

F

CONCLUSION

In the foregoing pages an attempt has been made to give a bird's-eye view of a tremendously vast field. We have concentrated on the most important features of ibn 'Arabi's life and thought; many important facts have of necessity been omitted for lack of space. If ibn 'Arabi experienced—as we must assume he did—some sort of strain while writing his mystical philosophy, we are placed under greater strain while writing about him. There is more than one way of interpreting his ideas and fathoming his intricate and obscure style. This makes it possible for scholars to give not only different but conflicting accounts of his teachings. The present account deals with him as a thoroughgoing pantheist who tried his best to reconcile his pantheistic doctrine with Islam. In doing so he had to read new meanings into the traditional Muslim concepts, and change Islam from a positive into a mystic religion. It is true he never lost sight of the idea of Godhead, but his God is not the transcendent God of revealed religions, but the Absolute Being who manifests Himself in every form of existence, and in the highest degree in the form of man. People may agree or disagree with some of his theories, but the fact remains that in production and influence he is the greatest Arabic-speaking mystic Islam has ever produced. It has been said that he has annulled religion in the orthodox sense in which it is usually understood. This is not altogether true. He has done away with a good many concepts which were so narrowly understood by Muslim jurists and theologians, and offered in their place other concepts which are much deeper in their spirituality and more comprehensive than those of any of his Muslim predecessors. His ideas about the universality of everything—being, love, religion—may be considered landmarks in the history of human thought.

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Part 3. THE "PHILOSOPHERS"

Those who were mainly interested in philosophy and science and were greatly influenced by Greek thought)

Chapter XXI

AL-KINDI

A

LIFE

Al-Kindi (c. 185/801–c. 260/873) was the first Muslim philosopher. Philosophical studies in the second/eighth century were in the hands of Christian Syrians, who were primarily physicians. They started, through encouragement by the Caliph, to translate Greek writings into Arabic. Being the first Arab Muslim to study science and philosophy, al-Kindi was rightly called "the Philosopher of the Arabs."

His full name is: abu Yūsuf Ya'qūb ibn Ishāq ibn al-Ṣabbāh ibn 'Imrān ibn Ismā'il ibn al-Ash'ath ibn Qais al-Kindi. Kindah was one of the great Arab tribes before Islam. His grandfather al-Ash'ath ibn Qais adopted Islam and was considered one of the Companions (Ṣaḥābah) of the Prophet. Al-Ash'ath went with some of the pioneer Muslims to al-Kūfah, where he and his descendants lived. Ishāq ibn al-Ṣabbāh, al-Kindi's father, was Governor of al-Kūfah during the reign of the 'Abbāsīd Caliphs al-Mahdi and al-Rashīd. Most probably al-Kindi was born in the year 185/801,¹ a decade before the death of al-Rashīd.

Al-Kūfah and al-Baṣrah, in the second/eighth and third/ninth centuries, were the two rivalling centres of Islamic culture. Al-Kūfah was more inclined to rational studies; and in this intellectual atmosphere, al-Kindi passed his early boyhood. He learnt the Qur'ān by heart, the Arabic grammar, literature, and elementary arithmetic, all of which formed the curriculum for all Muslim children. He, then, studied *Fiqh* and the new-born discipline called *Kalām*. But it seems that he was more interested in sciences and philosophy, to which he consecrated the rest of his life, especially after he went to Baghdād. A complete knowledge of Greek science and philosophy required proficiency in Greek and Syriac languages into which latter many Greek works had already been translated. It seems that al-Kindi learnt Greek, but

¹ Muṣṭafa 'Abd al-Rāziq, following de Boer, gives this date. On the biography of al-Kindi the best article is that of Muṣṭafa 'Abd al-Rāziq in *Faṭāwā al-'Arab w-al-Mu'allim al-Thāni*, Cairo, 1945, pp. 7–50. See also Ahmed Fouad El-Ehwany's "Introduction" to the edition of al-Kindi's treatise on "First Philosophy," Cairo, 1948, pp. 3–49, and abu Rīdah's "Introduction" to *Rasā'il al-Kindi*, Cairo, 1950, pp. 1–80.

certainly he mastered the Syriac language from which he translated several works. He also revised some of the Arabic translations, such as al-Ḥimṣī's translation of Plotinus' *Enneads*, which passed to the Arabs as one of the writings of Aristotle. Al-Qiṭṭī, the biographer, says that "al-Kindi translated many philosophical books, clarified their difficulties, and summarized their deep theories."²

In Baghdād he was connected with al-Ma'mūn, al-Mu'taṣim, and the latter's son Aḥmad. He was nominated tutor of Aḥmad ibn al-Mu'taṣim, to whom he dedicated some of his important writings. Ibn Nabatah says: "Al-Kindi and his writings embellished the empire of al-Mu'taṣim."³ He flourished also under the reign of al-Mutawakkil (r. 232-247/847-861). A story related by ibn abi Uṣaibi'ah indicates the great fame of al-Kindi at that time, his advanced knowledge, and his famous private library. This is the full account: "Muḥammad and Aḥmad, the sons of Mūsa ibn Shākir, who lived during the reign of al-Mutawakkil, were conspiring against everyone who was advanced in knowledge. They sent a certain Sanad ibn 'Alī to Baghdād so that he might get al-Kindi away from al-Mutawakkil. Their conspiracies succeeded to the point that al-Mutawakkil ordered al-Kindi to be beaten. His whole library was confiscated and put in a separate place, labelled as the 'Kindian Library.'"⁴

