on the one hand al-Aṣmaʿī, Abū ʿUbayda and some others who initiated the first work of methodical arrangement, and on the other hand al-Sukkarī [*q.v.*] who completed the process. It is for this reason that the *Fihrist* (i, 157-8) lists some thirty ancient poets whose *dīwān* was collected and commented on by Ibn al-Sikkīt, with a care which in general compels the respect of critics. Only a few of his works have survived: those on al-Khansāʾ (see Cheikho's ed. of the *dīwān* of this poetess, Beirut 1896); on ʿUrwa b. al-Ward (see Nöldeke, *Die Gedichte des ʿUrwa ibn Alward*, Göttingen 1883); on Ḳays b. al-Khaṭīm (ed. Th. Kowalski, Leipzig 1914); and on al-Ḥuṭayʾa (ed. N. A. Ṭāhā and M. Ḥalabī, Cairo 1958).

Bibliography: *Fihrist*, i, 72, 157-8 (Cairo ed. 107, 224-5); al-Anbārī, *Nuzha*, ed. A. Amer, 109-11; Zubaydī, *Ṭabaḳāt*, in *RSO*, viii; Ibn Khayr al-Iṣhbilī, *Fahrasa*, 382; Yāḳūt, *Udabāʾ*, xx, 50-2; Ibn Khallikān, Cairo 1310, ii, 309; Suyūṭī, *Bughya*, 418; Flügel, *Die grammatischen Schulen der Araber*, Leipzig 1862, 159; M. Ben Cheneb, *Etude sur la fahrasa . . .*, 433, § 237; R. Blachère, *HLA*, i, 113; M. Makhzūmī, *Madrasat al-Kūfa*, Baghdād 1374/1955, 155; S. A. Ahmedali, *Ibn as-Sikkīt*, Lahore n.d.; idem, in *ZDMG*, xc (1936), 201-8; R. Sellheim, *Die klassisch-arabischen Sprichwörtersammlungen*, The Hague 1954, 112 and index; H. Fleisch, *Traité de philologie arabe*, i, Beirut 1961, index; Brockelmann, I², 121, S I, 180.

(ED.)

IBN SĪNĀ, ABŪ ʿALĪ AL-ḤUSAYN B. ʿABD ALLĀH B. SĪNĀ, known in the West as AVICENNA. He followed the encyclopaedic conception of the sciences that had been traditional since the time of the Greek Sages in uniting philosophy with the study of nature and in seeing the perfection of man as lying in both knowledge and action. He was also as illustrious a physician as he was a philosopher [see ḤIKMA].

Life. His life is known to us from authoritative sources. An autobiography covers his first thirty years, and the rest are documented by his disciple al-Djuzadjānī, who was also his secretary and his friend.

He was born in 370/980 in Afshana, his mother's home, near Bukhārā. His native language was Persian. His father, an official of the Sāmānid administration, had him very carefully educated at Bukhārā. His father and his brother were influenced by Ismāʿīlī propaganda; he was certainly acquainted with its tenets, but refused to adopt them. His intellectual independence was served by an extraordinary intelligence and memory, which allowed him to overtake his teachers at the age of fourteen.

It was he, we are told, who explained logic to his master al-Nātilī. He had no teacher in the natural sciences or in medicine; in fact, famous physicians were working under his direction when he was only sixteen. He did, however, find difficulty in understanding Aristotle's *Metaphysics*, which he grasped only with the help of al-Fārābī's commentary. Having cured the *amīr* of Khurāsān of a severe illness, he was allowed to make use of the splendid library of the Sāmānid princes. At the age of eighteen he had mastered all the then known sciences. His subsequent progress was due only to his personal judgment.

His training through contact with life was at least equal to his development in intellectual speculation. At the age of twenty-one he wrote his first philosophical book. The following year, however, the death of his father forced him to enter the administration in order to earn his living. His judgment was swiftly appreciated. Having consulted him on medical matters, the princes had recourse to him also in matters of politics. He was a minister several times, his advice being always listened to; but he became an object of envy, sometimes persecuted by his enemies and sometimes coveted by princes opposing those to whom he wished to remain loyal. He took flight and was obliged to hide on several occasions, earning his living by medical consultations. He was imprisoned, escaped, lived for fourteen years in relative peace at the court of Iṣfahān and died at Hamadān, during an expedition of the prince ʿAlāʾ al-Dawla, in 428/1037. He was buried there; and a monument was erected to him to celebrate the (*hidjrī*) millenary of his birth.

If his works are to be understood, they should not be thought of as those of a philosopher who lived in his books. He was occupied all day by affairs of state, and he laboured by night on his great works, which were written with astonishing rapidity. He was never safe, and was frequently compelled to move; he would write on horseback, and sometimes in prison, his only resource for reference being his memory. It has been found surprising that he differs from Aristotle in his works: but he quoted him without re-reading him, and, above all, his independence of mind inclined him to present his own personally worked out thought, rather than to repeat the works of another. Besides, his personal training was different. He was a man who lived in touch with the concrete, constantly faced with difficulties, and a great physician who dealt with specific cases. Aristotle's *Logic* seemed to him insufficient, because it could not be applied in a way that was sufficiently close to life. Many recent controversies have been aroused since the study of his works has increased, especially at the time of his millenary, but the most plausible view of his personality is still the following: he is a scientific man, who attempts to bring the Greek theories to the level of that which needs to be expressed by the study of the concrete, when apprehended by a great mind.

The secret of his evolution, however, will remain concealed from us as long as we do not possess such important works as the *Kitāb al-Inṣāf*, the "Book of Impartial Judgment", which investigated 28,000 questions, and his "Eastern Philosophy", of which we have only a fragment.

Works. The corpus of Ibn Sīnā's works that has come down to us is considerable, but incomplete. To the many questions that were put to him he replied hastily, without always taking care to keep his texts. Al-Djuzadjānī has preserved several of these; others have been transmitted with different titles, others lost. The manuscript of the *Inṣāf* disappeared at the sack of Iṣfahān, in his own lifetime. The fundamental bibliography is that which al-Djuzadjānī included in his biography, but it is not exhaustive. G. C. Anawati lists a total of 276 works, including texts noted as doubtful and some apocryphal works, in his bibliography of 1950. Mahdavi, in 1954, lists 131 authentic, and 110 doubtful works. Ibn Sīnā was known primarily as a philosopher and a physician, but he contributed also to the advancement of all the sciences that were accessible in his day: natural history, physics, chemistry, astronomy, mathematics, music. Economics and politics benefited from his experience as a statesman. Moral and religious questions (not necessarily pertaining to mysticism), Ḳurʾānic exegesis, statements on Ṣūfī doctrine and behaviour produced minor writings. He wrote poetry for instructional purposes, for he versified epitomes of logic and medicine, but he had also the abilities

of a true poet, clothing his philosophical doctrine in images, both in verse (as in his poem on the soul) and in prose, in symbolic narratives whose meaning has given rise to controversy [see ḤAYY B. YAḲẒĀN].

