against the ship and cargo respectively. Commissions on money advanced, maritime interest on bottomry and *respondentia*, and the loss on exchanges, &c., are apportioned relatively to the gross sums expended on behalf of the several interests concerned.

The expenses incurred in getting a stranded ship off the ground, the hire of extra hands to pump a ship which has sprung a leak, and the sums awarded for salvage or for other services rendered to the ship and cargo under any extraordinary emergencies, are compensated by average contribution. But this rule applies only to the *extraneous* assistance that may have been obtained, the crew being bound to do their utmost in the service of the ship on all occasions, with extra remuneration for what they might consider extraordinary exertions on their part.

The costs of reclaiming the ship and cargo after having been captured are allowed as general average charges; and although *ransom* to an enemy is prohibited in this country by legal enactment, it seems that this does not apply to the case of money or goods given up by way of composition to pirates for the liberation of the ship and cargo, and that this would also form a subject of average contribution.

When the ship and cargo arrive at the port of destination it is unnecessary, in ordinary cases, to distinguish, in the adjustment of the general average, between the losses which have arisen from *sacrifices* and those which have resulted from *expenditures* for the common benefit. But if the ship and cargo should be lost before reaching their destination, no contribution is due for the goods or ship's materials which may have been *sacrificed* at a former stage of the voyage, the owners of these being in no worse position than any of their coadventurers. On the other hand, it is evident that when money has been *expended* for the common benefit, the subsequent loss of the ship and cargo should not affect the right of the party who has made the advance to recover it in full from all the parties for whose advantage it was originally made. Hence, while *sacrifices* are made good only in the event of the ship and cargo being ultimately saved, *expenditures* must be reimbursed whether the ship and cargo be eventually saved or lost; and the contribution for these expenditures must be regulated by the values of the ship, cargo, and freight as they stood at the time when the advances were made.

If, however, the money required for average expenditures has been raised by means of bottomry, and the ship be lost before completing the voyage, there can be no claim for reimbursement,—the risk being assumed by the bottomry lender in consideration of the premium he receives on the sum advanced. When there is no bottomry, it is a usual practice, but not an invariable rule, to insure the average disbursements by a special policy. When this has been done, and when the amount has been recovered on the subsequent loss of the ship, it cannot be again claimed from the individuals who would otherwise have been liable. But if the expenditures are not insured, either by a bottomry contract, or by a special policy, and if the ship and cargo be totally lost in the subsequent course of the voyage, the parties for whose benefit the expenditures were incurred must reimburse them on the principles already explained. These parties, however, have recourse on their original insurers, not only for the total loss of the interests insured, but also for the previous expenditures, although the insurers may thus be called on to pay a *larger sum* than the amount of the insurance.

The contribution for general average losses is regulated by the values of the respective interests for the benefit of which they were incurred. The practical rule adopted, in all ordinary cases, is to estimate the ship, cargo, and freight at their *net* values to their owners, in the state in which they arrive at the port of destination, *but including in these values the sums made good for sacrifices*, and to assess the contribution accordingly. The necessity for including the amount of compensation made for sacrifices in the valuations on which the contribution is charged, arises from the principle that all the parties interested in the adventure should bear the ultimate loss in exact proportion to their respective interests, which would not be the case if the owners of the articles sacrificed were to recover their full value without being themselves assessed for the loss thereon in the same manner as their coadventurers.

The contributory value of the *ship* is accordingly her actual value to her owner in the state in which she arrives, whether damaged or otherwise, including the sum made good in the general average for any sacrifices which may have been made of part of the ship or her materials.

The value of the *cargo* for contribution is its net market value on arrival, after deducting the charges incurred for freight, duty, and landing expenses, but without deducting the costs of insurance or commission. If goods be damaged, they contribute only according to their deteriorated value; and if special charges have been incurred on the cargo at a port of refuge (as for warehouse rent, &c.), the amount of these charges is deducted. The sum charged to general average for goods sacrificed is of course added to the valuation. All goods carried in the ship for the purposes of traffic must be included in the valuation of the cargo; but the wearing apparel, or personal effects, of the passengers and crew are exempted from contribution.