Al-Kindi's notoriety for avarice was equal to his fame for knowledge. This bad repute was due to al-Jāhīz's caricature of him in his *Kitāb al-Bukhālā'*. However, al-Kindi lived a luxurious life in a house, in the garden of which he bred many curious animals. It seems that he lived aloof from society, even from his neighbours. An interesting story related by al-Qiṭṭī shows that al-Kindi lived in the neighbourhood of a wealthy merchant, who never knew that al-Kindi was an excellent physician. Once the merchant's son was attacked by sudden paralysis and no physician in Baghdād was able to cure him. Someone told the merchant that he lived in the neighbourhood of the most brilliant philosopher, who was very clever in curing that particular illness. Al-Kindi cured the paralyzed boy by music.

B

WORKS

Most of his numerous works (numbering about 270) are lost. Ibn al-Nadīm and following him al-Qiṭṭī classified his writings, most of which are short treatises, into seventeen groups: (1) philosophical, (2) logical, (3) arithmetical, (4) globular, (5) musical, (6) astronomical, (7) geometrical, (8) spherical, (9) medical, (10) astrological, (11) dialectical, (12) psychological, (13) political, (14) causal (meteorological), (15) dimensional, (16) on first things, (17) on the species of some metals, chemicals, etc.

² Al-Qiṭṭī, *Tārīkh al-Hukamā'*, Cairo ed., p. 241.

³ Ibn Nabatah, *Sharḥ Risālah Ibn Zaidūn*, Cairo, p. 113.

⁴ Ibn abi Uṣaibi'ah, *Ṭabaqāt al-Atibbā'*, Cairo, Vol. I, p. 207.

This account shows to what extent al-Kindi's knowledge was encyclopedic. Some of his scientific works were translated by Gerard of Cremona into Latin and influenced very much the thought of medieval Europe. Cardano considered him to be one of the twelve greatest minds.

Scholars studied al-Kindi, until his Arabic treatises were discovered and edited, merely on the basis of the extant Latin translations. His *De Medicinarum Compositarum Gradibus* was published in 938/1531. Albino Nagy⁵ in 1315/1897 edited the medieval translations of these treatises: *De intellectu*; *De Somno et uisione*; *De quinque essentiis*; *Liber introductorius in artem logicae demonstrationis*.

Since the discovery of some of his Arabic manuscripts, a new light has been thrown on al-Kindi's philosophy. A compendium containing about 25 treatises was found by Ritter in Istanbul. Now they have all been edited by different scholars, Walzer, Rosenthal, abu Ridah, and Ahmed Fouad El-Ehwany.⁶ There are other short treatises discovered in Aleppo, but they have not yet been edited. It has become possible, to a certain extent, to analyse al-Kindi's philosophy on more or less sure grounds.

C

PHILOSOPHY

It was due to al-Kindi that philosophy came to be acknowledged as a part of Islamic culture. The early Arab historians called him "the Philosopher of the Arabs" for this reason. It is true that he borrowed his ideas from Neo-Platonic Aristotelianism, but it is also true that he put those ideas in a new context. By conciliating Hellenistic heritage with Islam he laid the foundations of a new philosophy. Indeed, this conciliation remained for a long time the chief feature of this philosophy. Furthermore, al-Kindi, specializing in all the sciences known at his time—of which his writings give sufficient evidence—made philosophy a comprehensive study embracing all sciences. Al-Fārābi, ibn Sina, and ibn Rushd were first scientists and then philosophers. For this reason ibn al-Nadīm placed al-Kindi in the class of natural philosophers. This is his full account: "Al-Kindi is the best man of his time, unique in his knowledge of all the ancient sciences. He is called the Philosopher of the Arabs. His books deal with different sciences, such as logic, philosophy, geometry, arithmetic,

⁵ Albino Nagy, *Die philosophischen Abhandlungen des al-Kindi*, 1897.

⁶ Ahmed Fouad El-Ehwany edited his important and long treatise on "First Philosophy" in 1948; his *De Intellectu* with *Kitāb al-Nafs* of ibn Rushd in 1950; his treatise "On the Soul" in *al-Kitāb*, 1949.

