

## MUSLIM SPAIN

The conquest of Spain by the Muslims in the beginning of the 8th century A.D. opened a glorious chapter in the history of Islam. The success of the expedition of Tariq ibn Ziyad, a lieutenant of General Musa ibn al-Nusair, was so dramatic and sweeping that the place of his first landing in 711 A.D. on the Spanish soil has been epitomised in the name of Gibraltar, or Jabal at-Tariq. Indeed, fired by the missionary zeal for spreading the wonderful religion of monotheism, universal justice, equality and brotherhood, the followers of Prophet Muhammad (peace be on him) proved a great conquering nation. Within a century of the Prophet's death, they carried the banners of Islam through North Africa and Spain right across the Pyrenees into the Southern France and through Persia, India (Sind) and Turkistan on the borders of China.

Spain under Muslim rule for nearly eight centuries, as Professor Hitti observes, "wrote one of the brightest chapters in the intellectual history of medieval Europe." At the time of the conquest of Spain her cultural standard was so poor, and her general condition was so depressing, that the Muslims had little to learn there but a lot to teach. Europe itself being scourged by the barbarian Germanic races on the one hand and fleeced by the tyrannical nobles and priests on the other had sunk very low, so that centres of the learning of Greek philosophy and sciences had shifted long since to Syria and Persia and thereby the remnants of the invaluable Greek works were saved from the burning rage of the Christian priests. Naturally, the growing Muslim civilization was incubated in the East centering on the great city of Baghdad. During the first few hundred years, culture of a high standard naturally flowed into Spain from the Muslim East. Poets, musicians, artists, theologians, professors, scientists and administrators were lured into Spain by the rich gifts and munificence of the kings and nobles. Muslim scholars of Spain, often under royal patronage, travelled to Madinah, Baghdad, Damascus and elsewhere in the East, even to Transoxiana and China in quest of learning. In the tenth century A.D. when Cordova (the Umayyad capital of Spain) began to rival Baghdad, the tide of the flow of culture and learning was turned. During the subsequent centuries increasingly more students from the Muslim East and the Christian Europe flocked

at the Universities of Cordova, Toledo, Granada and Seville to drink deep from the wells of learning that flowed there in abundance. Especially, in the twelfth and thirteenth centuries, the current of this flow became so strong that it overflowed Europe with newer amenities of life ranging from higher philosophy down to the playing of Chess and, above all, with that scientific spirit of observation and research which set in motion those intellectual forces in Europe that were responsible for bringing about the Renaissance and Reformation, and for ultimately heralding our modern scientific age.

Spain had attained to the highest glory under the Umayyad rulers Abdur Rahman III (912-916) and al-Hakam II (961-976) who styled themselves as Caliphs. At the time, their capital city, Cordova, shone like a brilliant light in the dark continent of Europe and, with Baghdad and Constantinople, was reckoned with as one of the three cultural centres of the world. The extent of its culture and prosperity can be gauged from the evidence of the contemporary historians, Ibn Idhari and Maqqari that the city contained 1,13,000 homes, 21 suburbs, 70 libraries, numerous book shops, mosques and palaces, and paved streets illuminated by lights from bordering houses. Besides, it also contained plenty of public baths in luxurious establishments. The University of Cordova, housed in the principal Mosque, was enlarged and beautified by al-Hakam who spent 2,061,537 dinars for the purpose. Its water supply was conducted through lead-pipes and its library contained 4,000,000 books. The University of Cordova rose to great fame as one of the most enlightened academies of the world and attracted students from near and far including many Christians of Europe. In addition, Hakam had also established 27 free schools in the city of Cordova. This was as a time when the people of Europe had not yet learnt the use of paper and looked upon bathing as a heathen custom. J.D. Draper remarks that even seven hundred years after this time there was not so much as one public lamp in London and, centuries subsequently, whoever stepped over his threshold on a rainy day in Paris stepped up to his ankles in mud.

The contributions of the Spanish Muslims towards intellectual progress, scientific research and cultural refinement were rated not only invaluable by the Muslims of the East but also proved as a potent factor for the advancement of human civilization. There is no dispute among the historians that from the 8th to the 13th

century, the Arabic-speaking peoples were the torch bearers of culture and civilization throughout the world and after they reached their zenith their culture was transmitted to Europe mainly through the channels of Spain and Sicily which cast deep influence on almost every aspect of European life and thought. As a medium of this transmission Spain's role was also very significant.

