

commentaries exist only for the *Posterior Analytics*, *Physics*, *De Caelo*, *De Anima*, and *Metaphysics*. On the *History of Animals* no commentary at all exists, and Plato's *Republic* is substituted for the then inaccessible *Politics*. The Latin editions of these works between 1480 and 1580 number about 100. The first appeared at Padua, 1472; about fifty were published at Venice, the best known being that by the Juntas (1552-3), in ten volumes folio.

See Renan, *Averroes et l'Averroïsme*; Munk, *Mélanges*, 418-458; Müller's German translation, *Philosophie und Theologie*, München, 1875; Stöckl, *Phil. d. Mittelalters*, ii. 67-124; Averroes (Vater und Sohn), *Drei Abhandl. über d. Conjunction d. separaten Intellekts mit d. Menschen*, translated into German from the Arabic version of Sam. ibn-Tibbon, by Dr J. Hercz, Berlin, 1869. (W. W.)

AVERSA, a town of Italy, province of Terra di Lavoro, situated in a beautiful plain covered with orange-groves and vineyards, about midway between Naples and Capua. It is the seat of a wealthy bishopric, and its founding hospital and lunatic asylum, the latter founded by Murat, are very celebrated. Aversa owed its origin to the Normans, and dates from 1030, the people of the ancient city of Atella being transported thither. Population, 21,176.

AVESNES, a town of France, in the department of Nord, situated in a fertile district on the Greater Helpe. It is generally well built, and is fortified on Vauban's system. Its principal building is the cathedral, surmounted by a tower 330 feet high, which is raised on four columns, and has a fine chime. It is the seat of a sub-prefect, and has a tribunal of primary jurisdiction, an agricultural society, and a communal college. The principal manufactures are hosiery, coarse serge, and soap; there are also breweries, tanneries, salt-refineries, and brick and marble works. A great part of the town was destroyed by the explosion of a powder-magazine during the siege by the Prussians in July 1815, but was soon afterwards rebuilt. Population, 3737.

AVEYRON, a department in the S. of France, bounded on the N. by Cantal, E. by Lozère, S. by Hérault and Tarn, and W. by Tarn et-Garonne and Lot, containing an area of 3429 square miles. It corresponds to a large portion of the ancient district of Rouergue in Guienne, which formerly gave its name to a family of counts. Its earliest inhabitants known to us were the Rutheni, whose capital was Segodunum, identified with the modern Rodez. The department is rich in prehistoric antiquities, such as the dolmens at Taurines, Laumière, Graülhe, &c. (see paper by M. E. Cartailhac in Norwich vol. of *Internat. Cong. of Prehist. Arch.*, 1868). A large portion of Aveyron is occupied by offshoots of the Cévennes, the highest summit being Cham-de-la-Roche, 4350 feet above the level of the sea. About half the area is under cultivation, nearly one-fourth is heath, one-tenth woods and forests, and rather more than an eighth part meadow land. Vineyards occupy about one-twelfth part of the cultivated land. The department has mines of copper, lead, silver, iron, zinc, alum, and antimony, and extensive coal-fields of great value. Rather more than three-fourths of the inhabitants are engaged in agricultural pursuits of one kind or another, —mainly in the rearing of cattle, sheep, and swine; and there are manufactures of paper, woollen and cotton goods, silk, and leather, to which water-power is skilfully applied. Aveyron exports chestnuts, almonds, hemp, wool, wax, the famous Roquefort cheese, timber, and cattle. Among the numerous men of mark belonging to the department may be mentioned Jean de la Valette, the defender of Malta, Raynal, Bonald, and Louis Blanc. The capital is Rodez, and the arrondissements are Rodez, Espalion, Milhau, Saint-Affrique, and Villefranche. Population in 1872, 402,474. For investigations into the races represented in the department see *Bulletins de la Soc. d'Anthrop.* vol. iv.

AVEZZANO, a town of Italy, in Abruzzo Ulteriore II., containing a castle, which was built in 1499 by Virgilio

Orsini, afterwards belonged to the family of the Colonnas, and is now in the possession of the Barberinis. Population about 5900. Long. 13° 32' E., lat. 41° 58' N.