Abu Ridah edited all the treatises in two volumes in Cairo, the first in 1950, the second in 1953. M. Guidi and R. Walzer edited in 1940 his treatise "On the Number of Aristotle's Books," and translated it into the Italian, in *Reale Accademia Nazionale dei Lincei*, ser. VI, Vol. VI, fasc. 5. Rosenthal in 1956 edited in the *Journal of the American Oriental Society*, Vol. LXXVI, No. 1, pp. 27-31, his treatise "On Atmospheric Phenomena" (*Risālah fi Aḥdāth al-Jaww*).

astronomy etc. We have connected him with the natural philosophers because of his prominence in science."⁷

Philosophy is the knowledge of truth. Muslim philosophers, like the Greek, believed that truth is something over and above experience; that it lies immutable and eternal in a supernatural world. The definition of philosophy in al-Kindi's treatise on "First Philosophy" runs like this: "Philosophy is the knowledge of the reality of things within man's possibility, because the philosopher's end in his theoretical knowledge is to gain truth and in his practical knowledge to behave in accordance with truth." At the end of the treatise, God is qualified by the term "truth," which is the objective of philosophy. "The True One (*al-Wāḥid al-Ḥaq*) is, then, the First, the Creator, the Sustainer of all that He has created . . ." This view is borrowed from Aristotle's metaphysics, but the Unmovable Mover of Aristotle is substituted by the Creator. This difference constitutes the core of the Kindian system.

Philosophy is classified into two main divisions: theoretical studies, which are physics, mathematics, and metaphysics; and practical studies which are ethics, economics, and politics. A later writer, quoting al-Kindi, gives the classification as follows: "Theory and practice are the beginning of the virtues. Each one of the two is divided into the physical, mathematical, and theological parts. Practice is divided into the guidance of one's self, that of one's house, and that of one's city."⁸ Ibn Nabata, quoting also al-Kindi, mentions only the theoretical divisions. "The philosophical sciences are of three kinds: the first in teaching (*ta'lim*) is mathematics which is intermediate in nature; the second is physics, which is the last in nature; the third is theology which is the highest in nature."⁹ The priority of mathematics goes back to Aristotle, but the final sequence of the three sciences beginning with physics came from the later Peripatetics. Most probably al-Kindi was following Ptolemy, who gave a division of sciences in the beginning of *Almagest*.¹⁰ Mathematics was known to the Arabs from that time on as the "first study."

The definition of philosophy and its classification, as mentioned above, remained traditional in Muslim philosophy. As Muṣṭafa 'Abd al-Rāziq puts it: "This attitude in understanding the meaning of philosophy and its classification according to subject-matter directed Muslim philosophy from its very outset."¹¹

First philosophy or metaphysics is the knowledge of the First Cause, because all the rest of philosophy is included in this knowledge.¹² The method followed in the study of first philosophy is the logic of demonstration. From now on, logic will be the instrument of the philosophers in their quest for

⁷ Ibn al-Nadīm, *al-Fihrist*, Cairo, p. 255.

⁸ Rosenthal, *op. cit.*, p. 27.

⁹ Ibn Nabatah, *op. cit.*, p. 125.

¹⁰ A full discussion of this question is found in the article of Rosenthal referred to above.

¹¹ Muṣṭafa 'Abd al-Rāziq, *op. cit.*, p. 47.

¹² El-Ehwany, Ed., "First Philosophy," Cairo, 1948, p. 79

truth. Al-Kindi's value as a philosopher was debated in ancient times because of the lack of logical theory in his system. Ṣā'id al-Andalusi says: "Al-Kindi wrote on logic many books which never became popular, and which people never read or used in the sciences, because these books missed the art of analysis which is the only way to distinguish between right and wrong in every study. By the art of synthesis, which is what Ya'qūb meant by his writings, no one can profit, unless he has sure premises from which he can make the synthesis." It is difficult for us to give an exact idea concerning this charge until his logical treatises are discovered. But the fact that al-Fārābi was called the "Second Master" because of his introducing logic as the method of thinking in Islamic philosophy¹³ seems to corroborate the judgment of Ṣā'id just mentioned.

D

HARMONY BETWEEN PHILOSOPHY AND RELIGION

Al-Kindi directed Muslim philosophy towards an accord between philosophy and religion.¹⁴ Philosophy depends on reason, and religion relies on revelation. Logic is the method of philosophy; faith, which is belief in the realities mentioned in the Qur'ān as revealed by God to His Prophet, is the way of religion. From the very outset, men of religion mistrusted philosophy and the philosophers. Philosophers were attacked for being heretics. Al-Kindi was obliged to defend himself against the accusation of religious spokesmen that "the acquisition of the knowledge of the reality of things is atheism (*kufr*)."¹⁵ In his turn, al-Kindi accused those religious spokesmen for being irreligious and traders with religion. "They disputed with good men in defence of the untrue position which they had founded and occupied without any merit only to gain power and to trade with religion."¹⁶

The accord between philosophy and religion is laid down on the basis of three arguments: (1) that theology is part of philosophy; (2) that the prophet's revelation and philosophical truth are in accord with each other, and (3) that the pursuit of theology is logically ordained.

Philosophy is the knowledge of the reality of things, and this knowledge comprises theology (*al-rubūbiyyah*), the science of monotheism, ethics, and all useful sciences.

Furthermore, the prophets have ordained the pursuit of truth and practice of virtue. "The totality of every useful science and the way to attain it, the getting away from anything harmful and taking care against it—the acquisition of all this is what the true prophets have proclaimed in the name of God . . .