Medicine is the subject of separate works; but natural history and mathematics are thought of as parts of philosophy. Thus, his principal treatise on these sciences is included in the great *Kitāb al-Shifāʾ*, "Book of Healing [of the Soul]", in the same way as that on Metaphysics, while the famous *Ḳānūn fi 'l-ṭibb*, "Canon of Medicine", is a separate work.

The *Ḳānūn* appears to have formed a more consciously coherent whole than the philosophical works. Because it constituted a monumental unity, which maintained its authority until modern times when experimental science began, and because it still remained more accessible than Hippocrates and Galen, it served as a basis for seven centuries of medical teaching and practice. Even today it is still possible to derive useful information from it, for Dr. ʿAbd Allāh Ahmadieh, a clinician of Tehran, has studied the therapeutics of Avicenna and is said to use them with good results, particularly in treating rheumatism.

The *Ḳānūn* is the clear and ordered "Summa" of all the medical knowledge of Ibn Sīnā's time, augmented from his own observations. It is divided into five books. The first contains generalities concerning the human body, sickness, health and general treatment and therapeutics (French translation of the treatise on Anatomy by P. de Koning, 1905; adaptation giving an incomplete résumé of the first book, in English, by Cameron Grüner, 1930). The second contains the Materia Medica and the Pharmacology of herbs; the page on experimentation in medicine (115, of the Rome 1593 edition) quoted in the Introduction to the French translation of the *Ishārāt*, 58, is to be found there. This passage sets out the three methods—agreement, difference and concomitant variations—that are usually regarded as characteristic of modern science. The third book deals with special pathology, studied by organs, or rather by systems (German translation of the treatise on diseases of the eyes, by Hirschberg and Lippert, 1902). The fourth book opens with the famous treatise on fevers; then follow the treatise on signs, symptoms, diagnostics and prognostics, minor surgery, tumours, wounds, fractures and bites, and that on poisons. The fifth book contains the pharmacopoeia.

Several treatises take up in isolation a number of the data in the *Ḳānūn* and deal with particular points. Some are very well-known: their smaller size assured them of a wide circulation. Among the most widely diffused are treatises on the pulse, the medical pharmacopoeia, advice for the conservation of health and the study of diarrhoea; in addition, monographs on various remedies, chicory, oxymel, balsam, bleeding. The virtues of wine are not neglected.

Physicians were offered a mnemonic in the form of a poem which established the essentials of Avicenna's theory and practice: principles, observations, advice on therapeutics and dietetics, simple surgical techniques. This is the famous *Urdjūza fi 'l-ṭibb*, which was translated into Latin several times from the 13th to the 17th century, under the title *Cantica Avicennae* (ed. with French trans. by H. Jahier and A. Noureddine, Paris 1956, *Poème de la Médecine*, together with Armengaud de Blaise's Latin translation).

Ibn Sīnā's philosophical works have come down to us in a mutilated condition. The important *Kitāb al-Shifāʾ* is complete (critical text in process of publication, Cairo 1952-). Extracts chosen by the author himself as being the most characteristic make up the *Kitāb al-Nadjāt*, "The Book of Salvation [from Error]", which is not an independent redaction, as was thought until 1937 (table of concordances established by A.-M. Goichon in *La distinction de l'essence et de l'existence d'après Ibn Sīnā*, 499-503). The *Kitāb al-Ishārāt wa 'l-tanbīhāt*, "Book of directives and remarks", is complete (trans. into Persian and French), as is the *Dānishnāma-i ʿAlāʾi*, "The Book of Knowledge for ʿAlāʾ", a résumé of his doctrine written at the request of the prince ʿAlāʾ al-Dawla. We have only fragments of the *Kitāb al-Inṣāf*, "Book of Impartial Judgment between the Easterners and the Westerners", which have been published by A. Badawī, and a small part of the *Manṭiḳ al-mashriḳiyyīn*, "Logic of the Easterners", which is the logic of his "Eastern Philosophy", the rest of it being lost. A fairly large number of minor writings are preserved; they illuminate points of detail which are often important, but are far from completing the lacunas.

Ibn Sīnā's was too penetrating a mind, and one too concerned with the absolute, not to venture outside the individual sciences. He looked for the principle and the guarantee of these, and this led him to set above them, on the one hand, the science of being, Metaphysics, and, on the other, the universal tool of truth, Logic, or "the instrumental science", as the *falāsifa* termed it.

As far as one can tell in the absence of several of his fundamental works, he seems to have been an innovator particularly in logic, correcting the excess of abstraction which does not permit Aristotle to take sufficient account of change, which is present everywhere and at all times in the terrestrial world; and, thus, of the difference between strict (*muṭlaḳ*) meaning, and concrete meaning, specified by the particular "conditions" in which a thing is actualized. As a physician, he enters into logic when he admits a sign as the middle term of a syllogism. He gives it the force of a proof, as the latter is recognized in a symptom in medical diagnosis (see Introduction to the French trans. of the *Ishārāt*).

In Metaphysics the doctrine of Ibn Sīnā is most individual, and is also illuminated by his personal antecedents. On the other hand, his thought was fashioned by three teachers, of whom, however, he knew only two by name: Aristotle and al-Fārābī, who introduced several of the great concepts subsequently developed by Ibn Sīnā. The third was Plotinus, who came down to him under the name of Aristotle, in the so-called "Theology of Aristotle" [see ARISṬŪṬĀLĪs], which was composed of extracts from Plotinus's *Enneads*, and presented as the culmination of Aristotle's *Metaphysics*. This error of attribution dogs the whole of Avicenna's work. As a born metaphysician he earned the title of "Philosopher of being" but as a realist he wished to understand essences in their actualized state, so that he is just as much the "Philosopher of essence". The whole of his metaphysics is ordered round the double problem of the origin of being and its transmission to essence, but to individually actualized essence (cf. Goichon, *La distinction de l'essence et de l'existence d'après Ibn Sīnā*, Paris 1937).