AVICEBRON. The writer referred to by the Scholastics of the 13th century under this name was supposed by them to be an Arabian philosopher, and was accordingly classed along with Avempace, Abubacer, and others. Recent researches have shown that this is an error, and that this author, about whom so little was known, is identical with Salomon ben Gebirol, a Jewish writer, several of whose religious poems are still celebrated among the Jews. Few details are known regarding the life of Gebirol. He was born at Malaga, and received his education at Saragossa, where, in 1045, he wrote a small treatise on morals, which has been several times reprinted. His death is said to have taken place in 1070 at Valencia. Among the Jews he is known only through his poems, and, with a few unimportant exceptions, no Jewish writer refers to his philosophical speculations. The Christian Schoolmen, about the middle of the 12th century, became acquainted with Gundisalvi's Latin translation of a work called *Fons Vitæ* or *Sapientia*, which exercised a powerful influence on their metaphysical discussions. The author was called by them Avicebron, or Avicembrol, or Avenebrol, and nothing was known regarding him till M. Munk discovered a Hebrew abridgment, by Ibn Falaquera, of Rabbi S. ben Gebirol's treatise on the source of life. He readily identified this with the work of the unknown Avicebron, and the discovery of two Latin MSS. of the *Fons* has placed the identification beyond doubt. The extracts of Falaquera give a fair idea of the work, and enable us to understand the peculiar influence it exercised. The objects of metaphysics according to it are three in number, the knowledge of matter and form, of the divine will or creative word, and of the supreme unity of God. God, as infinite, cannot be known by intelligence which is finite, for all knowledge involves comprehension, or requires that the known be contained in the knowing. God works through the divine will, which is intermediate between the supreme unity and the world. All things in the world possess both matter and form; all the various species of matter are but variations of one universal matter; and similarly all forms are contained in one universal form. This unity of matter applies to the soul and mind as well as to material things, and it is against this proposition that the orthodox Schoolmen, as Albertus and Thomas, principally argue. The matter and form in the universe is disposed in successive stages, and rising above the lowest grade or corporal matter there are certain intermediate substances uniting it with the divine will, without which there is no motion. These intermediate substances, taken in order, are —the universal intellect, the rational soul, the vital soul, the vegetative soul, and nature, or the principle of motion in material things. Activity is transmitted from the divine will through these stages, each of which causes the one next below itself to pass from potentiality into actuality. The materials of Avicebron's philosophy are due mainly to the Alexandrian speculations concealed in the pseudo-Aristotelian *Theology*. The position of the divine will, somewhat enigmatical in a philosophical point of view, is probably a concession to Jewish orthodoxy. For a full account of all that is known regarding Avicebron's life and philosophy, with translation of Falaquera's extracts, see Munk's *Mélanges de Phil. Juive et Arabe*, pp. 1-306; for his poems see Sachs's *Die Religiöse Poesie der Juden in Spanien*, and Geiger's *S. ben Gebirol und seine Dichtungen*.

AVICENNA (in Arabic, Abû Ali el-Hosein Ibn-Abdallah IBN-SINA) was born about the year 980 A.D. at Afshena, one of the many hamlets in the district of Bokhara. His mother was a native of the place; his father, a Persian

from Balkh, filled the post of tax-collector in the neighbouring town of Harmaitin, under Nûh ibn Mansûr, the Samanide emir of Bokhara. On the birth of Avicenna's younger brother the family migrated to the capital, then one of the chief cities of the Moslem world, and famous for a culture which was older than its conquest by the Saracens. Avicenna was put in charge of a tutor, and his precocity soon made him the marvel of his neighbours,—as a boy of ten who knew by rote the Koran and much Arabic poetry besides. From a greengrocer he learnt arithmetic; and higher branches were begun under one of those wandering scholars, who gained a livelihood by cures for the sick and lessons for the young. Under him Avicenna read the *Isagoge* of Porphyry, and the first propositions of Euclid. But the pupil soon found his teacher to be but a charlatan, and betook himself, aided by commentaries, to master logic, geometry, and the *Almagest*. Before he was sixteen he not merely knew medical theory, but by gratuitous attendance on the sick had, according to his own account, discovered new methods of treatment. For the next year and a half he worked at the higher philosophy, in which he encountered greater obstacles. In such moments of baffled inquiry he would leave his books, perform the requisite ablutions, then hie to the mosque, and continue in prayer till light broke on his difficulties. Deep into the night he would continue his studies, stimulating his senses by occasional cups of wine, and even in his dreams problems would pursue him and work out their solution. Forty times, it is said, he read through the metaphysics of Aristotle, till the words were imprinted on his memory; but their meaning was hopelessly obscure, until one day they found illumination from the little commentary by Alfarabius, which he bought at a bookstall for the small sum of three drachmæ. So great was his joy at the discovery, thus made by help of a work from which he had expected only mystery, that he hastened to return thanks to God, and bestowed an alms upon the poor. Thus, by the end of his seventeenth year, he had gone the round of the learning of his time; his apprenticeship of study was concluded, and he went forth a master to find a market for his accomplishments.

His first appointment was that of physician to the emir, whom the fame of the youthful prodigy had reached, and who owed him his recovery from a dangerous illness. Avicenna's chief reward for this service was access to the royal library, contained in several rooms, each with its chests of manuscripts in some branch of learning. The Samanides were well-known patrons of scholarship and scholars, and stood conspicuous amid the fashion of the period, which made a library and a learned retinue an indispensable accompaniment of an emir, even in the days of campaign. In such a library Avicenna could inspect works of great rarity, and study the progress of science. When the library was destroyed by fire not long thereafter, the enemies of Avicenna accused him of burning it, in order for ever to conceal the sources of his knowledge. Meanwhile, he assisted his father in his financial labours, but still found time to write some of his earliest works for two wealthy patrons, whose absolute property they became. Among them was the *Collectio*, one of those short synopses of knowledge which an author threw off for different patrons.

