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THE INFLUENCE OF THE ARABIC LANGUAGE AND CULTURE ON MEDIEVAL EUROPE

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Abstract

At the turn of the 1st and 2nd millennia AD, Europe was inhabited by semi-savage, multilingual barbarians, while the Arab countries, after successful wars and conquests, experienced a brilliant, multi-faceted cultural flowering. The people that formed on the Arabian Peninsula, in a historically short period of time, captured vast territories in Western Asia and North Africa and then moved to the West, firm in their intention to conquer it. By 711, the Arabs had reached the strait that separated Africa from Europe, later called Gibraltar, and perpetuated in its name the name of the Arab commander Tarik, who led the campaign (from the Arabic "Jabal (Gabal) Tarik"—Mount Tarik). It is from here, from the south of the Iberian Peninsula, which has now become the extreme west of the Muslim world, that the main direction of the penetration of the Arab-Muslim syncretic culture into Europe begins.

Andalusia, as the Arabs called the part of Spain they conquered at the beginning of the 8th century, at a time when Latin culture was weakened by the invasion of the Goths, played the greatest role in familiarizing Europe with Arab culture. For several centuries, the Arab world gave birth to remarkable scientists, poets, philosophers, and doctors who had a noticeable civilizing influence on Europeans. History has clearly established that the very European ancient heritage, in particular the philosophy and science of ancient Greece, reached the Europeans through Muslim intermediaries. In other words, the spiritual heritage of the Hellenes was accepted by Europe only after it was taken out of oblivion, seriously studied, and assimilated by Islamic scholars and philosophers. If not for them, the Europeans would have remained in complete ignorance of this heritage for a long time, and perhaps they would never have gotten to know it. The Europeans of the "dark Middle Ages" learned from the Arabs, and it was thanks to Islamic scholars that it became possible to restore the almost lost connection between ancient culture and the European Christian Middle Ages.

The outstanding achievements of the Arab conquerors in the cultural and scientific fields are due to various reasons. The most significant of them are interest in and tolerance for the cultures of the vast territories they captured, respect for scientific research, and the desire for knowledge. The Qur'an advised the search for knowledge from the cradle to the grave and taught that learning the sciences is like praying. After

the knowledge of the Arabs was enriched primarily by the legacy of the ancient world and the Byzantine era, the stage of their own acquisition and processing of knowledge and their improvement began. Countless eminent scholars who came out of the Arab schools soon began relying on the acquired knowledge for their own research and publication of their works.

While the ability to read and write was limited in Europe to a small circle of monks and other clerics, a school of the Koran was created in each of the many mosques of the resulting Arab state, and the great mosques themselves turned into universities where the most famous scholars competed with each other in the art of expounding their knowledge in front of interested listeners and in disputes with colleagues. One of the most famous educational institutions of this kind was the University of Cordoba (Spain), and in addition to the University of Cordoba, 14 academies and many lower and secondary schools were founded by the Arabs in Spain. They also founded five public libraries here, of which the library of Caliph Hakim contained up to 600,000 volumes.

"Remove the Arabs from history," wrote the historian and philosopher Labri, "and the revival of literature in Europe would be many centuries late." Indeed, the cultural and historical influence of the Arabic language can be traced in many languages of Western Europe, as evidenced by the borrowing of Arabic terms and roots that have entered almost all European languages and are still used today. This was facilitated by the spread of Islam as well as the high cultural status of the literary Arabic language, which has a developed system of terminology for many areas of social, scientific, and cultural life that had not received proper development before the arrival of the Arab conquerors in Europe. For a long time, Arabic received the status of the state language not only in Spain but also in Sicily, as well as in the southern regions of France and Italy. It has become the language of science, politics, and culture. For example, Spanish scholars, thinkers, and writers in the Middle Ages often used Arabic for their scientific work, and some of the remarkable works of Saadia, Maimonides, and others were originally written in Arabic. The growing interest in Moorish culture led to more and more translations from Arabic into Latin. Translations of Arabic books, primarily scientific ones, with a few exceptions, served as the basis of education in European universities during the 5th and 6th centuries.

As for the scientific branches of human knowledge, some of them were fully borrowed by Europe from the Islamic civilization. The contribution made by the Arabic-speaking peoples in the field of natural sciences and exact disciplines, especially in mathematics, is especially great.