¹³ El-Ehwany, *Islamic Philosophy*, Cairo, 1957, pp. 35–36.

¹⁴ Muṣṭafa 'Abd al-Rāziq, *op. cit.*, p. 47.

¹⁵ "First Philosophy," p. 82.

¹⁶ *Ibid.*

The prophets have proclaimed the unique divinity of God, the practice of the virtues accepted by Him, and the avoidance of the vices which are contrary to virtues-in-themselves."

Again, the pursuit of philosophy is necessary for it "is either necessary or it is not necessary. If theologians (those who oppose its pursuit) say that it is necessary, they should study it; if they say that it is not necessary, they have to give the reason for this, and present a demonstration. Giving the reason and demonstration is part of the acquisition of the knowledge of reality. It is necessary then that they should have this knowledge and realize that they must obtain it."¹⁷

In his treatise on "The Number of the Works of Aristotle," al-Kindi makes a sharp distinction between religion and philosophy. The fact that he discussed this point in this particular treatise proves that he was comparing the religion of Islam with Aristotle's philosophy. The divine science, which he distinguished from philosophy, is Islam as revealed to the Prophet and recorded in the Qur'an. Contrary to his general view that theology is a part of philosophy, here we find (1) that theology occupies a rank higher than philosophy; (2) that religion is a divine science and philosophy is a human one; (3) that the way of religion is faith and that of philosophy is reason; (4) that the knowledge of the prophet is immediate and through inspiration and that of the philosopher is by way of logic and demonstration. We quote in full this interesting and very important passage:

"If, then, a person does not obtain the knowledge of quantity and quality, he will lack knowledge of the primary and secondary substances, so that one cannot expect him to have any knowledge of the human sciences which are acquired by man through research, effort, and industry. These sciences fall short in rank of the divine science (*al-'ilm al-ilāhi*)¹⁸ which is obtained without research, effort, and industry, and in no time. This latter knowledge is like the knowledge of the prophets, a knowledge bestowed by God; unlike mathematics and logic, it is received without research, effort, study, and industry, and requires no period of time. It is distinct in being obtained by the will of God, through the purification and illumination of souls, so that they turn towards truth, through God's support, assistance, inspiration, and His messages. This knowledge is not a prerogative of all men, but only of the prophets. This is one of their miraculous peculiarities, the distinctive sign which differentiates them from other human beings. Men who are not prophets have no way of attaining knowledge of the secondary substances or that of the primary sensible substances and their accidents without

¹⁷ *Ibid.*

¹⁸ In *Oriens*, Vol. X, No. 2, 1957, "New Studies on al-Kindi," Walzer translates this term by "divine knowledge." We guess what is meant in this context is the divine science as compared with human science. Guidi and Walzer edited this manuscript and translated it into Italian: *Il Numero dei Libri di Aristotele*. In the Italian translation the term is *scienza divina* which corresponds to divine science.

research and industry through logic and mathematics, and without any period of time.

"Hence, men of intelligence draw the evident conclusion that since this¹⁹ (knowledge) exists, it comes from God; whereas (ordinary) men are unable by their very nature to attain to a similar knowledge, because it is above and beyond their nature and the devices they use. Thus, they submit themselves in obedience and docility to it and faithfully believe in the truth of the message of the prophets."²⁰

The Muslims follow the Word of God stated in the Qur'an and are convinced by its sure arguments. Philosophers refer to logical demonstration, i. e., their reason. Philosophical arguments depend on the self-evident first principles of demonstration. In al-Kindi's view, the Qur'anic arguments, being divine, are more sure, certain, and convincing than the philosophical arguments which are human. The Qur'an gives solutions of some very important problems, such as the creation of the world from nothing, and resurrection. Al-Kindi holds that the Qur'anic arguments are "beliefs, clear and comprehensive." Thus, they lead to certainty and conviction. Hence, they are superior to the philosopher's arguments. An example of such sure arguments is to be found in the answer to the infidels who asked, "Who will be able to give life to bones when they have been reduced to dust?" The answer is: "He who produced them originally will give life to them."

Thus, al-Kindi opened the door for the philosophical interpretation of the Qur'an, and thereby brought about an accord between religion and philosophy. In his treatise "The Worship (*sujūd*) of the *Primum Mobile*," the verse: "Stars and trees are worshipping" is interpreted by reference to the different meanings of the word "*sajdah*." It means: (1) prostration in praying; (2) obedience; (3) change from imperfection to perfection; (4) following by will the order of a person. It is this last meaning that applies to the worship of the stars. The heavenly sphere is animated and is the cause of life in the world of generation and corruption. The movement of the *primum mobile* is called worship (*sujūd*) in the sense that it obeys God.

To sur. up, al-Kindi was the first philosopher in Islam to effect an accord between religion and philosophy. He paved the way for al-Fārābī, ibn Sīna, and ibn Rushd. Two quite different views are given by him. The first follows the way of the logicians and reduces religion to philosophy. The second, considering religion a divine science, raises it above philosophy. This divine science can be known by a prophetic faculty. However, through philosophic interpretation religion becomes conciliated with philosophy.