At the age of twenty-two Avicenna lost his father. The Samanide dynasty, which for ten years had been hard pressed between the Turkish Khan of Kashgar on the north and the rulers of Ghazni on the south, came to its end in December 1004. Avicenna seems to have declined the offers of Mahmud the Ghaznevide (who, like his compeers, was rapidly gathering a brilliant cortege of savants, including the astronomer Albiruni), and proceeded westwards to

the city of Urdjensh in the modern district of Khiva, where the vizier, regarded as a friend of scholars, gave him a small monthly stipend. But the pay was small, and Avicenna wandered from place to place through the districts of Nishapur and Merv to the borders of Khorasan, seeking an opening for his talents. In the restless change which threw the several cities of Iran from hand to hand among those feudal emirs of the Buide family, who disputed the fragments of the caliphate, the interests of letters and science were not likely to be regarded. Shems al-Maali Kabûs, the generous ruler of Deilem, himself a poet and a scholar, with whom he had expected to find an asylum, was about that date (1013) starved to death by his own revolted soldiery. Avicenna himself was at this season stricken down by a severe illness. Finally, at Jorjân, near the Caspian, he met with a friend, who bought near his own house a dwelling in which Avicenna lectured on logic and astronomy. For this patron several of his treatises were written; and the commencement of his *Canon of Medicine* also dates from his stay in Hyrcania.

He subsequently settled at Rai, in the vicinity of the modern Teheran, where a son of the last emir, Medj Addaula, was nominal ruler, under the regency of his mother. At Rai about thirty of his shorter works are said to have been composed. But the constant feuds which raged between the regent and her second son, Shems Addaula, compelled the scholar to quit the place, and after a brief sojourn at Kaswin, he passed southwards to Hamadân, where that prince had established himself. At first he entered into the service of a high-born lady; but ere long the emir, hearing of his arrival, called him in as medical attendant, and sent him back with presents to his dwelling. Avicenna was even raised to the office of vizier; but the turbulent soldiery, composed of Koords and Turks, mutinied against their nominal sovereign, and demanded that the new vizier should be put to death. Shems Addaula consented that he should be banished from the country. Avicenna, however, remained hidden for forty days in a sheikh's house, till a fresh attack of illness induced the emir to restore him to his post. Even during this perturbed time he prosecuted his studies and teaching. Every evening extracts from his great works, the *Canon* and the *Sanatio*, were dictated and explained to his pupils; among whom, when the lesson was over, he spent the rest of the night in festive enjoyment with a band of singers and players. On the death of the emir Avicenna ceased to be vizier, and hid himself in the house of an apothecary, where, with intense assiduity, he continued the composition of his works. Meanwhile, he had written to Abu Jaafar, the prefect of Ispahan, offering his services; but the new emir of Hamadân getting to hear of this correspondence, and discovering the place of Avicenna's concealment, incarcerated him in a fortress. War meanwhile continued between the rulers of Ispahan and Hamadân; in 1024 the former captured Hamadân and its towns, and expelled the Turkish mercenaries. When the storm had passed Avicenna returned with the emir to Hamadân, and carried on his literary labours; but at length, accompanied by his brother, a favourite pupil, and two slaves, made his escape out of the city in the dress of a Sufite ascetic. After a perilous journey they reached Ispahan, and received an honourable welcome from the prince. The remaining ten or twelve years of Avicenna's life were spent in the service of Abu Jaafar Ala Addaula, whom he accompanied as physician and general literary and scientific adviser, even in his numerous campaigns. During these years he began to study literary matters and philology, instigated, it is asserted, by criticisms on his style. But amid his restless study Avicenna never forgot his love of enjoyment. Unusual bodily vigour enabled him to combine severe



devotion to work with facile indulgence in sensual pleasures. His passion for wine and women was almost as well known as his learning. With much gaiety of heart, and great powers of understanding, he showed at the same time the spirit of an Aristippus more than that of an Aristotle at the courts of the wealthy. Versatile, light-hearted, boastful, and pleasure-loving, he contrasts with the nobler and more intellectual character of Averroes. His bouts of pleasure gradually weakened his constitution; a severe colic, which seized him on the march of the army against Hamadân, was checked by remedies so violent that Avicenna could scarcely stand. On a similar occasion the disease returned; with difficulty he reached Hamadân, where, finding the disease gaining ground, he refused to keep up the regimen imposed, and resigned himself to his fate. On his deathbed remorse seized him; he bestowed his goods on the poor, restored unjust gains, freed his slaves, and every third day till his death listened to the reading of the Koran. He died in June 1037, in his 58th year, and was buried among the palm-trees by the Kiblah of Hamadân.

It was mainly accident which determined that from the 12th to the 17th century Avicenna should be the guide of medical study in European universities, and eclipse the names of Rhazes, Ali, and Avenzoar. His work is not essentially different from that of his predecessors Rhazes and Ali; all present the doctrine of Galen, and through Galen the doctrine of Hippocrates, modified by the system of Aristotle. But the *Canon* of Avicenna is distinguished from the *El-Hawi* (*Continens*) or *Summary* of Rhazes by its greater method, due perhaps to the logical studies of the former, and entitling him to his surname of Prince of the Physicians. The work has been variously appreciated in subsequent ages, some regarding it as a treasury of wisdom, and others, like Avenzoar, holding it useful only as waste paper. In modern times it has been more criticised than read. The vice of the book is excessive classification of bodily faculties, and over-subtlety in the discrimination of diseases. It includes five books; of which the first and second treat of physiology, pathology, and hygiene, the third and fourth deal with the methods of treating disease, and the fifth describes the composition and preparation of remedies. This last part contains some contingent of personal observation. He is, like all his countrymen, ample in the enumeration of symptoms, and is said to be inferior to Ali in practical medicine and surgery. He introduced into medical theory the four causes of the Peripatetic system. Of natural history and botany he pretends to no special knowledge. Up to the year 1650, or thereabouts, the *Canon* was still used as a text-book in the universities of Louvain and Montpellier.