When the Arabs created their empire in Europe, the calculations were made on the basis of the so-called Roman numerals, i.e., systems where the values of numbers were expressed by certain letters. But in India, the development of numbers began already in the 4th century, and later, in the 6th century, there was a leap from significant figures to the positional writing of numbers, first from 1 to 9. Thanks to the translation of the Indian textbook of arithmetic into Arabic, the new method was widely used at first in the East and then in Europe. Muhammad al-Khwarizmi, who belonged to the list of the most talented Arab scientists of his time, processed this work in about 800 pages, developed the decimal system further, wrote an introduction to the four basic operations of arithmetic and the calculus of fractions, and also compiled a collection of exercises. When many centuries later these books came to Europe through Spain, the first word from the collection was distorted and became the word "algebra", and the word "algoritmus" ("algorithm") arose from the author's name, by which in the Middle Ages they understood the art of calculus according to the decimal system, and today every method of calculation that obeys a certain rule. When a new type of account penetrated Europe, new numbers came with it; in Europe, they are called "Arabic".

The adoption, improvement, and dissemination of the new number system were the greatest achievements in the history of science. They created the prerequisites for the further development of mathematics and caused a tremendous upsurge in mathematical and natural science research among the scientists of the Arab world. They are credited with bringing arithmetic, especially algebra, into a system and further developing and applying it in everyday life and scientific work.

Advances in mathematics created the basis for new discoveries in the field of physics. Particularly outstanding advances were made in astronomy. The technical terms corresponding to it in all European languages, for the most part, testify to their Arabic origin; the names of most celestial bodies also sound in Arabic in the mouths of astrologers around the world. This is explained by the fact that the works of ancient astronomers, such as the Almagest, the first complete teaching on the planets of Ptolemy, became known in Europe only thanks to the Arabic translations, interpretations, and writings of their Muslim followers. In Cordoba, special schools and observatories were established for the first time. At the beginning of the 10th century, the Arab scientist al-Batani deepened the knowledge of mankind about the position of the earth in the universe; he managed to determine the path of the sun with exceptional accuracy; he was the first to calculate the deviation of the earth's orbit from its axis; he improved the calculus of the sine function; and thus he was the founder of spherical trigonometry. 500–600 years later, his works appeared in Latin

translation in Europe, and al-Batani, under the name of Albateny, became a very famous and highly valued authority for Renaissance scholars.

A century after al-Batani, around the year 1000, the naturalist al-Hasan ibn al-Haytan, known as Alhasan, discovered that celestial bodies radiate their own light and that light takes time to move. He refuted Euclid's opinion that a person receives a concept of the world around him with the help of visual rays emanating from the eye and described the visual process as a pure act of perception. He was able to accurately calculate the height of the earth's atmosphere. All the great scientists of the Middle Ages studied his works, from Bacon to Newton, from Copernicus to Kepler, from Leonardo da Vinci to Galileo.

Undoubtedly, the most invaluable contribution was made by the Arabs in the Middle Ages to medicine. After the first period of translation, when the main works of Galen and Hipocrates were made available to the Arabs, it became apparent that Muslim scholars had reached a position in medical science where they were far superior to their Christian and Greek predecessors. For many centuries, when the knowledge of the Hellenes and Romans was completely unknown in Europe, Arab hygiene and medicine were considered the most advanced in the world. Since that time, based on the information received, they have led the art of healing to a new flowering, which has determined the level of the world for at least half a thousand years. Anatomy, however, could not be developed by the Arabs since the Koran forbade the dissection of the human body, but more attention was paid to pharmacology and chemistry, which still retained their Arabic names, dating back, as you know, to ancient Egypt.

While in Europe for many centuries there was no question of an independent class of doctors at all and the art of healing was left to barbers, the Arab scientist al-Razi, called Rasas in Europe, wrote the largest medical encyclopedia of his time and advocated that admission to medical practice must be approved by the decision of the state commission.

Another doctor and scientist whose star shone in Europe, perhaps even brighter than the star of al-Razi, is Abu Ali Hussein ibn Sina, known in Europe under the name of Avicenna. He was the author of the world-famous work "Canons of Medicine", which for five hundred years was a kind of code of laws for physicians and was included in the curricula of universities. In the main work of Ibn Sina, "The Book of Health", consisting of 18 volumes, he summarized all the knowledge of his time and distributed it, guided by the scientific principles of classification.

Islam contributed to a very large extent to the rapid development of hygiene and health care in the Arab world, in complete contrast to the Christian religion, which was not at all interested in these issues. She cared about the salvation of the soul, and

by no means of the body, and either considered the disease a punishment from the Lord or saw in it the act of the devil. In both cases, she recommended prayers or devotional parables as the best means of healing. In contrast, Muhammad elevated daily ablutions to a religious cult, and mosques became centers not only of public education but also of hygiene: there is not a single mosque without a room for ablution, and not a single believer will begin the main prayer without having performed the ablution previously prescribed by the Qur'an. Throughout the Arab world, public baths sprang up in addition to the ablution facilities in mosques.