¹⁹ "This" either refers to the divine science, the divine knowledge of the prophet, or the prophetic faculty. Walzer in his translation of this passage gives the latter interpretation. Cf. *Oriens*, p. 206.

²⁰ M. Guidi and R. Walzer, *op. cit.*, p. 395. Except at some places, we follow in the main the translation given by Walzer in *Oriens*, p. 206.

E

GOD

An adequate and sure knowledge of God is the final objective of philosophy. Philosophy by its very name was a Greek study. For this reason, al-Kindi made a great effort to transmit Greek philosophy to the Arabs. As Rosenthal rightly puts it: "Al-Kindi himself states that he considered it his task to serve as an Arab transmitter and interpreter of the ancient heritage."²¹ In Theon's commentary on the *Almagest* of Ptolemy, we find God described as immutable, simple, of invisible nature, and the true cause of motion. Al-Kindi in his treatise *al-Šinā'at al-'Uzma*²² paraphrases the same idea. He says: "For God, great is His praise, is the reason and agent of this motion, being eternal (*qadīm*), He cannot be seen and does not move, but in fact causes motion without moving Himself. This is His description for those who understand Him in plain words: He is simple in that He cannot be dissolved into something simpler; and He is indivisible because He is not composed and composition has no hold on Him, but in fact He is separate from the visible bodies, since He . . . is the reason of the motion of the visible bodies."²³

Simplicity, indivisibility, invisibility, and causality of motion are the divine attributes stated by Theon. When al-Kindi mentions them he is simply a transmitter of the Hellenistic conception of God. The originality of al-Kindi lies in his conciliation of the Islamic concept of God with the philosophical ideas which were current in the later Neo-Platonism.

The basic Islamic notions concerning God are His unicity, His act of creation from nothing, and the dependence of all creatures on Him. These attributes are stated in the Qur'ān in a manner which is neither philosophical nor dialectical. Al-Kindi qualifies God in new terms. God is the true one. He is transcendent and can be qualified only by negative attributes. "He has no matter, no form, no quantity, no quality, no relation; nor is He qualified by any of the remaining categories (*al-māqūlāt*)."²⁴ He has no genus, no differentia,

²¹ Rosenthal, "Al-Kindi and Ptolemy," *Studi Orientalistici*, Vol. II, Roma, 1956, p. 455. The view that al-Kindi was not a true philosopher, but simply a translator, was held by some ancient writers. Madkour, in his book *La Place d'Al-Fārābī dans l'École Philosophique Musulmane*, considers him rather a mathematician. Abu Ridah, in his "Introduction" to *al-Rasā'il*, considers him to be a true philosopher in the full sense of the term. We rather adhere to Rosenthal's view. Cf. Ahmed Fouad El-Ehwany's "Introduction" to al-Kindi's "First Philosophy."

²² This treatise is not yet edited. Rosenthal, in the above article on "Al-Kindi and Ptolemy," gave some excerpts and analysed it.

²³ Rosenthal, "Al-Kindi and Ptolemy," *Studi Orientalistici*, p. 449. The author has compared Ptolemy's text with both Theon's commentary and al-Kindi's text.

²⁴ With abu Ridah we understand this term to be intelligibles or concepts (*al-māqūlāt*), but categories is more suitable in this context.

no species, no proprium, no accident. He is immutable. . . . He is, therefore, absolute oneness, nothing but oneness (*wahdah*). Everything else is multiple."²⁵

To understand the position of al-Kindi, we must refer to the Traditionalists and the Mu'tazilites. The Traditionalists—ibn Ḥanbal was one of their chief representatives—refused to interpret the attributes of God. They simply called them "the names of God." When, for example, ibn Ḥanbal was asked whether the Qur'ān, being the Word of God, is eternal (*qadīm*) or created (*makhluq*), he gave no answer. His only answer was that the Qur'ān is the Word (*kalām*) of God. The Traditionalists accepted the literal meaning of the Scripture, i. e. without any further interpretation.

The Mu'tazilites, such as were the contemporaries of al-Kindi, rationally interpreted the attributes of God to establish His absolute unicity. They solved the problem on the basis of the relation between the essence (*dhāt*) of God and His attributes (*ṣifāt*). The main attributes in their view amount to three: knowledge, power, and will. These they negate, for, if affirmed of God, they would entail plurality in His essence. The Mu'tazilites and the philosophers shared this denial of the divine attributes. Al-Ghazālī rightly says in the *Tahāfut al-Falāsifah* that "the philosophers agree exactly as do the Mu'tazilites that it is impossible to ascribe to the First Principle knowledge, power, and will."²⁶

Al-Kindi, the first philosopher in Islam, followed the Mu'tazilites in their denial of the attributes. But his approach to the solution of the problem is quite different. First, it is not the essence of God and His attributes with which he is concerned; it is rather the predicability of the categories—as we have seen above—to the substance of God. Secondly, all things can be defined, hence known, by giving their genera and differentiae, except God who has neither genus nor differentia. In other terms, al-Kindi follows in his quest the "way of the logicians."

