle in favour of the Platonic tradition. But it must be said that he nowhere else endorses the idea that the soul exists *before* the body. Yet, he does think that it can live on *after* the body's death, as numerous other texts demonstrate.

This highly intellectualist theory of knowledge did not, however, stop al-Kindī from exploring the physical world around him with enthusiasm. In fact, he turned his attention to a staggering range of topics, some of them quite practical (the making of swords and perfumes, the removal of stains from clothing). One can gauge the breadth of his interests by looking through the list of his works, translated in this volume along with biographical information about him. If the ninth century was a kind of Renaissance in the Islamic world, then al-Kindī was that century's Renaissance man, or one of them. Yet the eclectic range of his

interests can obscure the fact that his activities do seem to be animated by just the kind of intellectualism that we have been discussing. For instance, when he investigates an apparently empirical and practical topic like the making of compound drugs, he does so by means of a highly abstract arithmetic theory, insisting in effect that the proportions which govern the mixtures in medicines must conform to the most 'perfect' arithmetic ratios.⁶⁴ Al-Kindī is convinced that mathematical structure can be *assumed* to underlie physical structure, as dramatically illustrated in the aforementioned text on why the ancients associated the elements with geometrical figures.⁶⁵

Ethics

Al-Kindī's intellectualism is also on display in the area of ethics. In one sense, his ethical writings address 'practical' concerns. The longest ethical—and probably the most charming—work from his pen is devoted to 'dispelling sorrows'. To this end, al-Kindī relates memorable anecdotes; and he recommends what one might call psychological exercises: one should reflect on the way in which other people have suffered, but still achieved happiness in the long run. One should not think, however, that his advice is undemanding: on the contrary, his ethical hero is Socrates, the paradigm of self-control and disdain for physical possessions. Al-Kindī is so fascinated with Socrates that he not only mentions him in *On Dispelling Sadness*, §§IX.5 and 9, but also authors a separate work collecting sayings and anecdotes ascribed to Socrates. Nonetheless, the bulk of *On Dispelling Sadness* addresses practical concerns. Only in the opening paragraphs does al-Kindī fly his intellectualist colours, insisting that the apparent goods in the sensible world do not possess any real value and invariably lead to unhappiness, as one loses them in the end. Therefore, we should prefer the

⁶⁴ In his work *On Degrees (De Gradibus)*, for which see Gauthier 1938; see further Adamson 2007a, 161–6.

⁶⁵ For the relation between mathematics and al-Kindī's philosophy, see again Endress 2003; Gutas 2004.

objects in the ‘world of the intellect’ (§1.2).⁶⁶

Systematising Philosophy

In addition to the philosophical epistles just discussed, in which al-Kindī tackles a variety of specific philosophical themes, he also produced works intended to help his readers understand the fruits of the translation movement. Here the most significant text authored by al-Kindī—or at least emanating from his circle—is *On the Definitions and Descriptions of Things*.⁶⁷ This text presents itself neither as an epistle nor as a discursive treatise, but rather as a kind of glossary of al-Kindī’s specialised vocabulary. Some Greek loan-words appear in the list, such as *al-hayūlā* (‘matter’), derived from Greek *húlē*. Other terms come from Persian, such as *ğawhar* (‘substance’), originally designating precious stones in both Persian and Arabic. The vast majority of entries, however, are Arabic words that acquired a terminological meaning, and therefore require further definition and elucidation. Examples include ‘difference (*al-ḥilāf*)’ and ‘otherness (*al-ğayrīya*)’, in need of differentiation; or ‘moisture (*ar-ruṭūba*)’, which takes on a specific meaning in a scientific context. Of course defining a philosophical term is itself a philosophical enterprise; the list of definitions may not make for riveting reading, but it sheds light on terms and ideas found in other works.

A rather different kind of systematising work is *On the Quantity of Aristotle’s Books*. We have already mentioned that it includes a striking digression on divine creation (§VI), one of the most interesting passages in the whole corpus. The main argument of this treatise, however, also arrests the reader’s interest: it surveys Aristotle’s corpus, probably on the basis of a Greek model or models. It shows us which works in it al-Kindī knew well, and which ones he did not know. He displays a close acquaintance with the *Categories*, for instance, but shows little if any direct knowledge of the treatises on ethics and politics. Moreover, he

⁶⁶ For this intellectualist reading see further Adamson 2007a, 153–6.

⁶⁷ For the question of authenticity, see the introduction to this work below.

characterises the purpose of Aristotle's *Metaphysics* in a striking manner:

to explain things that subsist without matter and, though they may exist together with what does have matter, are neither connected nor united to matter; to affirm the oneness (*tawhīd*) of God, the great and exalted; and to explain His beautiful names, and that He is the agent cause of the universe, which perfects [all things], the God of the universe who governs through His perfect providence and complete wisdom (§IX.5).