The value of the *freight* for contribution is the sum received by the shipowner on the completion of the voyage for the carriage of the cargo, after deducting from that sum the wages reckoned as from the date of the casualty, the port charges at the place of destination, and the special charges against the freight which may have been incurred at a port of refuge, consisting of the costs of reshipping the cargo, and of outward pilotage, &c. The provisions for the voyage are not deducted, as these are held to have formed part of the original value of the *ship*. If the freight has been paid in advance, it forms part of the value of the *goods*, and, consequently, does not contribute as a separate interest. When a sum has been advanced on account of freight, subject to insurance, it must be distinguished from the portion of the freight which remains at the shipowner's risk, and be charged separately for its rateable contribution; and the freight so advanced is not subject to deduction for wages, &c., this deduction being made only from the freight at risk. It has been decided that, when a vessel has been originally chartered for a double voyage, the whole freight to be earned under the charter-party must contribute at its net value, after deducting the wages and other charges which must be incurred in earning it. The effect of this rule is to render the freight attaching to the *return* voyage, as well as that attaching to the voyage *outwards*, liable to contribute for average losses arising in the course of the outward passage,—a result the equity of which is not always very apparent.

An adjustment of general average made at any foreign port where the voyage may terminate, if proved to be in conformity with the law and usage of the country to which such foreign port belongs, is binding on all the parties interested as coadventurers, although they may be subjects of this country, and although the adjustment may be made on principles different from those sanctioned by the laws or usages of Britain. The reason for this rule is, that the parties engaging in the adventure are held to assent to the known maritime usage according to which general average is adjusted on the arrival of the ship and goods at the port of destination.

The subject of general average is only incidentally connected with that of marine insurance, being itself a distinct branch of maritime law. But the subject of particular average arises directly out of the contract of insurance, and will therefore be best considered in connection with it. (See INSURANCE.)

For further information with respect to the subject of average, the reader is referred to the famous work of M. Valin, *Commentaire sur l'Ordonnance de* 1681, t. ii. p. 147–198, ed. 1760; to Emerigon, *Traité des Assurances*, t. i. pp. 598–674; Arnould on *Marine Insurance;* and the treatises on *Average* of Stevens, Benecke, Baily, Hopkins, and Lowndes. (J. WA.)

AVERNUS, a lake of Campania in Italy, near Baiæ, occupying the crater of an extinct volcano, and about a mile and a half in circumference. From the gloomy horror of its surroundings, and the mephitic character of its exhalations, it was regarded by ancient superstition as an entrance to the infernal regions. It was especially dedicated to Proserpine, and an oracle was maintained on the spot. In 214 B.C., Hannibal with his army visited the shrine, but not so much, according to Pliny, for purposes of piety, as in hope of surprising the garrison of Puteoli. By some critics the Cimmerians of Homer were supposed to have been the inhabitants of this locality, and Virgil in his *Æneid* adopted the popular opinions in regard to it. Originally there seems to have been no outlet to the lake, but Agrippa opened a passage to the Lucrine, and turned this "mouth of hell" into a harbour for ships. The channel, however, appears to have become obstructed at a later period. In the reign of Nero it was proposed to construct a ship-canal from the Tiber through Avernus to the Gulf of Baiæ, but the works were hardly commenced. The plan of connecting the lake with the Gulf of Baiæ was brought forward as late as 1858, but only to be abandoned. The *Lago d'Averno* is now greatly frequented by foreign tourists, who are shown what pass for the Sibyl's Grotto, the Sibyl's Bath, and the entrance to the infernal regions, as well as the tunnel from Cumæ, and ruins variously identified as belonging to a temple or a bathing-place.