The Kindian arguments for the existence of God depend on the belief in causality. Everything that comes to be must have a cause for its existence. The series of causes are finite, and consequently there is a prime cause, or the true cause, which is God. Causes, enumerated by Aristotle, are the material, the formal, the efficient, and the final. In al-Kindi's philosophy, as repeated in many of his treatises, God is the efficient cause.

There are two kinds of efficient causes; the first is the true efficient cause and its action is creation from nothing (*ibda'*). All the other efficient causes are intermediate, i. e., they are produced by other causes, and are themselves the causes of other effects. They are called so by analogy; in fact, they are not true causes at all. Only God is the true efficient cause. He acts and is never acted upon.

²⁵ "First Philosophy," p. 141; in abu Ridah's edition, p. 160. The term *wahdah* means either unity or oneness, but in this context it is oneness.

²⁶ Van den Bergh, *The Incoherence of the Incoherence*, London, 1954, Vol. I, p. 186.

Given that the world is created by the action of *ibda'* in no time, it must be in need of a creator, i.e., God. Nothing which is created is eternal; God alone is eternal. Beings come to be and pass away. This is clear in the case of corporeal sensibles which are in perpetual flux and change. Also the world as a whole, the celestial bodies, and the universals, such as genera and species, are not eternal, because they are finite and composed. Everything which is finite in space and time is not eternal. The notion of infinity occupies an important place in the philosophy of al-Kindi, and will be discussed later in detail.

Another proof for the existence of God is the order observed in all natural beings. The regularity inherent in the world, the hierarchical degrees of its parts, their interactions, the most perfect state in every being realizing its highest goodness—all this is a proof that there is a Perfect Being who manages everything according to the greatest wisdom.²⁷

Beings are in continuous need of God. This is so because God, the Creator *ex nihilo*, is the sustainer of all that He has created, so that if anything lacks His sustainment and power, it perishes.²⁸

F

INFINITY

The world in Aristotle's system is finite in space but infinite in time, because the movement of the world is co-eternal with the Unmovable Mover. Eternity of the world was refuted in Islamic thought, since Islam holds that the world is created. Muslim philosophers, facing this problem, tried to find a solution in accord with religion. Ibn Sina and ibn Rushd were accused of atheism because of their pro-Aristotelianism; they assumed that the world is eternal. In fact, this problem remained one of the important features of Islamic philosophy, and al-Ghazali mentioned it at the beginning of his twenty points against the philosophers in the *Tahāfut al-Falāsifah*.

Al-Kindi, contrary to his great successors, maintained that the world is not eternal. Of this problem he gave a radical solution by discussing the notion of infinity on mathematical grounds.

Physical bodies are composed of matter and form, and move in space and time. Matter, form, space, movement, and time are the five substances in every physical body. (*Res autem quae sunt in omnibus substantiis sunt quinque, quarum una est hyle, et secunda est forma, et tertia est locus, et quarta est motus, et quinta est tempus.*)²⁹ Being so connected with corporeal bodies, time

²⁷ Abu Rīdah, *Rasā'il*, "On the Efficient Cause of Generation and Corruption," p. 215.

²⁸ "First Philosophy," p. 143.

²⁹ *Liber de Quinque Essentiis*. This treatise was translated into Latin in the Medieval Ages.

and space are finite, given that corporeal bodies are finite; and these latter are finite because they cannot exist except within limits.

Time is not movement; it is the number which measures the motion (*Tempus ergo est numerus numerans motum*) for it is nothing other than the prior and posterior. Number is of two kinds: discrete and continuous. Time is not of the discrete kind but of the continuous kind. Hence, time is definable as the supposed instants which continue from the past to the future. In other words, time is the sum of anterior and posterior instants. It is the continuum of instants.

Time is part of the knowledge of quantity. Space, movement, and time are quantities. The knowledge of these three substances and also the other two is subordinate to the knowledge of quantity and quality. As mentioned above, he who lacks the knowledge of quantity and quality will lack knowledge of the primary and secondary substances. Quality is the capacity of being similar and dissimilar; quantity, of being equal and unequal. Hence, the three notions of equality, greater, and less are basic in demonstrating the concepts of finitude and infinity.

The arguments against infinity are repeated in a number of al-Kindi's treatises. We give from his treatise "On the Finitude of the Body of the World" the four theorems given as proofs for finitude: —

- (1) Two magnitudes³⁰ of the same kind are called equal if one is not greater than the other.³¹
- (2) If a magnitude of the same kind is added to one of the two magnitudes of the kind, they will be unequal.
- (3) Two magnitudes of the kind cannot be infinite, if one is less than the other, because the less measures the greater or a part of it.
- (4) The sum of two magnitudes of the kind, each of which is finite, is finite.

Given these axioms, every body, being composed of matter and form, limited in space, and moving in time, is finite, even if it is the body of the world. And, being finite it is not eternal. God alone is eternal.

³⁰ Magnitudes apply to lines, surfaces, or bodies. A magnitude of the same kind means one applying solely to one of the three kinds mentioned. Cf. abu Rīdah, *Rasā'il*, Vol. I, "Treatise on the Finitude of the Body of the World," p. 187.