It is at this point that a free interpretation of Aristotle and Plotinus gives him his theory of the creation of forms by emanation. This is linked with a cosmogony taken from the apocryphal *Theology*, but is also inspired by hylemorphism and Aristotelian data on the soul. The extensive place occupied in his thought by the intelligence prompts him to this startling view: the gift of being is linked with the

light of the intelligence. Moreover, Ibn Sīnā is a believer; in accordance with Islam he believes in God as the Creator. None of the philosophies handed down from pagan antiquity takes account of this. He attempts to integrate dogma with his philosophical formulation. In fact, he does not succeed very well, but he continually works in this direction.

The first certitude apprehended by the human mind, he says, is that of being, which is apprehended by means of sense-perceptions. The idea of being, however, is so deep-rooted in man that it could be perceived outside of the sensible. This prefiguration of the Cartesian "Cogito ergo sum" appears to have two causes: intuition (*ḥads*) is so powerful in Ibn Sīnā (see in the Physics of the *Dānišnāma* the part that it played for him) that he bases himself here on a metaphysical apprehension of being; in addition, since the human soul, according to him, is a separate intelligence, which leads its own spiritual existence while being united with the body, it is capable of apprehending itself directly.

The second certitude is that the being thus apprehended in man, and in every existing thing, is not present there of necessity. The essence of "man", "horse" or "stone" does not imply the necessity of the existence of a particular man or horse. Existence is given to actualized, concrete beings by a Being that differs from all of them: it is not one of the essences that have no existence in themselves, but its essence is its very being. The Creator is the First Cause; as a consequence of this theory the proof of the existence of God is restricted to Metaphysics, and not to Physics, as happens when God is proved to be the prime mover.

A Western controversy enters here: did Avicenna really believe in the analogy of being? It is true that he does not place the uncreated Being in the genus Substance or in a genus Being; but if he proceeds from knowledge of created beings to that of the uncreated Being, is not this a proof that he considers their natures to be allied? He certainly apprehends an analogy between the being of substance and that of accident, as he states explicitly, but did he go further? (see M. Cruz Hernandez, *passim*).

Ibn Sīnā did not formulate the distinction between the uncreated Being and created beings as clearly as did Thomas Aquinas, but the latter does base himself on Ibn Sīnā's doctrine; only being is in God, God is in no genus and being is not a genus. He then sets out his thought precisely (cf. Vasteenkiste, *Avicenna-Citaten bij S. Thomas*, in *Tijdschrift voor Philosophie*, September 1953, citations nos. 12, 13, 14, 15, 20, 148, 330, pp. 460-1, 473 and 491).

With the principles established, two reasons for the omission of the conclusion are plausible, but neither involves the distinction not being made. Either, having set it out and admitted it, he withdrew it with difficulty because of the confusion between the data of Aristotle and Plotinus, or, as G. M. Wickens (*Avicenna, scientist and philosopher*, 52) suggests, he does not speak of it as a discovery because the celebrated distinction was then generally admitted—as Abū Ḥayyān al-Tawḥīdī says. But Ibn Sīnā maintains that God, as he conceives Him, is "the first with respect to the being of the Universe, anterior to that being, and also, consequently, outside it" (E. Gilson, *L'esprit de la philosophie médiévale*[2], 80-1).

However, this apparent impetus of Ibn Sīnā is interrupted by the data of Plotinus, for they inspire the emanatist theory of creation. The Ḳur'ān, like the Old and New Testaments, explains creation by a free act of will on the part of God. For Ibn Sīnā, by way of Plotinus, the necessary Being is such in all its modes—and thus as creator—and being overflows from it. (Here the reader will ask himself the question: "Is it an analogous being? is it not rather the same being?") Moreover, this emanation does not occur freely, and creation involves intermediaries, which are also creators. From the One can come only one. The necessary Being thus produces a single Intelligence. This, having a cause, necessarily possesses a duality of being and knowledge. It introduces multiplicity into the world; from it can derive another Intelligence, a celestial Soul and a celestial body. Ptolemy's system becomes the framework of creative emanation; emanation descends from sphere to sphere as far as a tenth pure Intelligence, which governs, not a sphere, but our terrestrial world, which is made, unlike the others, of corruptible matter. This brings with it a multiplicity which surpasses human knowledge but is perfectly possessed and dominated by the active Intellect, the tenth Intelligence. Its role is demonstrated in a poetic and symbolic form in the "Tale of Ḥayy b. Yaḳẓān", a name that refers to the active Intellect itself.

The philosophical origin of this active Intellect is the passage in the *De Anima* in which Aristotle refers by this name to the active part of the human soul. Ibn Sīnā irremediably mutilates the latter by taking away from it this active part, and with it its most noble action and its highest intellectual function: abstraction of intelligibles. This active Intellect, which, according to Aristotle, produces all intelligibles, is now a separate Intelligence. Thus the human soul receives them passively, and so cannot think except by leave of the Intellect; comprehension, knowledge and the sciences are now no longer its affair. It can elaborate only that which is given to it by the active Intellect. The latter produces not only these intelligibles but also all the substantial forms that are created in accordance with the models that it has conceived in conformity with the potentialities of matter. It is in this way, Ibn Sīnā replies to Plato's anxious question (*Parmenides*, 131 a-b), that the concrete being can share in the Idea. The active Intellect has an ability which Plato sought for in vain: it apprehends the two series of relative perceptions, both the forms with their mutual relationships and the concrete beings with their mutual relationships; in addition, it apprehends their common repository, which is its own essence (cf. Goichon, *La théorie des formes chez Avicenne*, in *Atti XII congr. intern. de filosofia*, ix, at 137-8). A reply is also given to the question of Aristotle as to the provenance of form and the contribution of the Ideas to sensible beings (*Metaph.*, Z 8 and M 5).

The human soul by itself can attain only the first three degrees of abstraction: sensation, imagination and the action of estimation that extracts individual non-sensible ideas. It then apprehends the intelligible that is given to it from outside. Intuition is due to its joining with the active Intellect.

