, Abū Yūṣuf Ya’kūb b. Ishāk, “the philosopher of the Arabs” whose distinguished genealogy is obligingly given by the bio-bibliographers, was born before the end of the 2nd/8th century and died in about the middle of the 3rd/9th (perhaps approximately 185-252/801-66).

An eminent universal scholar and philosopher, he lived in a period of intellectual ferment in the sphere of the sciences as well as in that of kalām: the period of the translations, and of the controversies concerning Muʿtazilism.

He was a companion of the caliphs al-Maʾmūn and al-Muʿtaṣim. To the latter he dedicated notably his On first philosophy, and to his son Aḥmad, who was a pupil of his, he dedicated a number of other treatises. His association with these two sovereigns, plus the fact that he fell into disfavour during the reign of al-Mutawakkil (and was even deprived temporarily of his extensive library), lead one to suspect at least a tendency towards Muʿtazilism on his part. This hypothesis is supported by several passages from his known works (where there are references to the negation of the divine attributes or to the excellence of the works of God), as well as by the titles of works which are known only from the bibliographies. The latter show the extent and the variety of the work of al-Kindī: almost 250 titles (according to the Fihrist) concerning all the sciences cultivated in his day (these include astrology but not alchemy, which he regarded as a form of trickery), also technical subjects of particular interest to the ruling classes with whom he was associated: the manufacture of glass, jewellery, armour and perfume.

It is impossible to give a complete account of al-Kindī’s thought because of the relatively small number of documents which has survived (less than 40 extant titles, as many of them philosophical as scientific; the task of editing and evaluating a number of unpublished ones is
as yet incomplete). In the meantime, one can sketch the general outline, or at least note certain significant features, on the basis of the available texts.

His general philosophical position is best expressed in the introductory chapter of On first philosophy. Besides certain definitions and technical statements concerning philosophy, sc. the principles of philosophy, the four “causes”, the four “scientific questions”, there is to be found there what is in effect both an advertisement for, and a defence of, philosophy (it should be remembered that this treatise is dedicated to the caliph).

Taking as his inspiration, and sometimes borrowing literally from, the opening of a book of Aristotle’s Methaphysics, of which he quotes a passage (without, however, acknowledging his source), al-Kindī describes the progressive accumulation of true knowledge which has come about in the course of time, thanks to the efforts of the philosophers: from this he infers that “the truth must be acquired, from whatever source it comes”, and the statements of the philosophers must be re-examined and completed. He violently criticises the opponents of philosophy who attack it in the name of religion, while they themselves, he says, are without religion. The content of “the science of things and their true nature”, that is to say philosophy, is identical to that of the message of the prophets: the science of divine sovereignty and divine unity, the science of morality and ethics. Finally, a brief quotation from Aristotle’s Protreptic (again not acknowledged), according to which it is logically impossible not to be a philosopher, is followed by a prayer invoking the assistance of God in the pursuit of knowledge.

Thus al-Kindī sets forth an intellectual orientation doubly opposed to that of the traditionalists; according to him, knowledge can come from various sources and can still be expected to develop; but equally, he claims to respect the prophetic message. In precisely the same spirit his epistle Concerning the number of Aristotle’s works compares human knowledge (ʿilm insānī) with divine knowledge (ʿilm ilāhī); whereas the first depends on prolonged effort and preparation regulated according to a precise scheme, God inspires the prophets, when He so desires, and without them having recourse to the methods of “human knowledge”, with a type of revelation condensed into a few phrases whose sense the philosopher can only explain at the cost of a lengthy process of elucidation.

This position of al-Kindī’s, with regard to the sciences and to philosophy, derived from various sources on the one hand, to revelation and religious speculation on the other, emerges also in some ways from the information supplied by the bio-bibliographers. These emphasise that al-Kindī had an unequalled acquaintance with the ancient sciences (Ibn al-Nadīm), that he of all the Islamic philosophers was closest to Aristotle (Ibn al-Djulджul), that he studied in depth the various branches of Greek, Persian and Indian wisdom (Ḵiftī); but also that he combined in his works the principles of the Law and those of the rational sciences (Bayhaḵī) and that he wrote an essay on tawḥīd according to the methods of the logicians (Ibn al-Djulджul).
Also, in a systematic list of his works such as is first to be found in the Fihrist, one notes the section of “books of dialectic” or of “controversy” ( _kutub ḍjadaliyya_ ), many of which must have dealt with specific problems of _kalām_, such as prophecy, _istiṭāʿa_ , divine unity, the creation of the body, of the atom, etc.