AVERROES, known among his own people as Abûl-Walid Mohammed Ibn-Ahmed Ibn-Mohammed IBN-ROSHD, the kâdi, was born at Cordova in 1126, and died at Marocco in 1198. His early life was occupied in mastering the curriculum of theology, jurisprudence, mathematics, medicine, and philosophy, under the approved teachers of the time. The years of his prime were a disastrous era for Mahometan Spain, where almost every city had its own petty king, whilst the Christian princes swept the land in constant inroads. But with the advent of the Almohades, the enthusiasm which the desert tribes had awakened, whilst it revived religious life and intensified the observance of the holy law within the realm, served at the same time to reunite the forces of Andalusia, and inflicted decisive defeats on the chiefs of the Christian North. For the last time before its final extinction the Moslem caliphate in Spain displayed a splendour which seemed to rival the ancient glories of the Ommiade court. Great mosques arose; schools and colleges were founded; hospitals, and other useful and beneficent constructions, proceeded from the public zeal of the sovereign; and under the patronage of two liberal rulers, Jusuf and Jakûb, science and philosophy flourished apace. It was Ibn-Tofail (Abubacer), the philosophic vizier of Jusuf, who introduced Averroes to that prince, and Avenzoar (Ibn-Zohr), the greatest of Moslem physicians, was his friend. Averroes, who was versed in the Malekite system of law, was made kâdi of Seville (1169), and in similar appointments the next twenty-five years of his life were passed. We find him at different periods in Seville, Cordova, and Marocco, probably following the court of Jusuf Almansur, who took pleasure in engaging him in discussions on the theories of philosophy and their bearings on the faith of Islam. But science and free thought then, as now, in Islam, depended almost solely on the tastes of the wealthy and the favour of the monarch. The ignorant fanaticism of the multitude viewed speculative studies with deep dislike and distrust, and deemed any one a Zendik (infidel) who did not rest content with the natural science of the Koran. These smouldering hatreds burst into open flame about the year 1195. Whether, as one story ran, he had failed in conversation and in his writings to pay the customary deference to the emir, or a court intrigue had changed the policy of the moment, at any rate Averroes was accused of heretical opinions and pursuits, stripped of his honours, and banished to a place near Cordova, where his actions were closely watched. Tales have been told of the insults he had to suffer from a bigoted populace. At the same time efforts were made to stamp out all liberal culture in Andalusia, so far as it went beyond the little medicine, arithmetic, and astronomy required for practical life. But the storm soon passed, when the transient passion of the people had been satisfied, and Averroes for a brief period survived his restoration to honour. He died in the year before his patron Almansur, with whom (in 1199) the political power of the Moslems came to an end, as did the culture of liberal science with Averroes. The philosopher left several sons, some of whom became jurists like Averroes's grandfather. One of them has left an essay, expounding his father's theory of the intellect. The personal character of Averroes is known to us only in a general way, and as we can gather it from his writings. His clear, exhaustive, and dignified style of treatment evidences the rectitude and nobility of the man. In the histories of his own nation he has little place; the renown which spread in his lifetime to the East ceased with his death, and he left no school. Yet, from a note in a manuscript, we know that he had intelligent readers in Spain more than a century afterwards. His historic fame came from the Christian Schoolmen, whom he almost initiated into the system of Aristotle, and who, but vaguely discerning the expositors who preceded, admired in his commentaries the accumulated results of two centuries of labours.

For Aristotle the reverence of Averroes was unbounded, and to expound him was his chosen task. The uncritical receptivity of his age, the defects of the Arabic versions, the emphatic theism of his creed, and the rationalising mysticism of some Oriental thought, may have sometimes led him astray, and given prominence to the less obvious features of Aristotelianism. But in his conception of the relation between philosophy and religion, Averroes had a light which the Latins were without. The science, falsely so called, of the several theological schools, their groundless distinctions and sophistical demonstrations, he regarded as the great source of heresy and scepticism. The allegorical interpretations and metaphysics which had been imported into religion had taken men's minds away from the plain sense of the Koran, and destroyed the force of those appeals which had been spoken to the hearts and understandings of our common humanity, not to the wisdom of the "people of demonstration." God had declared a truth meet for all men, which needed no intellectual superiority to understand, in a tongue which each human soul could apprehend according to its powers and feelings. Accordingly, the expositors of religious metaphysics, Algazali included, are the enemies of true religion, because they make it a mere matter of syllogism. Averroes maintains that a return must be made to the words and teaching of the prophet; that science must not expend itself in dogmatising on the metaphysical consequences of fragments of doctrine for popular acceptance, but must proceed to reflect upon and examine the existing things of the world. Averroes, at the same time, condemns the attempts of those who tried to give demonstrative science where the mind was not capable of more than rhetoric: they harm religion by their mere negations, destroying an old sensuous creed, but cannot build up a higher and intellectual faith.

In this spirit Averroes does not allow the fancied needs of theological reasoning to interfere with his study of Aristotle, whom he simply interprets as a truth-seeker. The points by which he told on Europe were all implicit in Aristotle, but Averroes set in relief what the original had left obscure, and emphasised things which the Christian theologian passed by or misconceived. Thus Averroes had a double effect. He was the great interpreter of Aristotle to the later Schoolmen, worthy of a place, according to Dante, beside the glorious sages of the heathen world. On the other hand, he came to represent those aspects of Peripateticism most alien to the spirit of Christendom; and the deeply-religious Moslem gave his name to the anti-sacerdotal party, to the materialists, sceptics, and atheists, who defied or undermined the dominant beliefs of the church.