The rank of Avicenna in the mediæval world as a philosopher was far beneath his fame as a physician. Still, the logic of Albertus Magnus and succeeding doctors was largely indebted to him for its formulae. In logic Avicenna starts from distinguishing between the isolated concept and the judgment or assertion; from which two primitive elements of knowledge there is artificially generated a complete and scientific knowledge by the two processes of definition and syllogism. But the chief interest for the history of logic belongs to his doctrine in so far as it bears upon the nature and function of abstract ideas. The question had been suggested alike to East and West by Porphyry, and the Arabians were the first to approach the full statement of the problem. Alfarabius had pointed out that the universal and individual are not distinguished from each other as understanding from the senses, but that both universal and individual are in one respect intellectual, just as in another connection they play a part in perception. He had distinguished the universal essence from its abstract nature, from the universal considered in

relation to a number of singulars. These suggestions formed the basis of Avicenna's doctrine. The essences of forms—the *intelligibilia* which constitute the world of real knowledge—may be looked at in themselves (metaphysically), or as embodied in the things of sense (physically), or as expressing the processes of thought (logically). The first of these three points of view deals with the form or idea as self-contained in the principles of its own being, apart from those connections and distinctions which it receives in real (sensuous) science, and through the act of intellect. Secondly, the form may be looked at as the similarity evolved by a process of comparison, as the work of mental reflection, and in that way as essentially expressing a relation. When thus considered as the common features derived by examination from singular instances, it becomes a universal or common term strictly so called. It is intellect which first makes the abstract idea a true universal. (*Intellectus in formis agit universalitatem.*) In the third place, the form or essence may be looked upon as embodied in outward things (*in singularibus propriis*), and thus it is the type more or less represented by the members of a natural kind. It is the designation of these outward things which forms the "first intention" of names; and it is only at a later stage, when thought comes to observe its own modes, that names, looked upon as predicables and universals, are taken in their "second intention." Logic deals with such second intentions. It does not consider the forms *ante multiplicitem*, i.e., as eternal ideas—nor *in multiplicitem*, i.e., as immersed in the matter of the phenomenal world—but *post multiplicitem*, i.e., as they exist in and for the intellect which has examined and compared. Logic does not come in contact with things, except as they are subject to modification by intellectual forms. In other words, universality, individuality, and speciality are all equally modes of our comprehension or notion; their meaning consists in their setting forth the relations attaching to any object of our conception. In the mind, e.g., one form may be placed in reference to a multitude of things, and as thus related will be universal. The form animal, e.g., is an abstract intelligible, or metaphysical idea. When an act of thought employs it as a schema to unify several species, it acquires its logical aspect (*respectus*) of generality; and the various living beings qualified to have the name animal applied to them constitute the natural class or kind. Avicenna's view of the universal may be compared with that of Abelard, which calls it "that whose nature it is to be predicated of several," as if the generality became explicit only in the act of predication, in the *sermo* or proposition, and not in the abstract, unrelated form or essence. The three modes of the universal before things, in things, and after things, spring from Arabian influence, but depart somewhat from his stand-point.

The place of Avicenna amongst Moslem philosophers is seen in the fact that Shahrastani takes him as the type of all, and that Algazali's attack against philosophy is in reality almost entirely directed against Avicenna. His system is in the main a codification of Aristotle modified by fundamental views of Neo-Platonist origin, and it tends to be a compromise with theology. In order, for example, to maintain the necessity of creation, he taught that all things except God were admissible or possible in their own nature, but that certain of them were rendered necessary by the act of the creative first agent,—in other words, that the possible could be transformed into the necessary. Avicenna's theory of the process of knowledge is an interesting part of his doctrine. Man has a rational soul, one face of which is turned towards the body, and, by the help of the higher aspect, acts as practical understanding; the other face lies open to the reception and acquisition of the intelligible forms, and its aim is to become a reason-

able world, reproducing the forms of the universe and their intelligible order. In man there is only the susceptibility to reason, which is sustained and helped by the light of the active intellect. Man may prepare himself for this influx by removing the obstacles which prevent the union of the intellect with the human vessel destined for its reception. The stages of this process to the acquisition of mind are generally enumerated by Avicenna as four; in this part he follows not Aristotle, but the Greek commentator. The first stage is that of the hylic or material intellect, a state of mere potentiality, like that of a child for writing, before he has ever put pen to paper. The second stage is called *in habitu*; it is compared to the case of a child that has learned the elements of writing, when the bare possibility is on the way to be developed, and is seen to be real. In this period of half-trained reason, it appears as happy conjecture, not yet transformed into art or science proper. When the power of writing has been actualised, we have a parallel to the *intellectus in actu*—the way of science and demonstration is entered. And when writing has been made a permanent accomplishment, or lasting property of the subject, to be taken up at will, it corresponds to the *intellectus adeptus*—the complete mastery of science. The whole process may be compared to the gradual illumination of a body naturally capable of receiving light. There are, however, grades of susceptibility to the active intellect, i.e., in theological language, to communication with God and his angels. Sometimes the receptivity is so vigorous in its affinity, that without teaching it rises at one step to the vision of truth, by a certain "holy force" above ordinary measure. (In this way philosophy tried to account for the phenomenon of prophecy, one of the ruling ideas of Islam.) But the active intellect is not merely influential on human souls. It is the universal giver of forms in the world.