### **Scholars**

Among numerous writers on literature, historiography and theology special mention may be made of Ali ibn Hazm (994-1064). Ibn Hazm is said to have written about 400 books on history, theology, Hadith, logic, poetry, etc., and is considered as the greatest scholar and most original thinker of Spanish Islam. His most valuable work, *al-Fasl fi-l-Milal wa-l-Abwa wa-l-Nibal* on Religions and Sects has been considered as the first study on comparative religion. Ibn Khatib was a versatile scholar and wrote about 60 works on poetics, history, geography, philosophy and medicine. Ibn Khaldun has been classed as one of the greatest historians of all ages and was the first to attempt a philosophy of history, i.e., "a theory of historical development on the basis of climatic and geographic influences on the one hand and moral and spiritual forces at work on the other." His *Muqaddamah* or Introduction (Prolegomena to his voluminous work on history) in which he has advanced his philosophy of history has been rated as one of the finest works ever produced by man and, on account of this, he is considered as the father of the science of sociology, and the real founder of the social sciences.

### **Sciences**

The contribution of the Muslims of Spain towards sciences was also remarkable. Especially in the field of botany, pure and applied, they had excelled their Eastern counterpart and enriched the world by their painstaking researches. They collected plants in Spain and North Africa, gave them appropriate names and, in Arabic, Latin and Berber languages classified them. In his outstanding work on agriculture entitled *al-Filahah*, Abu Zakariya deals with 585 plants and explains the cultivation of over fifty fruit trees. The greatest Muslim botanist and pharmacist was Ibn Baytar (d. 1248) whose voluminous

work, *al-Jami-fit Adwiyat al-Muadah*, on medicines has been considered as the most outstanding work from the time of Dioscorides down to the 16th century. It describes 1400 medical drugs including 200 novel plants that were not known before.

Some of the outstanding philosophers and historians of Spain such as Ibn Bajjah, Ibn Tufail Ibn Rushd and Ibn al-Khatib were also physicians and contributed substantially to the science of medicine. For instance, in a treatise on the "Black Death" which was ravaging Europe during the 14th century, Ibn al-Khatib defended the theory of infection by contagion while the Christians of Europe stood helpless considering it as an act of God and ridiculed the Muslim theory as blasphemous. Ibn Rushd wrote a book entitled *Kulliyat* or general theories on medicine and observed that no one is taken twice with smallpox.

Among the professional physicians, Abul Qasim al-Zahrawi (d. 1013) and Ibn Zuhr (d. 1162) were the greatest. al-Zahrawi, known to Europe as Abulacasis, was a surgeon who exerted deep influence in laying the foundation of modern surgery. In his famous work, *al-Tafsir li-man Ajaza an al-Taalif*, he introduced new ideas of cauterization of wounds, crushing a stone inside the bladder, and emphasized the necessity of vivisection and dissection. In its last section he also summed up the surgical knowledge of his time. The surgical part of this work was translated into Latin in the fifteenth century and various editions were published from Venice, Basel and Oxford, and was studied as a manual of surgery in European schools of medicine for centuries. As Professor Hitti observes, the illustration of instrument which it contained helped later scholars to lay the foundation of surgery in Europe.

Ibn Zuhr was a doctor of medicine, and was known to the Latin Christendom as Venzoar. He was a contemporary of Ibn Rushd who considered him as the greatest physician since Galen. He wrote six books on medicine, therapeutics and diet. He was the first person to discuss feeling in bones. His family is also reputed for having produced six generations of renowned physicians.

### **Philosophy**

The crowning achievement of Islam in Spain, however, had lain in the realm of philosophy. By an unusual coincidence, Spain

produced a number of great philosophers in the twelfth century such as Ibn Bajjah, Ibn Tufail, Rushd, Ibn Maymun and Ibn Arabi who exerted abiding influence equally in the East and in the West and thus epitomised the century as a glorious chapter in the history of philosophic thought.

Ibn Bajjah (d. 1138) known to Europe as Avempace was a philosopher, scientist, physician and an expert on the art of music. He wrote several works on all the above subjects. He was a rationalist belonging to the Aristotelian school and emphasised that if man exercises his reason properly, he can arrive at the truth even unaided by revelation or any other external agency. This was precisely what his younger contemporary Ibn Tufail (d. 1185) proceeded to demonstrate in his famous philosophic romance, *Hayy ibn Yaqzan*, showing how a wakeful boy reared under natural conditions away from human society discovers through the exercise of his inborn intelligence the existence of a Supreme Being on whom everything depends for its existence. This delightful story was translated into Latin in 1671 and exerted considerable influence on the modern European conception of the "state of nature."

The greatest of all medieval philosopher was Ibn Rushd (d.1198), more known to Europe as Averroes, whose commentaries on the philosophy of Aristotle ranked him only second to that great philosopher himself. The European scholars called him "the Commentator" as they called Aristotle, "the Teacher." The main trend of his philosophy was directed towards reconciling religious faith with reason which exerted deep influence on the Christian and Jewish theology through St. Thomas Aquinas and Ibn Mayrum, respectively. On the other hand, as a champion of rationalism, he stirred the minds of the European scholars so powerfully that the school of Averroism remained the dominant school of thought in the West from the end of the 12th to the end of 16th century and his influence is traceable in Descartes, Spinoza and Kant. Indeed, Averroism continued to be a living factor in European thought until the growth of the modern experimental science.