On three points Averroes, like other Moslem thinkers, came specially into relation, real or supposed, with the religious creed, viz., the creation of the world, the divine knowledge of particular things, and the future of the human soul. But the collision was rather with the laboured ratiocinations by which the Asharite and Motazelite theologians aimed at rationalising dogma than with the doctrine of religion in its simplicity. True philosophy is the foster sister of religion, but is the critic of scholastic subtleties. In regard to the second charge, Averroes himself remarks that philosophy only protests against reducing the divine to the level of the created mind. But the real grandeur of Averroes is seen in his resolute prosecution of the stand-point of science in matters of this world, and in his recognition that religion is not a branch of knowledge to be reduced to propositions and systems of dogma, but a personal and inward power, an individual truth which stands distinct from, but not contradictory to, the universalities of scientific law. In his science he followed the Greeks, and to the Schoolmen he and his compatriots rightly seemed philosophers of the ancient world. He maintained alike the claim of demonstrative science with its generalities for the few who could live in that ethereal world, and the claim of religion for all,—the common life of each soul as an individual and personal consciousness. But theology, or the mixture of the two, he regarded as a source of evil to both—fostering the vain belief in a hostility of philosophers to religion, and meanwhile corrupting religion by a pseudo-science. A stand-point like this was the very antithesis of scholasticism; it was the anticipation of an adequate view which modern speculation has seldom exhibited.

The latent nominalism of Aristotle only came gradually to be emphasised through the prominence which Christianity gave to the individual life, and, apart from passing notices as in Abelard, first found clear enunciation in the school of Duns Scotus. The Arabians, on the contrary, emphasised the idealist aspect which had been adopted and promoted by the Neo-Platonist commentators. Hence, to Averroes the eternity of the world finds its true expression in the eternity of God. The ceaseless movement of growth and change, which presents matter in form after form as a continual search after a finality which in time and movement is not, and cannot be reached, represents only the aspect the world shows to the physicist and to the senses. In the eye of reason the full fruition of this desired finality is already and always attained; the actualisation, invisible to the senses, is achieved now and ever, and is thus beyond the element of time. This transcendent or abstract being *is* that which the world of nature is always *seeking*. He is thought or intellect, the actuality of which movement is but the fragmentary attainment in successive instants of time. Such a mind is not in the theological sense a creator, yet the onward movement is not the same as what some modern thinkers seem to mean by development. For the perfect and absolute, the consummation of movement is not generated at any point in the process; it is an ideal end, which guides the operations of nature, and does not wait upon them for its achievement. God is the unchanging essence of the movement, and therefore its eternal cause.

A special application of this relation between the prior perfect, and the imperfect, which it influences, is found in the doctrine of the connection of the abstract (transcendent) intellect with man. This transcendent mind is sometimes connected with the moon, according to the theory of Aristotle, who assigned an imperishable matter to the sphere beyond the sublunary, and in general looked upon the celestial orbs as living and intelligent. Such an intellect, named active or productive, as being the author of the development of reason in man, is the permanent, eternal thought, which is the truth of the cosmic and physical movement. It is in man that the physical or sensible passes most evidently into the metaphysical and rational. Humanity is the chosen vessel in which the light of the intellect is revealed; and so long as mankind lasts there must always be some individuals destined to receive this light. "There must of necessity always be some philosopher in the race of man." What seems from the material point of view to be the acquisition of learning, study, and a moral life, is from the higher point of view the manifestation of the transcendent intellect in the individual. The preparation of the heart and faculties gives rise to a series of grades between the original predisposition and the full acquisition of actual intellect. These grades in the main resemble those given by Avicenna. But beyond these, Averroes claims as the highest bliss of the soul a union in this life with the actual intellect. The intellect, therefore, is one and continuous in all individuals, who differ only in the degree which their illumination has attained. Such was the Averroist doctrine of the unity of intellect—the eternal and universal nature of true intellectual life. By his interpreters it was transformed into a theory of one soul common to all mankind, and when thus corrupted conflicted not unreasonably with the doctrines of a future life, common to Islam and Christendom.