In several points Avicenna endeavoured to give a rationale of theological dogmas, particularly of prophetic rule, of miracles, divine providence, and immortality. The permanence of individual souls he supports by arguments borrowed from those of Plato. The existence of a prophet is shown to be a corollary from a belief in God as a moral governor, and the phenomena of miracles are required to evidence the genuineness of the prophetic mission. For man, in order to his well-being and the permanence of his kind, requires in the first place a clear vision of right and truth, and must, secondly, depend upon some power capable of carrying out these discoveries of moral law. If providence has so arranged that the eyelids and the hair of the eyebrows shall grow to protect the eye, much more is it needful for a prophet to arise who shall preach the truth of God's unity, prescribe laws for men, and exhort them to well-doing by the promise of recompense to come. The weal of humanity demands the revelation from God, and, to certify his office, the prophet must work miracles. Just as in ordinary states the soul influences the bodily organs, so in exalted conditions it may attain the level of those high immaterial spirits, whose energy is strong enough to permeate the whole passive world. This mystical union with the hidden universe is a mystery which the ordinary mind cannot understand. Many things then become visible as by a lightning flash in the darkness, and are apprehended by the vigorous grasp of pure intuition. But more generally the imagination throws itself on these intuitions, and presents them to the lower soul under the semblance of forms and sounds—the angelic beauty which the seer beholds, and the harmonious speech which a heavenly voice seems to utter in his ear. Thus Avicenna, like his predecessors, tried to harmonise the abstract forms of philosophy with the religious faith of his nation. But his arguments are generally vitiated by the fallacy of

assuming what they profess to prove. His failure is made obvious by the attack of Algazali on the tendencies and results of speculation.

Upwards of 100 treatises are ascribed to Avicenna. Some of them are tracts of a few pages, others are works extending through several volumes. The best-known amongst them, and that to which Avicenna owed his European reputation, is the *Canon of Medicine*; an Arabic edition of it appeared at Rome 1593, and a Hebrew version at Naples in 1491. Of the Latin version there were about thirty editions, founded on the original translation by Gerard of Cremona. The 15th century has the honour of composing the great commentary on the text of the *Canon*, grouping around it all that theory had imagined, and all that practice had observed. Other medical works translated into Latin are the *Medicamenta Cordialia*, *Canticum de Medicina*, *Tractatus de Symplo Actoso*. Scarcely any member of the Arabian circle of the sciences, including theology, philology, mathematics, astronomy, physics, and music, has been left untouched by the treatises of Avicenna, many of which probably varied little, except in being commissioned by a different patron and having a different form or extent. He wrote at least one treatise on alchemy, but several others have been falsely attributed to him. His book on animals was translated by Michael Scot. His *Logic*, *Metaphysics*, *Physics*, *De Cælo*, are treatises giving a synoptic view of Aristotelian doctrine. The *Logic* and *Metaphysics* have been printed more than once; the latter, e.g., at Venice in 1493, 1495, and 1546. Some of his shorter essays on medicine, logic, &c., take a poetical form (the poem on logic was published by Schmolders in 1836). Two encyclopædic treatises, dealing with philosophy, are often mentioned. The larger, *Al-Shefa* (*Sanatio*), exists nearly complete in manuscript in the Bodleian Library and elsewhere; part of it on the *De Anima* appeared at Pavia (1490) as the *Liber Sectus Naturalium*, and the long account of Avicenna's philosophy given by Shahrastani seems to be mainly an analysis, and in many places a reproduction, of the *Al-Shefa*. A shorter form of the work is known as the *Al-Nedjat* (*Liberatio*). The Latin editions of part of these works have been modified by the corrections which the monkish editors confess that they applied. There is also a *Philosophia Orientalis*, mentioned by Roger Bacon, and now lost, which according to Averroes was pantheistic in tone.

For Avicenna's life, see Ibn Khallikan's *Biographical Dictionary*, translated by Slane (1842); Wüstenfeld's *Geschichte der Arabischen Aerzte und Naturforscher*, Göttingen, 1840; Abul-Pharagius, *Historia Dynastiarum*. For his medicine, see Sprengel, *Histoire de la Médecine*; and for his philosophy, see Shahrastani, Germ. transl. vol. ii. 213-332; Prantl, *Geschichte der Logik*, ii. 318-361; Stöckl, *Phil. d. Mittelalters*, ii. 23-58; Munk, *Mélanges*, 352-366; and Haneberg in the *Abhandlungen der Philos.-Philolog. Class. der Bayerischen Academie*, 1867. (W. W.)