The Arabs were also the best geographers of their time. Many of them made long journeys and recorded their impressions. In the first half of the XII century, the geographer al-Idrisi compiled an atlas with 71 maps, among which was a map of the world, and wrote a geography textbook. In the 13th century, the Arabs created the globe. There is no doubt that most of the geographical knowledge concerning the most remote parts of Asia or Africa was obtained for a long time exclusively by Arab travelers who visited these parts.

Another area that deserves special mention is that of philosophy, in which Islamic influence was so significant in Europe during the Middle Ages. The philosophy of the Arabs is of Greek origin; the conquerors brought it to Spain, and from there it spread throughout Western Europe. It can be said with all certainty that at that time in Europe there simply were no other ways to get acquainted with Greek philosophy because the Latin translations of Plato and Aristotle were made not directly from the Greek originals but from Arabic translations, to which comments were attached by the then Muslim philosophers. In general, medieval philosophy, known as scholasticism, was divided into Muslim, Jewish, and Christian categories. But it was precisely its Muslim branch that was the source of the other two, and especially the Jewish one, which then flourished in Europe on the basis of the Arabic language, as can be judged, for example, by the most important works of Musa ibn Maimun, which inspired subsequent Jewish philosophy for whole centuries, up to Spinoza, who still traces some of the ideas of Ibn Maimun.

Moving from the sciences to the arts, it should be noted that many of the ideas generated by Muslim writers and poets developed during their time in European literature. Already, the richness and universality of Arabic literature contributed to its strong influence on European poetry. "Moorish" culture, surrounded by a romantic halo in the minds of Europeans, constantly attracted attention, especially the fabulous, fantastic Arab world with its fairies and other magical images, which completely entered the literature of the South European peoples. Some of the more common folk books in the Middle Ages were brought to Europe directly by the Arabs.

It should be noted that Arab literature is usually understood as the literature of Muslim Arabs, but there is also Christian Arabic literature, which, however, is significantly inferior to the first in both volume and content. The poetry of the life-loving poets of the Middle Ages—Nizami, Hafiz, Jami, Omar Khayyam, Rumi, and many others—inspired European poets to create masterpieces of world poetry.

Existing for over a thousand years, from Spain to India, the art of Islam played an important role in medieval European art, especially works of artistic craft and fabric. The West used it as a model, adopting motifs from Muslim Spain; in the architecture of Sicily and Venice and in the fabrics from Lucca and Florence, a strong influence of Arab motifs can be seen; a fashion arose for the culture and decorations of the Muslim East. So, the influence of the Arabs on medieval European art is not in doubt, but it manifested itself especially strongly in architecture.

Clearly manifested traces of Islamic influence can be traced in the architecture of the Middle Ages; thus, the lancet or Gothic vault, which gave the name to a whole architectural style, undoubtedly originates from Arab architecture. French and Spanish architecture of the XI–XII centuries borrowed important elements of construction and decoration from oriental art, so in the most revered Christian monument, the Cathedral of Pui, the door is decorated with an inscription with Arabic letters, and in civil and military buildings, corner towers, galleries with hinged loopholes, protruding turrets, and cornices with railings were essential attributes of the Arab architectural tradition.

The combination of Arabic and Christian arts gave rise to a special style, the so-called mudejar, which flourished in Europe in the 14th and 15th centuries. So, the towers of many churches in Toledo are nothing more than copies of minarets. The old structures built by Christians in the independent provinces during the Muslim era are more Arab than Christian. Such monuments are interesting in that they are a type of old European castle with a strongly pronounced Arab character. Many other structures now regarded as purely Gothic, such as the Belem Tower near Lisbon, seem to have been inspired by the Arabs, as evidenced by their general form, protruding turrets, embrasures, and other details.

So, it can be concluded that the Muslim civilization had a very great influence in medieval Europe and that this influence belongs only to the Arabs and not to the various races that adopted their faith. With their influence in the field of morality, they introduced culture to the barbarians who destroyed the Roman Empire. In terms of intelligence, they opened up to Europe a world of scientific knowledge, literature, and philosophy that she did not know, and they were civilizers and teachers for six centuries. Perhaps the most successful expression of all about the influence exerted

by the Arabs on Europe was expressed by the French thinker Gustav Le Bon: "If [the Arabs] had managed to conquer all of Europe, they would have made it Muslim, which, of course, would have saved it from the decline that it experienced during the dark Middle Ages, which, thanks to them, never touched Spain.