Averroes, rejected by his Moslem countrymen, found a hearing among the Jews, to whom Maimonides had shown the free paths of Greek speculation. In the cities of Languedoc and Provence, to which they had been driven by Spanish fanaticism, the Jews no longer used the learned Arabic, and translations of the works of Averroes became necessary. His writings became the text-book of Levi ben Gerson at Perpignan, and of Moses of Narbonne. Meanwhile, before 1250, Averroes became accessible to the Latin Schoolmen by means of versions, accredited by the names of Michael Scot and others. William of Auvergne is the first Schoolman who criticises the doctrines of Averroes, not, however, by name. Albertus Magnus and St Thomas devote special treatises to an examination of the Averroist theory of the unity of intellect, which they labour to confute in order to establish the orthodoxy of Aristotle. But as early as Ægidius Romanus (1247–1316), Averroes had been stamped as the patron of indifference to theological dogmas, and credited with the emancipation which was equally due to wider experience and the lessons of the Crusades. There had never been an absence of protest

against the hierarchical doctrine. Berengar had struggled in that interest, and with Abelard, in the 12th century, the revolt against authority in belief grew loud. The dialogue between a Christian, a Jew, and a philosopher suggested a comparative estimate of religions, and placed the natural religion of the moral law above all positive revelations. Nihilists and naturalists, who deified logic and science at the expense of faith, were not unknown at Paris in the days of John of Salisbury. In such a critical generation the words of Averroism found willing ears, and pupils who outran their teacher. Paris became the centre of a sceptical society, which the decrees of bishops and councils, and the enthusiasm of the orthodox doctors and knight-errants of Catholicism, were powerless to extinguish. At Oxford Averroes told more as the great commentator. In the days of Roger Bacon he had become an authority. Bacon, placing him beside Aristotle and Avicenna, recommends the study of Arabic as the only way of getting the knowledge which bad versions made almost hopeless; and the student of the present day might echo his remark. In Duns Scotus, Averroes and Aristotle are the unequalled masters of the science of proof; and he pronounces distinctly the separation between Catholic and philosophical truth, which became the watchword of Averroism. By the 14th century Averroism was the common leaven of philosophy; John Baconthorpe is the chief of Averroists, and Walter Burley has similar tendencies.

Meanwhile Averroism had, in the eye of the great Dominican school, come to be regarded as the arch-enemy of the truth. When Frederick II. consulted a Moslem free-thinker on the mysteries of the faith, when the phrase or legend of the "Three Impostors" presented in its most offensive form the scientific survey of the three laws of Moses, Christ, and Mahomet, and when the characteristic doctrines of Averroes were misunderstood, it soon followed that his name became the badge of the scoffer and the sceptic. What had begun with the subtle disputes of the universities of Paris, went on to the materialist teachers in the medical schools and the sceptical men of the world in the cities of Northern Italy. The patricians of Venice and the lecturers of Padua made Averroism synonymous with doubt and criticism in theology, and with sarcasm against the hierarchy. Petrarch, vexed by the arrogance and over-refinements of their argumentation, and by the barbarism of their words, refuses to believe that any good thing can come out of Arabia, and speaks of Averroes as a mad dog barking against the church. In works of contemporary art Averroes is at one time the comrade of Mahomet and Antichrist; at another he lies with Arius and Sabellius, vanquished by the lance of St Thomas.

It was in the universities of North Italy that Averroism finally settled, and there for three centuries it continued as a stronghold of Scholasticism to resist the efforts of revived antiquity and of advancing science. Padua became the seat of Averroist Aristotelianism; and, when Padua was conquered by Venice in 1405, the printers of the republic spread abroad the teaching of the professors in the university. As early as 1300, at Padua, Petrus Aponensis, a notable expositor of medical theories, had betrayed a heterodoxy in faith; and John of Jandun, one of the pamphleteers on the side of Lewis of Bavaria, was a keen follower of Averroes, whom he styles a "perfect and most glorious physicist." Urbanus of Bologna, Paul of Venice (d. 1428), and Cajetanus de Thienis (1387–1465), established by their lectures and their discussions the authority of Averroes; and a long list of manuscripts rests in the libraries of Lombardy to witness the diligence of these writers and their successors.[1] Even a lady of Venice, Cassandra Fedele, in 1480, gained her laurels in defence of Averroist theses.