As regards the Greek philosophers, al-Kindī mentions by name Plato and Aristotle and hardly any others. We know on the one hand that he used the _Treatise on the heavens_ of Aristotle, that he commissioned a translation of his _Metaphysics_ and revised the translation of the _Theology_ which was attributed to him. But careful scrutiny of his works shows that he must have been acquainted, directly or indirectly, with certain others, such as Epictetus, Proclus and probably John Philoponus; we find also echoes of the last phase of the teaching of the school of Alexandria as it is expressed notably in the writings of David. These various references to other authors and implied borrowings pose many problems, both historical and critical, which are far from being solved. Without doubt there are questions still to be asked.

The variety of these borrowings poses in addition a philosophical problem, which could only be solved by examining the entire corpus of works of our author and his precise chronology, and examining the consistency and the development of his thought, and his vocabulary as well.

Without attempting to enter into the details of the philosophy of al-Kindī as it is known to us, we can say that he adopted from the Aristotelian tradition a certain number of concepts (the four causes, the categories of change etc.) and of propositions (the finiteness of the world, the impossibility of a corporeal infinitude as an act, the mechanics of intellectual perception etc.); from the Platonist tradition, he takes speculation on the soul in its relationship with the body and with the divine light and on its ascent to and beyond the heavens. Parenetic and semimystical in this last case, his style and method are by times extremely precise, very abstract, strained, proceeding freely and methodically by means of axioms and deductions of a geometrical regularity.

On the other hand, al-Kindī, who ceases to follow the Greeks where they are in disagreement with the Qur’ānic revelation (i.e. with regard to the creation, and the life-span of the Universe), is interested in establishing or formulating agreements between certain philosophical ideas and certain articles of the Islamic faith, even Muʿtazili ones.

Thus the _On first philosophy_, after some reflections on the “one” and the “many”, where we detect echoes of Proclus, concludes (that is to say, the first part of the book, which is all that has survived, concludes) with a kind of philosophical _tawḥīd_ and with criticism of those who give attributes to God (the same theme is used in the essay _On the unity of God and finite nature of the world_). The epistle _Concerning the number of Aristotle’s works_ contains a philosophical commentary on verses 78-82 of Sūra XXXVI and the epistle _On the lowest prostration of the body_ another on verse 6 of Sūra LV.
There are other detailed references to other works which could be quoted. It would appear that al-Kindī uses the same method in his choice of language where certain words or verbal roots are common to the vocabulary of religion and to that of the Greek translations (thus he refers to God by the name al-wāḥid al-ḥakk, which is both Qur’ānic and Neo-Platonist; he uses the word rubūbiyya which belongs to the language of religion, in the title of the Theology attributed to Aristotle). It is important to analyse these various agreements and differences at this early stage of the history of falsafa.

In so far as one is able to judge from the bibliographical lists and the few treatises, of various lengths, which have survived, the scientific work of al-Kindī follows the same scheme as his philosophical work, sc. to revise and develop the findings of the ancient scholars in the light of new interests. He wrote essays on Euclid, Archimedes, Ptolemy, on the astrolabe and on Hippocratic medicine; he also drew to a considerable extent on Asiatic sources, particularly for his knowledge of remedies.

On the other hand he followed ideas which were specifically his own, notably in his studies of optics and pharmacology. His article on perspective (known only in Latin under the title De causis diversitatum aspectus) follows Euclid, though without following him blindly. Three points are set out here in succession: the rectilinear propagation of light which Euclid postulated and which al-Kindī demonstrates; a theory of vision whereby the eye illuminates the object seen—this also is a Euclidean theory which al-Kindī modifies, giving three dimensions to the rays emitted by the eye (whereas for Euclid these were geometric lines); finally, a theory of mirrors. Here too, his study of burning mirrors is an adaptation, that is to say a revision, a criticism and a completion, of what Anthemios of Tralles had written on this subject.

The same method is used in the treatise On compound medicines. The ancients had studied the proportions of the four qualities (hot, cold, dry, wet) in simple medicines. Now this method had to be extended to compound medicines, and al-Kindī takes pains to explain mathematically the relation between increasing the number of parts of each quality, and the corresponding increase in the effect of the medicine on the organism.

Al-Kindī left a few pupils (Aḥmad b. al-Ṭayyib al-Sarakḥṣi, Abū Maʿṣhar), but not a school in the strict sense of the word. It is most of all as a universal scholar and as an astrologer that he has survived (to the point that those of his works which were available in Latin, were still being read in medieval times). Ibn Khaldūn quotes him at various points in his Mukaddima, but does not include him in his list of Islamic philosophers.

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