³¹ We quote the example given by al-Kindi and the proof of this theorem as a specimen of his mathematical method.

"Example: Given A and B are magnitudes of the same kind, and the one is not greater than the other, we say that they are equal. Proof: If they are unequal, then one is greater than the other, say A is greater than B. But since A is not greater than B, as mentioned above, this leads to a contradiction. It follows that they are equal." *Ibid.*, p. 188.

SOUL AND INTELLECT

Al-Kindi was confused by the doctrines of Plato, Aristotle, and Plotinus concerning the soul, especially because he revised the parts translated from Plotinus' *Enneads*, a book which was wrongly ascribed to Aristotle. He borrowed from Plotinus the doctrine of the soul, and followed the model of Aristotle in his theory of the intellect. In a short treatise "On the Soul," he summarizes, as he says, the views of "Aristotle, Plato, and other philosophers." In fact, the idea expounded is borrowed from the *Enneads*.

The soul is a simple entity and its substance emanates from the Creator just as the rays emanate from the sun. It is spiritual and of divine substance and is separate and distinct from the body. When it is separated from the body, it obtains the knowledge of everything in the world and has vision of the supernatural. After its separation from the body, it goes to the world of the intellect, returns to the light of the Creator, and sees Him.

The soul never sleeps; only while the body is asleep, it does not use the senses. And, if purified, the soul can see wonderful dreams in sleep and can speak to the other souls which have been separated from their bodies. The same idea is expounded in al-Kindi's treatise: "On Sleep and Dreams," which was translated into Latin. To sleep is to give up the use of the senses. When the soul gives up the use of the senses and uses only reason, it dreams.

The three faculties of the soul are the rational, the irascible, and the appetitive. He who gets away from the pleasures of the body and lives most of his life in contemplation to attain to the reality of things, is the good man who is very similar to the Creator.

Another treatise on the intellect played an important role in medieval philosophy, both Eastern and Western. It was translated into Latin under the title *De Intellectu*. The purpose of this treatise is to clarify the different meanings of the intellect (*'aql*) and to show how knowledge is obtained.

Aristotle in his *De Anima* distinguished between two kinds of intellect, the possible and the agent. The possible intellect receives intellection and the agent intellect produces intelligible objects. The latter intellect is described by Aristotle as separate, unmixed, always in actuality, eternal, and uncorrupted.

Alexander of Aphrodisias in his *De Intellectu* holds that there are three kinds of intellect: the material, the habitual, and the agent, thus adding a new intellect which is the *intellectus habitus* or *adeptus*. The *intellectus materialis* is pure potentiality and is perishable. It is the capacity in man to receive the forms. The intellect *in habitu* is a possession, which means that the intellect has acquired knowledge and possessed it, i.e., has passed from potentiality into actuality. To bring a thing from potentiality to actuality needs something else to act as an agent. This is the third intellect, the agent intellect, also called the *intelligentia agens* and considered by some interpreters to be the divine intelligence which flows into our individual souls.

When we come to al-Kindi we find not three intellects but four. He divided the intellect *in habitu* into two intellects, one is the possession of knowledge without practising it and the other is the practising of knowledge. The first is similar to a writer who has learnt handwriting and is in possession of this art; the other is similar to the person who practises writing in actuality.

We quote the opening paragraph of his treatise:

"The opinion of Aristotle concerning the intellect is that it is of four kinds:

- (1) The first is the intellect which is always in act.
- (2) The second is the intellect which is potentially in the soul.
- (3) The third is the intellect which has passed in the soul from potentiality to actuality.
- (4) The fourth is the intellect which we call the second."³²

What he means by the "second" is the second degree of actuality as shown above in the distinction between mere possession of knowledge and practising it.

A complete theory of knowledge is expounded in the rest of the treatise. There are two kinds of forms, the material and the immaterial. The first is the sensuous, because the sensibles are composed of matter and form. When the soul acquires the material form, it becomes one with it, i.e., the material form and the soul become one and the same. Similarly, when the soul acquires the rational forms which are immaterial, they are united with the soul. In this way, the soul becomes actually rational. Before that it was rational in potentiality. What we call the intellect is nothing other than the genera and species of things.

This intellectual operation is again illustrated in al-Kindi's treatise on "First Philosophy." He says: "When the genera and species are united with the soul, they become intellectibles. The soul becomes actually rational after its unity with the species. Before this unity the soul was potentially rational. Now, everything which exists in potentiality does not pass to actuality save by something which brings it from potentiality to actuality. It is the genera and species of things, i.e., the universals which make the soul which is potentially rational to be actually rational, I mean, which get united with it."³³

Al-Kindi abruptly passes from the above epistemological discussion to an ontological one concerning the oneness of the universals and their origin. The universals are the intellect in so far as they are united with the soul. Thus the question arises whether the intellect is one or many. It is one in one respect and many in another. This is his full account: "And as universals are many, as shown above, so is the intellect. It seems to us that the intellect is the first plurality. But it is also one, because it is a whole, as shown above

³² El-Ehwany, *Islamic Philosophy*, Cairo, 1951, pp. 51-52.