Last but not the least was Muhiuddin ibn al-Farabi (d. 1240), the greatest Sufi philosopher, whose influence on the Muslim world through his mystic philosophy was almost universal in the medieval times and still continues to be a living factor among the Pirs and Shykhs of the mystic path. To the Sufiis he is known as the Shykh

al-Akbar or the grand master. The influence of his philosophy of illumination is also manifest on such Christian scholarstics as Duns Scotus, Roger Bacon and Raymond Wull as well on the great poet Dante.

In geography, astronomy and mathematics, the Spanish Muslims generally built upon their knowledge on the works of Eastern Muslim scholars, such as al-Khwarizmi, al-Maqdisi, al-Yakubi, Umar Khayyam. Nevertheless, in the person of Abu Abdullah al-Idrisi (d. 1166), Spain produced a brilliant geographer who flourished in the court of Roger II in Sicily. His monumental work *al-Nuzhat al-Mushtaq* was translated into Latin and Published from Paris in 1619.

### Paper

The peculiarities of Muslim life with its lack of political assemblies and theatres, which were characteristic features of Greece and Rome, as Professor Hitti aptly points out, "made books almost the sole means of acquiring knowledge." At the height of their intellectual progress, the Muslims, therefore, needed books more than anything else and mass production of books was made possible by the introduction of paper which they had acquired from China about the 8th century and thereafter locally manufactured everywhere in the Muslim world. Besides reproducing copies of books by handwriting, the Muslim governments also used a form of block printing for official correspondence including those with European governments and their agents in Spain. Manufacture of writing papers and a crude idea of printing were the most beneficial gifts of Islam to Europe. Italy borrowed the art of paper making from Sicily and France from Spain in the later half of the 13th century and the English word "ream," derived through the old French "rayme" and the Spanish "resme," ultimately from the Arabic "rismah," which means a bundle, is still a living reminder of that historic borrowing. It has often been pointed out by historians that without paper German invention of printing from movable style in the 15th century or the large-scale popular education in Europe, which led to the Renaissance and Reformation, would not have been feasible.

Another Muslim gift to Europe was the mathematical "cipher" (from the Arabic term *sifr*) or "zero," which the Arabs borrowed from India and introduced it into Europe along with Arabic numeral.

The Christian Europe in the beginning of the 13th century marked the beginning of the European mathematics.

A third conspicuous example of indebtedness of the West towards Muslim scholarship is furnished in the field of geography. During the Middle Ages, when the Christian Europe believed in the flatness of the earth, the Muslims kept alive the doctrine of sphericity of the earth. On the basis of the Hindu theories they had developed a "summit" situated at an equal distance from four cardinal points. This theory (known as the arin theory) was published in a Latin work in 1410 A.D. It was on the basis of this doctrine that Columbus believed in the pear-shape of the earth and that on the western hemisphere opposite the "world cupola" was a corresponding elevated centre and it was, working on this theory, that he discovered America.

In astronomy, a few branches of mathematics and chemistry which the Muslim had raised from the dust to the status of regular scientific disciplines, their immortal marks have survived at least practically down to the present day. For instance, most of the names of stars, as we know today, are derived from Arabic terminology as is also the case with many fundamental technical notions, such as, Acrab from the Arabic *aqrab* (scorpion) Algedi from *al-jadi* (the kid), Altair from *al-tair* (the flyer), Denab from *zanab* (tail) and technical terms, such as, "azimuth" from Arabic *al-sumut*, "nadir" from *nazir*, and "zenith" from *al-samat*. Likewise, algebra and trigonometry were substantially Muslim inventions which were transmitted to Europe through Spain and Sicily. In chemistry, such familiar terms as alcohol, alembic, alkali and antimony are evidently the gifts of the Muslims.

Finally, it would not be out of place to note that the all-pervasive message of Islam, which is the doctrine of monotheism, had been the mainspring of inspiration for its followers. To their credit, the Muslim scholars left no stone unturned to set the doctrine of the unity of God and its corollary, the brotherhood of man, finely and unalterably in the human consciousness. It certainly goes to the credit of the Muslim scholars and, as Professor Hitti testifies, "to the eternal glory of medieval Islam that it succeeded for the first time in the history of human thought in harmonising and reconciling monotheism, the greatest contribution of the ancient

Semitic world, with Greek philosophy, the greatest contribution of the ancient Indo-European world, thus leading the Christian Europe towards the modern point of view."

Thus, it is clear that what the West received from Islam through Spain and Sicily were not merely stray influences but the prints of a highly developed culture and civilization which cast deep and beneficial effects on almost every aspect of Western life and thought.