In this last section of the book, we have also included a number of texts on miscellaneous philosophical subjects. First comes *On the Five Essences*, in which al-Kindī briefly discusses five key ideas in Aristotle: matter, form, place, motion and time. This text resembles *On the Definitions and Descriptions of Things* in its aims and objectives. The final translation covers a few fragmentary texts found in the Istanbul manuscript; they deal with topics like the meaning of 'composition', and the imaginative faculty. One can hardly define the requirements for being a philosopher in a better way than does al-Kindī in the first fragment: 'skillful intelligence, constant desire, admirable steadfastness, piercing ability, the beginnings of understanding, and a long life.' We feel confident in attributing most of these qualities to al-Kindī himself.

Al-Kindī's Legacy

The perusal of this volume, if not the foregoing overview of al-Kindī's thought, will probably persuade the reader of the depth and breadth of his work in philosophy. There can also be little doubt of his historical importance as the first to undertake the process of absorbing Greek philosophy into Islamic civilisation. Even if his direct influence had been minimal, this would be sufficient to justify the careful study of his writings, and we hope these translations will be a spur to such endeavours.

Al-Kindī's direct influence, however, was not minimal, even if overviews of

philosophy in the Islamic world often leave the impression that his writings fell stillborn from the press (to borrow Hume's phrase). Luminaries like al-Fārābī (d. 950), Avicenna (Ibn Sīnā, d. 1037) and Averroes rarely engage directly with al-Kindī, though Averroes did mention and criticise al-Kindī's views on pharmacology.⁶⁸ But numerous thinkers in the generations directly succeeding al-Kindī not only engaged with him, but were deeply influenced by his works and his approach to philosophy. Here we can start with his student as-Saraḥsī, who has been mentioned above. From the indications we possess, as-Saraḥsī appears to have closely modelled his own writings on those of his master.

Another student, 'Abū Zayd al-Balḥī, has left few works to posterity, but one extant treatise is extensive: the *Benefits for Bodies and Souls*.⁶⁹ It shows how the generation directly after al-Kindī integrated his approach to philosophy into the cultured literary practices, called 'Adab.⁷⁰ (Al-Kindī himself had written poetry, and a look through his list of works shows that he too already cultivated the literary arts to some extent.⁷¹) Interestingly, both 'Abū Zayd and as-Saraḥsī came from the eastern part of the Islamic world, from Balḥ and Saraḥs in Ḥurāsān, as their names suggest. We can perhaps perceive here the beginning of a tradition in the East that embraced a Neoplatonising, syncretistic philosophy pioneered by al-Kindī. By contrast, in al-Kindī's former stomping grounds of Baghdad, a group of mostly Christian thinkers adhered to a more faithful Aristotelianism. These included Yaḥyā ibn 'Adī, from whom we have the quotations of the otherwise lost treatise of al-Kindī *Against the Trinity*.

Another associate of al-Kindī's, perhaps his most important one, also hailed from Balḥ: the astrologer 'Abū Ma'shar al-Balḥī. He dominated astrology in the Arabic world, and al-Kindī had a hand in bringing him to this discipline. The *Catalogue* by Ibn an-Nadīm tells the story of the enmity that first pitted 'Abū

⁶⁸ See Langermann 2003.

⁶⁹ *Maṣāliḥ al-abdān wa-l-'anfus*, ed. Cairo: 2005.

⁷⁰ On this phenomenon see Rowson 1990.

⁷¹ Rosenthal 1942.

Maʿšar against al-Kindī; but then, the latter enticed the former, first to study the mathematical sciences, and eventually to become an astrologer.⁷² ʿAbū Maʿšar was an astrologer and not a philosopher, but in his most important work, the *Great Introduction*,⁷³ he provides a scientific rationale for astrology that resonates with al-Kindī's cosmological writings.⁷⁴ Along with al-Kindī's own sizeable astrological output, the conversion of ʿAbū Maʿšar to Hellenic science, and astrology in particular, would form a major part of the Kindian legacy.

In fact, the Latin reception of al-Kindī as a thinker revolved especially around this side of his thought. The astrological and magical text discussed above, *On Rays*, acquired particular significance in the Latin tradition and attracted criticism in a work entitled *Errors of the Philosophers*, which is ascribed to the bishop and philosopher Giles of Rome (d. 1316).⁷⁵ The *Errors* decries the astrological determinism set out in the remarkable fourth chapter of *On Rays*, entitled 'On Possibility'. *On the Intellect* and *On Sleep and Dream* also circulated in medieval Latin versions, and we have taken them into account in our translations in the present volume. *On the Five Essences* only survives in Latin. We should note that another work preserved in Latin, *On Logical Demonstration*, is thought to be incorrectly ascribed to al-Kindī; we have not included it here.⁷⁶

Returning to the Islamic world, we can trace al-Kindī's influence well beyond his immediate associates. The most striking and puzzling case is that of the Jewish thinker ʿIshāq ibn Sulaymān al-ʿIsrāʾīlī (d. 955, better known as Isaac Israeli): he drew on several Kindian treatises, for example *On the Definitions and Descriptions of Things*. These textual borrowings are clear to see but not easy to explain, since we do not know exactly how Isaac would have been exposed to the Kindian corpus, to say nothing of his possible reasons for adopting so many

⁷² ed. Flügel 1871–2, p. 277, lines 1–8. The story is translated below, in *Biogr.* §§IV.4–5.