³³ "First Philosophy," p. 134.

and oneness is applied to the whole. But the true oneness (*waḥdah*)³⁴ is not of the intellect."

Following the doctrine of Plotinus, al-Kindi passed on to the metaphysical plane of the One. As mentioned above, he confused Aristotle's metaphysics of Being with that of Plotinus. For this reason he was unable to elaborate a coherent system of his own. This was what al-Fārābī, the Second Master, was able to do.

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³⁴ The term *waḥdah* means here oneness, not unity. At the beginning of this same paragraph he speaks about "the true one," and says it is not soul.

Chapter XXII

MUḤAMMAD IBN ZAKARIYA AL-RĀZI

A

LIFE

According to al-Bīrūnī,¹ abu Bakr Muḥammad ibn Zakariya ibn Yahya al-Rāzi was born in Rayy on the first of Sha'bān in the year 251/865. In his early life, he was a jeweller (Baihaqi), money-changer (ibn abi Uṣaibi'ah), or more likely a lute-player (ibn Juljul, Sa'id, ibn Kḥallikān, Uṣaibi'ah,

¹ *Épître de Beruni, contenant le repertoire des ouvrages de Muḥammad ibn Zakariya ar-Rāzi*, publiée par Paul Kraus, Paris, 1936, p. 4.

al-Ṣafadi) who first left music for alchemy, and then at the age of thirty or (as Ṣafadi says) after forty left alchemy because his experiments in it gave him some eye disease (al-Bīrūnī), which obliged him to search for doctors and medicine. That was the reason, they (al-Bīrūnī, Baihaqi and others) say, he studied medicine. He was very studious and worked day and night. His master was 'Ali ibn Rabbān al-Ṭabari (al-Qiftī, Uṣaibi'ah), a doctor and philosopher, who was born in Merv about 192/808, and died some years after 240/855.² With ibn Rabbān al-Ṭabari he studied medicine and perhaps also philosophy. It is possible to trace back al-Rāzi's interest in religious philosophy to his master, whose father was a rabbinist versed in the Scriptures.

Al-Rāzi became famous in his native city as a doctor. Therefore, he directed the hospital of Rayy (ibn Juljul, al-Qiftī, ibn abi Uṣaibi'ah), in the times of Manṣūr ibn Ishāq ibn Aḥmad ibn Asad who was the Governor of Rayy from 290-296/902-908 in the name of his cousin Aḥmad ibn Ismā'il ibn Aḥmad, second Sāmānian ruler.³ It is to this Manṣūr ibn Ishāq ibn Aḥmad that Rāzi dedicated his *al-Ṭibb al-Manṣūri*, as it is attested by a manuscript⁴ of this book, as against ibn al-Nadīm's assumption,⁵ repeated by al-Qiftī⁶ and ibn abi Uṣaibi'ah,⁷ that this Manṣūr was Manṣūr ibn Ismā'il who died in 365/975.

From Rayy al-Rāzi went to Baghdād during the Caliph Muktafi's time⁸ (r. 289/901-295/907) and there too directed a hospital.

It seems that after al-Muktafi's death (295/907) al-Rāzi came back to Rayy. Here gathered round him many students. As ibn al-Nadīm relates in *Fihrist*,⁹ al-Rāzi was then a *Shaiḫ* "with a big head similar to a sack"; he used to be surrounded by circle after circle of students. If someone came to ask something in science, the question was put to those of the first circle; if they did not know the answer, it passed on to those of the second, and so on till it came to al-Rāzi himself if all others failed to give the answer. Of these students we know at least the name of one, i. e., abu Bakr ibn Qārin al-Rāzi who became a doctor.¹⁰ Al-Rāzi was generous, humane towards his patients,

² See on him: *Fihrist*, p. 296; al-Baihaqi, p. 22; Uṣaibi'ah, Vol. I, p. 309; Meyerhof, *ZDMG*, 85, 38 *et seq.*; Wüstenfeld, p. 55; Leclerc, Vol. I, p. 292; Brockelmann, *GAL*, Vol. I, p. 265, *Suppl.*, Vol. I, pp. 414-15; Brockelmann (*Suppl.*, Vol. I, p. 415) refutes the contention that al-Rāzi was ibn Rabbān's pupil, on the ground that the latter was in Rayy in 224/838. But this proof is not sufficient, because ibn Rabbān's life is not well known as to enable one to assert that he did not go to Rayy much later, say between 265/878 and 270/883, especially when we know nothing about his later life till his death.

³ Yāqūt, *Buldān*, Vol. II, p. 901.

⁴ In Dār al-Kutub al-Miṣriyyah in Cairo, Taimūr 129, medicine.

⁵ *Fihrist*, pp. 299-300.

⁶ Al-Qiftī, p. 272.

⁷ Ibn abi Uṣaibi'ah, Vol. I, p. 310.

⁸ Ibn Juljul, p. 78.

⁹ P. 299, Flügel; pp. 314-416, Cairo ed.

¹⁰ Ibn abi Uṣaibi'ah, Vol. I, p. 312.