AVIENUS, RUFUS FESTUS, a Latin poet, who appears to have flourished in the latter half of the 4th century. Any knowledge we have of the facts of his life is derived from a Latin inscription, printed by Meyer (*Anthologia Latina*, 278), which has been supposed to refer to him. He is in all probability the Festus who was proconsul in Africa in 366 and following years, and in Achaia in 372. He is the author of the following works:—1. *Descriptio Orbis Terræ*, sometimes called *Metaphrasis Periageses Dionysii*, being derived from the *περιήγησις* of that writer; 2. *Ora Maritima*, of which there is extant only a fragment describing the Atlantic coast, and the Mediterranean as far as Marseilles; 3. *Aratea Phenomena*, and *Aratea Prognostica*, which are paraphrases of two works of Aratus. These poems, with the exception of the *Aratea*, are contained in Wernsdorff's *Poeta Latini Minores*, vol. v. pt. ii.

AVIGLIANO, a town of Italy, in the province of Basilicata, 11 miles N.N.W. of Potenza. It stands on the declivity of a hill, and contains a collegiate church, several convents, and a royal college. A peculiar kind of pottery produced here towards the end of the 18th century is still sought after by collectors. The surrounding country is said to produce the finest cattle in the kingdom. A part of the town was destroyed by a land-slip in 1824. Population, 15,982.

AVIGNON, the chief town of the department of Vaucluse in France, situated in a beautiful plain, on the left bank of the Rhone, not far from the entrance of the Durance. It is surrounded by its ancient crenellated walls, which are in a state of remarkable preservation,



and, on the outside, by a line of pleasant boulevards planted with trees. A precipitous rock rises from the river's edge; and from its summit the cathedral of *Nôtre Dame des Doms*, a building of the 12th century, looks down on the city, but is almost thrown into insignificance by the Palace of the Popes, which rises by its side, and



Sketch Plan of Avignon

1. Palace of the Popes. 2. Former Palace of the Archbishops. 3. Town-House. 4. Calvet Museum. 5. Convent of the Visitation. 6. Theological Seminary (St. Charles). 7. Hospital (St. Louis). 8. Cavalry Barracks. 9. Barracks. 10. Penitentiary. 11. Infantry Barracks. 12. St. Joseph's College. 13. Convent of the Holy Sacrament. 14. Hotel-Dieu and General Charity. 15. Church of St. Symphorien. 16. Church of the Sacred Heart. 17. Prisons. 18. Savings Bank and Loan Office. 19. Court-House. 20. Lyceum. 21. Lyceum. 22. Suspension Bridge. 23. Benezet Bridge. A. Place du Palais. B. Place de l'Hôtel de Ville. C. Rue de la République. D. Rue Calade. E. Place du Corps Saint. G. Rue des Lices. H. Place Pie. J. Vieux Septier. K. Rue du Saule. L. Rue Carrière. M. Porte du Rhône. N. Porte de la Ligne. O. Porte St. Lazare. Q. Porte L'Imbert. R. Porte St. Michael. S. Porte St. Roch. T. Porte de l'Ouille.

stretches in sombre grandeur along the southern slope. This building, or congeries of buildings, was commenced by Benedict XII. in 1336, and continued by successive popes for sixty years. It covers an area of rather more than 1½ acres. The paintings with which it was profusely adorned are in great measure destroyed, and even the grandeur of its dismantled interiors was for a long time broken in upon by the carpentry and plaster-work of French barracks. A restoration has, however, been for some time in progress; and the building will again be appropriated for ecclesiastical and civic purposes. The churches of St. Agricole, St. Didier, and St. Pierre may be mentioned as of some importance; also the papal mint, now known as a music academy; the town-hall, built in 1862; the Calvet museum, rich in Roman remains; the Requien museum of natural history; and the Hôtel des Invalides. Of the church of the Cordeliers, in which Petrarch's Laura was buried, only a small part is standing, and the tomb itself has been entirely destroyed. The city is the seat of an archbishop, and has tribunals of primary jurisdiction and commerce, a royal college, a theological seminary, a society of arts, the Vaucluse academy, a public library, a theatre, &c. The chief object of industry is the preparation of silk and the manufacture of silk goods; there are also manufactures of paper, leather, hats, jewellery, iron-ware &c. Avignon is remarkably subject to violent winds, of which the most disastrous is the *mistral*; and, according to the proverb, *Avenio ventosa, sine ventó venenosa, cum vento fastidiosa* (windy Avignon, liable to plague when it has not the wind, and plagued with the wind when it has it). The town was a place of some importance in the times of Roman supremacy, and seems to have had some special connection with the Greek colony at Massilia. It was incorporated with the Burgundian kingdom, and on its dissolution became a free republic, after the Italian type. As late, indeed, as 1790, it retained its consuls, though its

republican constitution was really destroyed by Charles of Anjou. From 1309, when Clement V. took up his abode in the city, to 1377, when Gregory XI. returned to Rome, Avignon was the seat of the papal court, and it continued from 1378 to 1418 to be the seat of French anti-popes. In 1348 it was purchased by Pope Clement VI. from Joanna of Sicily for the sum of 80,000 florins, and it remained in possession of the popes till the French Revolution. Population in 1872, 38,196.