Being and intelligence overflow like a river from the necessary Being and descend to the extreme limits of the created. There is an equally full re-ascent, produced by creatures' love and desire for their creators, as far as the supreme Principle, which corresponds to the abundance of this gift. This beautiful concept, which could derive only from a soul inclined towards religion, has been thought of as mystical. The *Risāla fī 'l-ʿišḳ*, "The Epistle on Love", however, is primarily a metaphysical explanation of the tendency of every being towards its

good, and a physical explanation of the motion of the stars; they imitate in their fashion, which is material, the unceasing action of the pure Act. The spheres, in fact, thus imitate the unceasing desire of the celestial Souls which correspond to each one of them. The rational soul of man tends towards its good with a conscious motion of apprehension of, and love for, the active Intellect, and, through it, for the necessary Being, which is pure Good. In the highest states, however, it can tend directly towards the latter.

Ibn Sīnā believed firmly in the immortality of the soul. Corruption cannot touch it, for it is immaterial. The proof of this immateriality lies in its capability of apprehending the intelligibles, which are in no way material. He is much more hesitant on the question of the resurrection of the body, which he at first admits in the *Shifā'* and the *Nadjāt*, and then denies in the epistle *Aḍḥawiyya*, after indicating in the "Tale of Ḥayy b. Yaḳẓān" that this dogma is often an object of temptations. He appears finally to have decided to understand it in a symbolic sense.

Among the fierce controversies to which Avicenna's thought has given rise is the discussion as to whether or not he should be considered a mystic.

At first sight, the whole range of expressions that he uses to speak of love's re-ascending as far as to the Creator leads one to an affirmative interpretation —not in an esoteric way [see ḤAYY B. YAḲẒĀN], but in the positive sense of the love of God. The more one studies his philosophical doctrine, the more one finds that it illuminates these expressions. The stages of the Ṣūfīs, studied in the *Ishārāt*, leave rather the impression of experiences observed by a great, curious and respectful mind, which, however, does not participate. Ibn Sīnā is a believer, and this fact should be maintained in opposition to those who have made of him a lover of pleasure who narrowly escapes being a hypocrite, although there is so much seriousness in his life and such efforts to reconcile his philosophy with his faith—even if he is not always successful. He is far above the gnosis impregnated with occultism and paganism to which some would reduce him. Is he a mystic in the exact sense that the word has in Catholic theology? It reserves the word for one whose whole life is a great love of God, in a kind of intimacy of heart and thought with Him, so that God holds the first place in all things and everything is apprehended as related to Him. Had it been thus with Ibn Sīnā, his writings would give a totally different impression. Nevertheless, at bottom he did perhaps apprehend God. It is in the simple expression of apprehension through the heart, in the secret of the heart (*sirr*), in flashes, however short and infrequent, that we are led to see in him a beginning of true mystic apprehension, in opposition to the gnosis and its symbols, for at this depth of the heart there is no longer any need for words. One doubt, however, still enters in: his general doctrine of apprehension, and some of the terms that he uses, in fact, in texts on *sirr*, could be applied at least as well to a privileged connexion with the active Intellect, and not with God Himself (cf. Goichon, *Le "sirr" (l'intime du coeur) dans la doctrine avicennienne de la connaissance*). Again, on this question, the absence of his last great work, the "Eastern Philosophy", precludes a definite answer.

This irreparable lacuna in the transmission of his works does not allow us to understand in what respects he wished to complete, and even to correct, Aristotle, as he states in the prologue. As a hypothesis, suggested by his constant efforts to express the concrete and by his biography, we may suppose that he wished to make room for the oriental scientific tradition, which was more experimental than Greek science. The small alterations made to Aristotelian logic are slanted in this direction. In metaphysics, it is probable that he was shocked by the contradictions between Plotinus and Aristotle that were evident in the texts which the knowledge of the time attributed to one single author, and that he wished to resolve these anomalies by giving new explanations.

Influence of Ibn Sīnā. The transmission of Greek science by the Arabs, and the translation of the works of the Arabs into Latin, produced the first Renaissance in Southern Europe, which began in the 10th century in Sicily, flourished in the 12th round Toledo, and soon afterwards in France. The two principal works of Ibn Sīnā, the *Shifā'* and the *Ḳānūn*, made him an undisputed master in medicine, natural sciences and philosophy.

From the 12th to the 16th century the teaching and practice of medicine were based on him. The works of Abū Bakr Muḥammad b. Zakariyyā' al-Rāzī were also known, and he was considered to be a better clinician; but the *Ḳānūn* provided an irreplaceable didactic corpus, for the *Kitāb al-Kulliyyāt fi 'l-ṭibb* of Ibn Rushd corresponded only with the first part of the *Ḳānūn*. The latter was translated in its entirety between 1150 and 1187 by Gerard of Cremona, and, in all, eighty-seven translations of it were made, some of which were only partial. The majority were into Latin, but several Hebrew translations were also made, in Spain, Italy and the south of France. The medical translations are less good than those of the philosophical works; some words transcribed in Arabic from Greek were not understood or identified, and some Arabic technical terms were more or less transcribed in Latin, and remain incomprehensible. The *Ḳānūn* formed the basis of teaching at all the universities. It appears in the oldest known syllabus of teaching given to the School of Medicine at Montpellier, a bull of Clement V, dating from 1309, and in all subsequent ones until 1557. Ten years later Galen was preferred to Ibn Sīnā, but the latter continued to be taught until the 17th century. The editing of the Arabic text, at Rome in 1593, demonstrates the esteem in which he was still held. (On the teaching of the works of Avicenna in the universities, see A. Germain, *L'Ecole de médecine de Montpellier* ..., Montpellier 1880, 71; Stephen d'Irsay, *Histoire des universités françaises et étrangères des origines à nos jours*, Paris 1933, i, 119; C. Elgood, *A medical history of Persia ... until the year 1932*, Cambridge 1951, 205-9). Chaucer reminds us in the Prologue to the *Canterbury Tales* that no doctor should be ignorant of him. Almost all, in fact, possessed either fragments of the *Ḳānūn*, especially the "Fevers" and the "Diseases of the eyes", or shorter writings, the treatise on the pulse or that on "Diseases of the heart". All Arab authors, from the 7th/13th to the 10th/16th century, are dependent on Ibn Sīnā, even though they question him, like the father of Ibn Zuhr (Avenzoar), or augment and correct him, like Ibn al-Nafīs, who recorded his discovery of pulmonary circulation in his commentary on the *Ḳānūn*; he wrote a summary of the *Ḳānūn* which any physician could obtain more easily than he could the original text.