⁷³ ed. Lemay 1995–6.

⁷⁴ As argued in Adamson 2002b.

⁷⁵ See Koch (ed.), Riedl (trans.) 1944. This authorship has been disputed, however.

⁷⁶ The Latin works of al-Kindī are edited in Nagy 1897. For the history of *On the Art of Demonstration* see Baffioni 1994.

of al-Kindī's ideas (even verbatim, in some cases).⁷⁷ Another more or less direct link can be drawn to the students of 'Abū Zayd, who would of course be second-generation students of al-Kindī's. One was the mysterious Ibn Farīgūn, author of a fascinating encyclopaedic work produced in a diagrammatic format rather than conventional prose.⁷⁸ 'Abū Zayd also taught al-'Āmirī (d. 992), who continued the philosophical project begun in al-Kindī's circle. For instance, al-'Āmirī elaborated on the *Book of the Pure Good* (called in Latin the *Book of Causes*), mentioned above. He reworked and reorganised this text, produced in the Kindī circle, just as the Kindī circle had reworked and reorganised the *Book of the Pure Good*. Al-'Āmirī also brought philosophical ideas more explicitly into contact with Islam; for example, he identified certain principles of the Neoplatonic system, intellect and soul, with God's 'tablet' and 'pen' with which He wrote the Koran.⁷⁹

In this way, various thinkers engaged with the output of al-Kindī's circle; but al-'Āmirī would not be the last. Certainly al-Kindī's influence was felt most deeply and widely thanks to the translation of Greek works into Arabic that he oversaw. Here one could mention the Kindī-circle version of Aristotle's *Metaphysics*, a translation which Averroes still consulted, when he wrote his *Long Commentary* on that work in the twelfth century.⁸⁰ The *Book of the Pure Good* also exerted enormous influence in the Latin world; no less a personage than St Thomas Aquinas commented on it, pointing out that it was based on Proclus rather than Aristotle, as often claimed. And speaking of pseudo-Aristotle, the *Theology of Aristotle* helped transmit Neoplatonism into the Islamic world in a major way; and even during the Safavid period (16th–17th c.), members of the 'school of Isfahan' still read it attentively.⁸¹

Al-'Āmirī represents more, though, than just the abiding enthusiasm for the

⁷⁷ See the fundamental Altmann and Stern 1958.

⁷⁸ See Biesterfeldt 1985 and 2000.

⁷⁹ As highlighted in the title of an excellent recent study of this work, Wakelnig 2006. On this author see also Rowson 1988.

⁸⁰ Cf. Bertolacci 2005.

⁸¹ On this see Rizvi 2007.

Neoplatonic writings produced under al-Kindī's supervision. He also illustrates the widespread adoption of al-Kindī's whole philosophical programme among a certain type of intellectual in the tenth century. This 'Kindian tradition' began, obviously, with al-Kindī himself and ran through the tenth century.⁸² A broad-minded appraisal of al-Kindī's influence would credit him with being a forerunner, and progenitor, of the 'popular Platonism' displayed by many literary and philosophical figures of this period. Thinkers would combine Platonic ideas with Islamic symbolism, mixing them into a heady brew; al-ʿĀmirī can illustrate this tendency, as well as ʿIsmāʿīlī authors and especially the 'Brethren of Purity' (ʾIḥwān aṣ-Ṣafāʾ), a group of Neo-Platonic philosophers in tenth-century Baghdad.⁸³ A broadly Kindian understanding of the Greek philosophical inheritance came easily to well-rounded intellectuals like the literary figure at-Tawḥīdī (d. 1023), and the historian and philosopher Miskawayh (d. 1030), who in fact quotes from *On First Philosophy* in a work on the soul.⁸⁴ While the full range of al-Kindī's influence on these figures remains a subject for future research, all of them drew heavily on texts like the *Theology of Aristotle*, and adopted the characteristically Kindian project of fusing the teachings of Islam with those of Greek philosophy. (Here one might contrast the approach of al-Fārābī, who instead portrayed religious statements as dialectical or rhetorical versions of the truths that are established demonstratively in philosophy.)

Of course, al-Kindī's legacy is inseparable from that of the translation movement in which he played such an important part. This legacy ensures al-Kindī a prominent place in any history of science and philosophy in the Islamic world. Yet al-Kindī's achievement as a transmitter of Greek ideas should not distract us from the fact that he was an original, creative thinker in his own right. Al-Kindī represents not only the enthusiastic adoption of the Hellenic tradition — with his rallying cry, from section one of *On First Philosophy*, that 'we must not be

⁸² Adamson 2007a (Kindian tradition).

⁸³ For the former see Walker 2005; for the latter see El-Bizri 2008.

⁸⁴ Adamson 2007c, 52–4.

ashamed to admire the truth or to acquire it, from wherever it comes' (§II.4). He stands too for the need to interpret and develop the truths of the Greeks, so that they might be more congenial to the truth of Islam.