AVILA, a province of Spain, one of the modern divisions of the kingdom of Old Castile, situated between long. 4° 14' and 5° 55' W., and lat. 40° 48' and 41° 18' N. It is bounded on the N. by Valladolid, E. by Segovia and Madrid, S. by Toledo and Cáceres, and W. by Salamanca. The area is 2570 square miles; population, 176,769. It naturally divides itself into two sections, differing completely in soil, climate, productions, and social economy. The northern portion is generally level; the soil is of indifferent quality, strong and marly in a few places, but rocky in all the valleys of the Sierra de Avila; and the climate alternates from severe cold in winter to extreme heat in summer. The population of this part is agricultural. The southern division is one mass of rugged granitic *sierras*, interspersed, however, with sheltered and well-watered valleys, abounding with rich vegetation. The winter here, especially in the elevated region of the Paramera and the waste lands of Avila, is long and severe, but the climate is not unhealthy. The inhabitants are occupied in the rearing of cattle. The principal mountain chains are the Guadarrama, separating this province from Madrid; the Sierras de Avila, a continuation of them westward; the Sierra de Gredos, running from the south of Piedrahita through Barco, Arenos and part of Cebreros; and the Paramera, stretching southwards from the city of Avila into Arenas and Cebreros. The various ridges which ramify from the latter are covered with wood, presenting a striking contrast to the bare peaks of the Sierra de Gredos, and the barren levels in which they rise on the north. The principal rivers are the Alberche and Tietar, belonging to the basin of the Tagus; and the Tormes, the Corneja, and the Adaja, belonging to that of the Douro. The mountains contain silver, copper, iron, lead, and coal, but their mineral wealth has been exaggerated, and the actual production is absolutely nil. Quarries of fine marble and jasper exist in the district of Arenas. The province has declined in wealth and population during the last two centuries, a result due less to the want of activity on the part of the inhabitants than to the oppressive manorial and feudal rights and the strict laws of entail and mortmain, which have acted as barriers to improvement. The principal production is the wool of the Merino sheep, which at one time yielded an immense revenue. Game is plentiful, and the rivers abound in fish, specially trout. Olives, chestnuts, and grapes are grown, and the culture of silk-worms is also carried on. There is little trade, and the manufactures are few, consisting chiefly of copper utensils, lime, soap, cloth, paper, combs, &c. The state of elementary education is comparatively good, and the ratio of crime is proportionately low (*Madoz, Diccionario de España*).

AVILA (the ancient *Abuaf*), a city of Spain, the capital of the above province, is situated on the right bank of the Adaja, about 3000 feet above the sea-level, at the termination of the Guadarrama Mountains. "On all sides," says a recent traveller, "the town is surrounded by a tawny desert, over whose arid plains numbers of gray boulders are scattered like flocks of sheep." Its ancient wall is still in good preservation, crowned by a breastwork, with towers of great strength; but a large part of the town lies beyond the circuit. Avila is the seat of a bishop suffragan to Santiago, and has a Gothic cathedral, built by Garcia

de Estrella in 1107; a number of interesting churches, such as *Santo Tomas*, with the beautiful tomb of Prince Juan, *San Vincenti*, with its remarkable carving, and *Nuestra Seraf. Madre Santa Teresa*, built over the birthplace of the patroness of Spain (who here founded the convent of St. Joseph); as well as several monasteries and schools, an infirmary, and a foundling hospital. It was formerly the seat of a university, which was founded in 1482, and changed into the college of St. Thomas in 1807. The only manufacture of any importance is the spinning of the wool furnished by the native sheep. Population, 6892.

AVILA, GIL GONZALEZ D', a Spanish biographer and antiquary, was born at Avila about the year 1577, and died there in 1658. He was made historiographer of Castile in 1612, and of the Indies in 1641. Of his numerous works, the most valuable are his *Teatro de las Grandezas de Madrid* (Madrid, 1623, sqq.), and his *Teatro Eclesiastico*, descriptive of the metropolitan churches and cathedrals of Castile, with lives of the prelates (Madrid, 1645-53, 4 vols. 4to).

AVILA Y ZUNIGA, LUIS D', author of a Spanish history of the wars of Charles V. Nothing is known as to the place or date either of his birth or of his death. He was probably of low origin, but married a wealthy heiress of the house of Zuniga, whose name he added to his own. He rose rapidly in the favour of the Emperor Charles V., served in the army and as ambassador to Rome, and was present at the funeral of Charles in 1558. His work is entitled *Comentarios de la Guerra de Alemania, hecha de Carlos V. en el año de 1546 y 1547*, and appears to have been printed in 1548. It became very popular, and was translated into English, French, Dutch, German, Italian, and Latin. As was to be expected from the position of the author, the book gave a rather one-sided account of Charles, and its misrepresentations have been severely criticised.

AVILES, SAN NICOLAS DE (the Latin *Flavionavia*), a town of Spain, in the province of Oviedo, about a league from the sea-coast, in lat. 43° 34' N., long. 5° 58' W. It has a considerable trade by means of its port, which affords good anchorage for all classes of vessels. There are here some copper works and coal mines, and the stone quarries are extensive and productive. Aviles has two parish churches, a theatre, and a public school. Population, 3297.