In the West several physicians learned Arabic for the sake of the works of Ibn Sīnā. The first known influence appears in the works of a Dane, Henrik Harpestraeng, a royal physician who died in 1244. Arnold of Villeneuve, born at Valence, translated the treatise on the diseases of the heart, as well as

some of the books of al-Kindī and other Arab authors. Some surgeons also quoted him as their authority: William of Saliceto in Italy, and his disciple Lanfranc, the founder of surgery in France; Guy of Chauliac, who died in 1368, and whose teaching employed Arabic terms and doctrines. At the University of Bologna, anatomy was still being taught in Arabic terms in the 14th century.

The Renaissance brought a violent reaction; Leonardo da Vinci rejected Ibn Sīnā's anatomy, but, for want of another vocabulary, used the Arabic terms. Paracelsus burned the *Ḳānūn* at Basle. Harvey dealt him a severe blow by publishing his discovery of the major circulation in 1628.

The natural sciences presented in the *Shifāʾ* were much used by the mediaeval encyclopaedists, as were the treatises of al-Rāzī and apocryphal treatises. The "Treatise on Animals" was translated by Michael Scot; Albertus Magnus employed the mineralogy (on Ibn Sīnā's scientific influence, see G. Sarton, *Introduction to the history of science*, ii, *passim.*). In physics, Ibn Sīnā was an Aristotelian, and as such inferior to al-Rāzī, who had discovered the existence of the vacuum, which he himself denied. However, he opposed the theory of the transmutation of metals, and hence alchemy (for citations to this effect from several Arab authors, see the introduction by Holmyard and Mandeville to their translation of *Avicennae De congelatione et conglutinatione lapidum*, Paris 1927, 6-7).

Ibn Sīnā's influence in philosophy was less absolute and more disputed, but more lasting, for the use made of him by St Thomas Aquinas embodied certain of his proofs in Catholic theology (cf. Goichon, *La philosophie d'Avicenne et son influence en Europe médiévale*, Paris 1944, ch. III).

The translation of the *Shifāʾ* came at a moment when Aristotle was scarcely known, and that only through the "Posterior Analytics", the "Topics" and the "Refutation of the Sophists". The corpus that presented a "Metaphysics", the "Treatise on the Soul" and that on the "Heavens", etc. seemed to hold another significance. It was, however, thought to be a simple commentary on Aristotle. For a century it received unreserved admiration; when Aristotle was better known, it was still thought that the *Shifāʾ* augmented his work on the subject of the origin of the world, on God, the soul, the intelligence and angels. He was placed in the Neoplatonist and Augustinian traditions; his attempts to reconcile philosophy and faith corresponded with the ardent desires of the Schoolmen. He was forbidden by the decrees of 1210 and 1215, referring to "Aristoteles et sequaces ejus", which banned Ibn Sīnā from the Sorbonne. But his role remained undiminished in private discussions.

After acclaim for his similarities with Christian thought came criticism of his divergences from it, violently initiated by William of Auvergne in 1230. Nevertheless, a pontifical decree of Gregory IX, in 1231, once more permitted the study of Ibn Sīnā's philosophy. The lacunas, however, were now apparent. Nonetheless, the thought of all philosophers was nourished by his, to such a degree that it is impossible to tell what it would have been like without him. Latin scholasticism owes to his opponent, William of Auvergne, the fact that it received from him the distinction between essence and existence, which William considered that he had found in him.

Another current of thought, stemming from English centres of study, developed particularly in the Franciscan order. It saw Ibn Sīnā as more of a philosopher, augmenting Saint Augustine: the active Intellect was like the sun of minds and the internal Master. They believed that he opened up a whole mystic world. Roger Bacon and Duns Scotus were influenced by him. The latter, however, based his doctrine of the univocity of being on the same text that Thomas Aquinas had used to support the opposite doctrine.

Selection was gradually practised in the corpus of Ibn Sīnā. He took his definitive place, together with Saint Thomas Aquinas. The distinction between essence and existence became one of the fundamentals of Thomist philosophy. It gave an explanation for the immateriality of angels; Saint Thomas's *De Ente et Essentia* is imbued with Avicennism. The better the theologian masters his own thought, the less he cites Ibn Sīnā (see the quotations in Vansteenkiste, *op. cit.*), but he still respects him. Saint Thomas's commentators, Cajetan and Jean de Saint-Thomas, writing respectively at the end of the 15th century and during the 17th, still allotted to Ibn Sīnā the place that he had taken in Thomism, the place that is definitely his.

Bibliography: I. Works of Ibn Sīnā: Brockelmann, I, 452-8, S I, 812-29; C. A. Nallino, art. *Avicenna*, in *Enciclop. Italiana*, v, 638-9, up to 1930; O. Ergin, *I. S. bibliografyası*, in *Büyük Türk filosof ve tıb ustadı Ibni Sina Şahsiyeti ve eserleri hakkında tetkikler*, Istanbul 1937, in Turkish; G. C. Anawati, *Muʾallafāt I. S. Essai de bibliographie avicennienne*, Cairo 1950, in Arabic, manuscripts and published works; résumé in French, *La tradition manuscrite orientale de l'oeuvre d'Avicenne. Essai de bibliographie avicennienne*, in *Rev. thomiste*, 1951, 407-40; A. A. Hekmat, *Les oeuvres persanes d'A.*, in *Ligue des Etats arabes, Millénaire d'A., Congrès de Baghdad*, Cairo 1952, 84-97; S. Naficy, *Pur-e Sina (A., his life, works, thought and time)*, Tehran 1954, bibl. 9-53; S. M. Afnan, *A., his life and works*, London 1958; Yahya Mahdavi, *Bibliographie d'I. S.*, Tehran 1954 (critical notes in Persian, signalizing manuscripts, editions, translations and numerous studies on each work). All the Persian works of Ibn Sīnā were published at Tehran on the occasion of his millenary, as well as some of the Arabic works; lists of these works and of some Persian translations of Arabic works published in this collection by E. Rossi, *Il millenario di A. a Teheran e Hamadan*, in *OM*, 1954, 214-24. For the medical and scientific works, both texts and translations into Latin, Hebrew, Persian and modern European languages, published since 1497, the date of the publication of Gerard of Cremona's translation of the *Ḳānūn*, see *Index Catalogue of the Library of the Surgeon-general's Office, U. S. Army*, Washington, including works on I. S., i, 1880, 712-3, 2nd series, i, 1896, 819-21, 3rd series, ii, 1920, 230-1 (s.v. *Avicenna*), 4th series, viii, 1943, 2-3 (s.v. *Ibn Sīnā*), then *Armed forces medical library catalog*, i, 1955, 112 (s.v. *Avicenna*).