With Pomponatius, in 1495, a brilliant epoch began for the school of Padua. Questions of permanent and present interest took the place of outworn scholastic problems. The disputants ranged themselves under the rival commentators, Alexander and Averroes; and the immortality of the soul became the battle-ground of the two parties. Pomponatius defended the Alexandrist doctrine of the utter mortality of the soul, whilst Augustinus Niphus, the Averroist, was entrusted by Leo X. with the task of defending the Catholic doctrine. The parties seemed to have changed when Averroism thus took the side of the church; but the change was probably due to compulsion. Niphus had edited the works of Averroes (1495–7); but his expressions gave offence to the dominant theologians, and he had to save himself by distinguishing his personal faith from his editorial capacity. Achillini, the persistent philosophical adversary of Pomponatius both at Padua and subsequently at Bologna, attempted, along with other moderate but not brilliant Averroists, to accommodate their philosophical theory with the requirements of Catholicism. It was this comparatively mild Averroism, reduced to the merely explanatory activity of a commentator, which continued to be the official dogma at Padua during the 16th century. Its typical representative is Marc-Antonio Zimara (d. 1552), the author of a reconciliation between the tenets of Averroes and those of Aristotle.

Meanwhile, in 1497, Aristotle was for the first time expounded in Greek at Padua. Plato had long been the favourite study at Florence; and Humanists, like Erasmus, Ludovicus Vives, and Nizolius, enamoured of the popular philosophy of Cicero and Quintilian, poured out the vials of their contempt on scholastic barbarism with its "impious and thrice-accursed Averroes." The editors of Averroes complain that the popular taste had forsaken them for the Greek. Nevertheless, while Fallopius, Vesalius, and Galileo were claiming attention to their discoveries, the Professors Zabarella, Piccolomini, Pendasio, and Cremonini continued the traditions of Averroism, not without changes and additions. Cremonini, the last of them, died in 1631, after lecturing twelve years at Ferrara, and forty at Padua. The legend which tells that he laid aside his telescope rather than see Jupiter's moons, which Galileo had discovered, is a parable of the fall of scholastic Averroism. Mediævalism, with its misconstruction of Averroes, perished because it would not see that the interpretation of the past calls for the ripest knowledge of all discoveries in the present.

The literary works of Averroes include treatises on jurisprudence, grammar, astronomy, medicine, and philosophy. In 1859, a work of Averroes was for the first time published in Arabic by the Bavarian Academy, and a German translation appeared in 1875 by the editor, J. Müller. It is a treatise entitled *Philosophy and Theology*, and, with the exception of a German version of the essay on the conjunction of the intellect with man, is the first translation which enables the non-Semitic scholar to form any adequate idea of Averroes. The Latin translations of most of his works are barbarous and obscure. A great part of his writings, particularly on jurisprudence and astronomy, as well as essays on special logical subjects, prolegomena to philosophy, criticisms on Avicenna and Alfarabius, remain in manuscript in the Escorial and other libraries. The Latin editions of his medical works include the *Colliget* (*i.e.*, Kulliyyat, or summary), a *résumé* of medical science, and a commentary on Avicenna's poem on medicine; but Averroes, in medical renown, always stood far inferior to Avicenna. The Latin editions of his philosophical works comprise the *Commentaries on Aristotle*, the *Destructio Destructionis* (against Algazali), the *De Substantia Orbis*, and a double treatise *De Animæ Beatitudine*. The Commentaries of Averroes fall under three heads:—the larger commentaries, in which a paragraph is quoted at large, and its clauses expounded one by one; the medium commentaries, which cite only the first words of a section; and the paraphrases or analyses, treatises on the subjects of the Aristotelian books. The larger commentary was an innovation of Averroes; for Avicenna, copied by Albertus Magnus, gave under the rubrics furnished by Aristotle works in which, though the materials were borrowed, the grouping was his own. The great commentaries exist only for the *Posterior Analytics*, *Physics*, *De Cœlo*, *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'Averroisme*; 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 Intellects 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 foundling 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, Laumières, Grailhe, &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 Cevennes, 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 *Sapientiæ*, which exercised a powerful influence on their metaphysical discussions. The author was called by them Avicebron, or Avicembron, or Avencebrol, and nothing was known regarding him till M. Munk discovered a Hebrew abridgment, by Ibn Falaquéra, 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 Falaquéra 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 Falaquéra'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 Gabirol 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 Mansîr, 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-Maâli 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 Kaswîn, 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