AVLONA, or VALONA (the ancient *Ἀβλὼν*), a town and seaport of Albania, in the eyalet of Yanina. It stands on an eminence near the Gulf of Avlona, an inlet of the Adriatic, almost surrounded by mountains. The port, which is protected by the island of Sasseno, the ancient Saso, is the best on the Albanian coast. It is visited weekly by Austrian steamers, and carries on considerable intercourse with Brindisi, &c. The town is about a mile and a half from the sea, and has rather a pleasant appearance with its minarets and its palace, surrounded with gardens and olive-groves. The Christian population, of which a considerable proportion are Italians, is largely engaged in commerce; while the Turks manufacture woollen stuffs and arms. The material imported into England for tanning, under the name of *Valonia*, is the pericarp of an acorn produced in the district. Avlona played an important part in the wars between the Normans and the Byzantine empire. In 1464 it was taken by the Ottomans; and after being in Venetian possession in 1690, was restored to them in 1691. In 1851 it suffered severely from an earthquake.

AVOIRDUPOIS, or AVERDUPOIS, the name of a system of weights, commonly supposed to be derived from the French, *avoir du pois*, to have weight. The suggested derivation from *averer*, to verify, seems, however, more probable, *averdupois* being the earlier form of the word.

Avoirdupois weight is used for all commodities except the precious metals, gems, and medicines. The pound avoirdupois, which is equal to 7000 grains troy, or 453.54 grammes, is divided into 16 ounces, and the ounce into 16 drams. See WEIGHTS AND MEASURES.

AVOLA, a city on the coast of Sicily, in the province of Syracuse, with 11,912 inhabitants. It manufactures straw-mats, and has trade in wine, grain, oil, honey, &c.: and there are sugar plantations.

AVON, the name of several rivers in England, Scotland, and France. The word is Celtic, appearing in Welsh as *afon*, in Manx as *aon*, and in Gaelic as *abhuinn* (pronounced *avain*), and is radically identical with the Sanskrit *ap*, water, and the Latin *aqua* and *amnis*. The root appears more or less disguised in a vast number of river names all over the Celtic area in Europe. Thus, besides such forms as *Evan*, *Aune*, *Anne*, *Ive*, *Auney*, *Uney*, &c., in the British Islands, we have *Aff* and *Aven* in Brittany, *Avenza* and *Avens* in Italy, *Avia* in Portugal, and *Avono* in Spain; while the terminal syllable of a large proportion of the French rivers, such as the *Sequana*, the *Matrona*, the *Garumna*, and so on, seems originally to have been the same word. The names *Punjab*, *Doab*, &c., show the root in a clearer shape. (See Taylor's *Words and Places*.) Of the principal English rivers of this name in its full form three belong to the basin of the Severn. The Upper or Shakespearean Avon, rising in Northamptonshire, near the battlefield of Naseby, flows through Warwickshire, Worcester, and Gloucester, past Rugby, Warwick, Stratford, and Evesham, and joins the larger river at Tewkesbury; while the Lower Avon has its sources on the borders of Wiltshire, and enters the estuary of the Severn at King's Roads, after passing Malmesbury, Bath, and Bristol. (See Ireland's *Upper Avon*; Lewis's *Book of English Rivers*, 1855.) The Middle or Little Avon has its whole course in Gloucestershire, and reaches the Severn a short distance below the town of Berkeley. Another river of this name rises in Wilts, and flows past Salisbury to the British Channel. In Scotland one is a tributary of the Clyde, another belongs to the basin of the Forth, and a third joins its waters with the Annan, while an *Aven* is a confluent of the Spey. In France there are two "Avons" in the system of the Loire, and two in that of the Seine.

AVRANCHES (ancient *Abrincate*, or *Ingena*), a town of France, in the département of Manche. It was an important military station of the Romans, and has in more modern times sustained several sieges, the most noticeable of which was the result of its opposition to Henry IV. It stands on a wooded hill, commanding a fine view of the bay and rock of St. Michel, about three miles distant. At the foot of the hill flows the river *Sée*, which at high tide is navigable from the sea. The principal trade is in corn, cider, and salt; and candles, lace, nails, parchment, leather, &c., are manufactured. Avranches was formerly a bishop's see; and its cathedral, destroyed as insecure in the time of the first French Revolution, was the finest in Normandy. Its site is now occupied by an open place, called after the celebrated Huet, bishop of Avranches; and one stone remains with an inscription marking it out as the spot where Henry II. received absolution for the murder of A. Becket. Saint-Saturnin's church dates from the 13th century, and has a remarkable gateway. The ancient episcopal palace is now used as a museum of antiquities; and an extensive public library is kept in the "mairie." A new cathedral is in course of erection. The agreeable situation and climate of this town make it a favourite residence of English families. Population in 1872, 8137.

AXHOLM, or AXELHOLM, an island in the N.W. part of Lincolnshire, England, formed by the rivers Trent, Idle, and Don. It consists mainly of a plateau of slight elevation