Philosophical works: Except for the *Nadjāt*, printed after the *Ḳānūn*, Rome 1593, all editions of texts are recent; *al-Ḳaṣīda fī ʿilm al-Manṭik*, ed. Schmoelders, 1836; *Politics*, ed. Margoliouth, 1887; *al-Shifāʾ*, lithographed at Tehran 1303/1886; the opuscula edited by Mehren under the title *Traités mystiques*, Leiden 1889-94, and *al-Ishārāt*, ed. Forget, Leiden 1892, are among the oldest (see Goichon, *Distinction de l'essence et de l'existence ...*, XIII-XV, 506-7, and bibliographies cited). Later publications: complete critical text of *al-Shifāʾ*, Cairo 1952- ; in the collection *Mémorial*

d'Avicenne, IFAO, Cairo 1952-63: fasc. IV, *al-Akẖlāḳ wa-'l-infiʿālāt al-nafsāniyya*, text established and translated by D. Rémondon; fasc. V, *ʿUyūn al-ẖikma*, text established by A. Badawī, and Introd., 1954; fasc. VI, *Kitāb al-Ḥudūd*, *Livre des Définitions*, text established, translated and annotated by A.-M. Goichon, 1963, augmenting by study of the Greek sources the *Introduction à A., son Epître des Définitions*, trans. from the printed editions, and illuminated by numerous texts taken from the works of Ibn Sīnā (Paris 1933); *Ibn Sina risaleleri*, several opuscula, ed. with French trans. by H. Z. Ülken, A. Ateş, Istanbul 1953; *al-Burhān min al-Shifāʾ*, ed. by A. Badawī, Cairo 1954; the same edited several texts, entire or fragmentary, in the collection *Arisṭū ʿind al-ʿArab*, Cairo 1948; *Ḳiṣṣat Ḥayy b. Yaḳẓān*, text established and French trans. by H. Corbin, in *A. et le Récit visionnaire*, ii, Tehran 1954; *Asbāb ḥudūṯ al-ḥurūf* [phonetics], Cairo 1332, less correctly known as *Makẖāridj al-ḥurūf*, text ed. with Persian tr. by Parviz Nātil Khanlari, Publ. Fac. Tehran 1955, no. 207, Eng. tr. by Khalil I. Semaan, Lahore 1963; *al-Fann al-sādis min al-Ṭabīʿiyyāt* (*ʿilm al-nafs*) *min Kitāb al-Shifāʾ*, *Psychologie d'I. S. d'après son oeuvre Ash-Shifāʾ*, ed. with French trans. by Jan Bakoš, Prague 1956; *Urdjūza fi 'l-ṭibb* (ed. Jahier-Noureddine, see above); *Kitāb al-Isẖārāt wa 'l-tanbīhāt*, with the commentary of Naṣīr al-Dīn Ṭūsī, ed. by S. Dunia, Cairo 1957-8; *Anthologie de textes poétiques attribués à A.*, published, translated and annotated by H. Jahier and A. Noureddine, Algiers 1379/1960.

Translations only: Medical, see *Index Catalogue*; Philosophical, printed in Latin, *ibid.* and Goichon, *Distinction . . .*, 507-8 (note: *De Anima*, 1485; *Metaphysica . . .*, ex Dominici Gundisalvi transl., 1495; *De animalibus*, per Michaelem Scotum trans., 1500. *Avicenne opera* [. . .] *Logyca. Sufficientia*; [. . .] *De anima*, ex transl. Joannis Hispalensis et D. Gundisalvi; *De animalibus* ex transl. Michaelis Scoti [. . .] *Philosophia prima*, ex transl. D. Gundisalvi, 1508; *Avicennae* [. . .] *Compendium de anima. De mahad* [. . .] *Aphorismi de anima. De diffinitionibus* [. . .]. *De divisione scientiarum*, ab Andrea Alpago [. . .] versa [. . .] 1546); P. Vattier, *La logique du fils de Sina*, Paris 1659, etc.).

Since 1930: Ch. 12 of the *Mathematics* of the *Shifāʾ*, tr. R. d'Erlanger, in *La musique arabe*, Paris 1935, ii, 103-245, with notes and appendix, 251-306; *Livre des Directives et remarques* (*Kitāb al-Isẖārat wa-'l-Tanbīhāt*), French trans. with introduction and notes by A.-M. Goichon, Beirut-Paris 1951; *Le poème de l'Ame*, French trans. by H. Massé, in *Revue du Caire*, June 1951, 7-9; *Le Livre de science* (*Dānisẖnāma*), trans. M. Achéna and H. Massé, 2 vols., Paris 1955-7; A.-M. Goichon, *Le récit de Ḥayy ibn Yaqẓān commenté par des textes d'A.*, Paris, 1959; Haven C. Krueger, *A.'s poem on medicine*, Springfield 1963, following the trans. of Opitz and Jahier; *Avicenna latinus. Liber de Anima seu Sextus de Naturalibus*, critical edition of the medieval Latin translation, by S. Van Riet (with an introduction on Avicenna's psychological teaching by G. Verbeke), Louvain-Leiden 1968.

II. Biography: Autobiography of I. S. completed by al-Djuzadjānī, preserved by Ibn al-Ḳifṭī, *Taʾrīkẖ al-ḥukamāʾ*, ed. Lippert, 413 (German trans. by P. Kraus in *Klinische Wochenschrift*, 1932, 1880-4; English trans. by A. J. Arberry, in *Avicenna on theology*, London 1951, 9-24; French trans. by H. Massé, in Introd. to *Livre de science*, 6-11); biography by Zabidollah Safa, Persian text, French adapt. by S. Naficy, in *Collection du Millénaire d'A.*, no 27, Teheran 1953, iv, 1-53; Y. A. Kashi, *Aperçu sur la biographie d'A.*, in *Mémorial Avicenne*, iii.

III. Books and articles on Ibn Sīnā: innumerable, particularly since the millenary; see the bibliographies cited, Nallino up to 1930, Ergin, Anawati, Mahdavi, A.-M. Goichon, *Distinction . . .*, bibliogr. 504-20, up to 1937, and the collection *A., scientist and philosopher, a millenary symposium*, London 1952, bibliography after each chapter; some information in *Islamologie*, Pareja *et al.*, bibliography to ch. XXII, 1012-14; see also A. -M. Goichon, *Avicenna e Avicennismo*, in *Enciclopedia filosofica*, Venice-Rome 1957, i, 525-35, and 2nd ed., 1968, i, coll. 666-78 (German trans. *Lexicon der Philosophie*, Munich 1968, i); S. Naficy, *Bibliographie des principaux travaux européens sur A.*, Tehran 1953 (63 eds. of Latin translations from 1472 to 1639). For the scientific section, see the numerous articles and books in the Library of Congress, for 1880-1943, *Index Catalogue*, Washington; since 1879, running bibliography, *Quarterly cumulative Index Medicus*, Chicago; G. Sarton, *Introduction to the History of Science*, Baltimore 1927-50, especially vol. i.

Principal studies after 1930: see text, and M. El-Hefny, *Ibn Sina's Musiklehre hauptsächlich an seinem "Naǧāt" erläutert. Nebst Uebersetzung und Herausgabe des Musikabschnittes des "Naǧāt"*, Berlin 1930; I. Madkour, *L'Organon d'Aristote dans le monde arabe* [. . .]. *Analyse puisée* [. . .] *à un commentaire inédit d'I. S.*, Paris 1934; A. Birkenmajer, *A.'s Vorrede zum "Liber Sufficentiae" und Roger Bacon*, in *Rev. Néo-scolastique de Philosophie*, 1934, 308-20; C. Fabro, *A. e la conoscenza divina dei particolari*, in *Boll. Filosofico*, i (1935), 45-54; A.-M. Goichon, *Distinction de l'essence et de l'existence d'après I. S.*, Paris 1937; eadem, *Lexique de la langue philosophique d'I. S.*, Paris 1938; eadem, *Vocabulaires comparés d'Aristote et d'I. S.*, Paris 1939; M. Amid, *Essai sur la psychologie d'A.*, Geneva 1940; M. Cruz Hernandez, *La metafisica de A.*, Granada 1949; A. Ahmadieh, *Rāzé darmān*, Tehran 1950; idem, *Darmān Rūmātīsm* [. . .] *I. S.*, n.d.; *Avicenne*, Lectures on Radiodiffusion Française, 1951; *Millénaire d'A.*, in *Rev. du Caire*, special number, June 1951; *Congrès de Baghdad*, Ligue des Etats arabes, Cairo 1952; L. Gardet, *La pensée religieuse d'A.*, Paris 1951; idem, *La connaissance mystique chez I. S. et ses présupposés philosophiques*, Paris 1952; A. A. Siassi, *La psychologie d'A. et ses analogues dans la psychologie moderne*, Teheran 1954; *Livre du millénaire d'A.* (Congress 1954), Tehran 1956; E. Troilo, *Lineamento e interpretazione del sistema filosofico di A.*, Rome 1956, in *Atti d. Accad. dei Lincei, Memorie*, Cl. di scienze morali storiche e filologiche, Sc. 8, 397-446; M. Cruz Hernandez, *La distinción aviceniana de la esencia y la existencia y su interpretación en filosofía occidental*, in *Homenaje a Millás Vallicrosa*, 1956, ii, 351-74; idem, *La noción de "ser" en A.*, in *Pensamiento*, 1959, 83-98; A.-A. Wolfson, *Avicenna, Algazali and Averroes on divine attributes*, in *Homenaje a Millás Vallicrosa*, ii, 545-71; O. E. Chahine, *Ontologie et théologie chez A.*, typescript thesis, Paris 1956; A. Lobato, *A. y santo Tomás en la teoria del conocimiento*, Granada 1957; M. Tabit al-Fandi, *Dieu et le monde: leurs rapports d'après I. S.*, in *BFA*, xi (1958), Arabic sect., 159-80; M. A. Abū Rayyān, *La critique de la philosophie d'A. par Abu 'l-Barakāt al-Baġdādī*,

in *BFA.*, xii (1958), 17-60; I. Madkour, *Le traité des Catégories du Shifā'*, in *MIDEO*, v (1958), 253-78; M. Alonso Alonso, *La "al-anniya" de A. y el problema de la esencia y existencia*, in *Pensamiento*, 1958, 311-46; G. C. Anawati, *La destinée de l'homme dans la philosophie d'A.*, in *L'homme et son destin. Actes du Ier Congrès international de philosophie médiévale*, Louvain 1958, 257-66; A. M. Goichon, *Selon A., l'âme humaine est-elle créatrice de son corps?*, *ibid.*, 267-76; M.-Th. d'Alverny, *Andrea Alpago interprète et commentateur d'A.*, in *Atti del XII Congresso internat. di filosofia*, ix, 1958, 1-6; A.-M. Goichon, *La théorie des formes chez A.*, *ibid.*, 131-8; E. Galindo Aguilar, *Anthropologie et cosmogonie chez A.*, in *IBLA*, 1959, no. 87, 287-323; M.-Th. d'Alverny, *Anniyya-Anitas*, in *Mélanges Etienne Gilson*, Paris 1959, 59-91; ʿAlī Naṣūḥ al-Ṭāhir, *al-Rūḥ al-ḫālida, naṣarāt fī ʿayniyyat al-ḥakīm al-faylasūf al-raʾīs I. S.*, Amman 1960 (on the poem on the soul); A. M. Goichon, *La démonstration de l'existence dans la logique d'A.*, in *Mélanges H. Massé*, Tehran 1963, 165-84; eadem, *L'exégèse coranique d'A. jugée par Averroès*, in *Actas del primer Congreso de estudios árabes e islámicos*, 1964, 89-99; eadem, *Le "sirr", l'intime du coeur dans la doctrine avicennienne de la connaissance*, in *Studia semitica Ioanni Bakoš dicata*, Bratislava 1965, 119-26 [see also ḤAYY B. YAḲẒĀN].

IV. Influence of I. S. in the West: B. Haneberg, *Zur Erkenntnisslehre des I. S. und Albertus Magnus*, in *Abhandl. d. philos.-philolog. Klasse d. Königl. bayer. Akad. d. Wissensch.*, xii (1868), 191-249; J. Forget, *L'influence de la philosophie arabe sur la philosophie scolastique*, in *Rev. néo-scolastique*, 1894, 385-410; C. Baeumker, *Witelo . . .*, *Beitr. z. Gesch. d. Phil. d. Mittelalters*, iii/2, Münster 1908; P. Mandonnet, *Les premières disputes sur la distinction réelle entre l'essence et l'existence*, in *Rev. thomiste*, 1910, 741-65; M.-D. Roland-Gosselin, *De distinctione inter essentiam et esse apud A. et D. Thomam*, in *Xenia thomistica*, iii (1925), 281-8; idem, *Le "De ente et essentia" de S. Thomas d'Aquin*, Le Saulchoir 1926 (numerous references to A.); E. Gilson, several articles in *Arch. d'histoire doctrinale et littéraire du M. A.* (*Pourquoi saint Thomas a critiqué saint Augustin*, i (1926-7), 5-127; *A. et le point de départ de Duns Scot*, ii, (1927), 89-149; *Les sources gréco-arabes de l'augustinisme avicennisant*, iv (1929-30), 5-107; *Roger Marston, un cas d'augustinisme avicennisant*, viii (1933), 37-42; *L'étude des philosophies arabes et son rôle dans l'interprétation de la scolastique*, in *Proc. of the sixth internat. Congress of phil.*, 1927, 592-6); G. Sarton, *op. cit.*, with numerous references; J. Rohmer, *Sur la doctrine franciscaine des deux faces de l'âme*, in *Arch. d'hist. doctr. et litt. du M. A.*, 1927, 73-7; L. Gauthier, *Scolastique musulmane et scolastique chrétienne*, in *Rev. d'Hist. de la philos.*, 1928, 221-53 and 333-55 (on the real distinction between essence and existence according to A. see 246-7 and 356); A. Forest, *La structure métaphysique du concret selon saint Thomas d'Aquin*, Paris 1931 (table of citations of A.); M. de Wulf, *L'Augustinisme avicennisant*, in *Rev. Néoscol.*, 1931, 11-39; W. Kleine, *Die Substanzlehre Avicennas bei Thomas von Aquin*, Freiburg im Breisgau 1933; Cajetan, *In "De Ente et essentia" . . . Commentaria*, Turin 1934; R. de Vaux, *Notes et textes sur l'avicennisme latin . . .*, Paris 1934; J. Teicher, *Gundissalino e l'agostinismo avicennizante*, in *Riv. Filos. Neoscolastica*, 1934, no. 3; A.-M. Goichon, *La philosophie d'A. et son influence en Occident* (see text); eadem, *Influence d'A. en Occident*, in *Encycl. mensuelle de la France d'Outre-Mer*, Sept. 1952, 257-61; A. C. Crombie, *A.'s influence on the medieval scientific tradition*, in *A., scientist . . .*; Vansteenkiste (see text); A.-M. Goichon, *Un chapitre de l'influence d'I. S. en Occident: le "De Ente et essentia" de S. Thomas d'Aquin*, in *Livre du Millénaire d'A.*, iv, 118-31; *A. nella storia d. cultura medievale*, Accad. dei Lincei, Rome 1957; G. Giacon, *A. e Tommaso*, Messina 1958; E. Gilson, *A. et les origines de la notion de cause efficiente*, in *Atti del XII Congresso intern. di filosofia*, 1958, ix, 121-30; E. Cerulli, *A. et Laurent de Medicis à propos d'un passage de l'"Altercazione"*, in *St. Isl.*, xi (1959), 5-27; Th. Litt, *Les corps célestes dans l'univers de saint Thomas d'Aquin*, Louvain 1963, see index; For medical influence see *Index Catalogue, loc. cit.*

(A.-M. GOICHON)

IBN SĪRĪN, ABŪ BAKR MUḤAMMAD, the first renowned Muslim interpreter of dreams, was also, according to Ibn Saʿd (vii/1, 140), a traditionist "of great trustworthiness, who inspired confidence, great and worthy, well-versed in jurisprudence. He was an *imām* of great scholarship and piety". Born two years before the end of the caliphate of ʿUthmān, *i.e.*, in 34/654, he was the contemporary and friend of al-Ḥasan al-Baṣrī [*q.v.*] and died in the same year as he, in 110/728. His father, a tinker from Djardjarāyā, had been taken prisoner in ʿIrāḳ (at Maysān or at ʿAyn al-Tamr) by Khālid b. al-Walīd; he then became a slave of Anas b. Mālik who was ordered by the caliph ʿUmar to set him free by contract of enfranchisement (see Bukhārī, ed. Krehl, ii, 50, no. 1, p. 127). His mother, Ṣafiyya, was a slave of the caliph Abū Bakr; she was held in such esteem within the community that when she died her laying-out was performed by three of the Prophet's wives, and eighteen *Badrīs*, led by Ubayy b. Kaʿb, were present at her burial.

Muḥammad was a cloth merchant, but this does not seem to have earned him enough to live on, since he died in debt (on the origin of this debt, cf. the various opinions reported by Ibn Saʿd, 144 f.). He is reputed to have had thirty children by the same Arab wife, only one of whom survived. He was at one period the secretary of Anas b. Mālik, who had requested that Ibn Sīrīn should lay him out and lead his funeral prayer. In order to do this, he had to be released from prison for one day.

So renowned was he for his piety and for the reliability of the information which he handed on that a century later al-Aṣmaʿī was to say of him: "When the deaf man [Ibn Sīrīn was deaf] relates traditions, clasp your hands" (probably as a sign of the intense interest aroused by his statements). Full details of his life are to be found in Ibn Khallikān, no. 576.

The pages which Ibn Saʿd (*op. cit.*, 140-50) devotes to Muḥammad b. Sīrīn prove the seriousness with which he acted as a *muḥaddith*. He said: "This science is religion; take care from whom you learn it" (141). In the chain of transmitters of *ḥadīths* in which his name appears there are found also, in particular, those of Abū Hurayra, Zayd b. Thābit, Anas b. Mālik, Yaḥyā b. al-Djazzār, and Shurayḥ. Especially noticeable among those who have transmitted his *ḥadīths* are Ḳatāda and Khālid al-Ḥadhdhāʾ. He was opposed to the written transmission of traditions (*ibid.*), and regarded the cunning questions which he was asked, particularly on the subject of predestination, as having been prompted