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THE ROLE OF THE ART OF TRANSLATION IN THE DEVELOPMENT OF MEDICINE AND ASTRONOMY IN THE MULTICULTURAL ABBASID SOCIETY

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Abstract. The main aim of the article **is** to explore the impact of the expanding art of translation in the multicultural Abbasid society on the development of medicine and astronomy, and to examine the role of non-Arabs alongside Arabs in this field. Arab-Islamic culture and literature are not only the products of the Arab people, but also the intellectual and spiritual progress of many peoples. Especially after the Abbasids came to power, the role of non-Arab (Ajam) peoples in this culture increased even more. Also, the strengthening of the translation movement gave a powerful impetus to the development of science, Greek philosophical thought and Indo-Iranian thought penetrated into the depths of the Islamic religion. Their activity is reflected in the work of both Christian and Muslim authors.

The article examines the multicultural society that arose in the Arab Caliphate during the Abbasid period, and also examines the role of Christian writers, scholars, and translators. One of the main factors driving the translation movement was society's need for science. Translators did not just translate, but studied, analyzed, interpreted what they translated, and then wrote their own works. Along with translated works, they also had several original works. Another reason why the translation movement was so widespread was the diversity of the ethnic composition of society. Thus, the cultural life in which the Persians, Turks, Greeks and Syrians, Jews and Copts play a role along with the Arabs inevitably creates the need to learn the cultural heritage of these peoples. This can be explained by the fact that the Abbasid caliphs were loyal to different cultures than their Umayyad predecessors.

Key words: Intercultural dialogue, ethnic diversity, translation movement, Arabic literature, Abbasids.

Introduction. The ethnic diversity, the combination of different religions, characteristic of the Abbasid society, results in the creation of a unique culture. This culture is primarily accompanied by the emergence of a strong translation movement. Especially the translated works from Greek, ancient Pahlavi and Syriac languages are increasing. Many works in the fields of astronomy, medicine, and logic are translated into Arabic. The influence of translated literature on Arabic literary works and Arabic poetry can be observed. Over time, the Arabs who benefited from these marriages created their own original works in philosophy, medicine, astronomy, mathematics and other fields. Greek words are used in scientific literature, Indian, Persian and Turkish words are used in everyday language. Thanks to the Greeks, the Arabs got acquainted with philosophy, logic, astronomy, chemistry and developed these sciences. Translations from Persian and ancient Sanskrit language introduce Arabs to the history and culture of neighboring nations, as well as ancient legends. Familiarity with Buddhism, Judaism, Christianity, Manichaeism, Madhhabism and other religious confessions strengthens the tendency to interpret controversial issues within Islam, and people with different ways of thinking form the basis of different sects and sects in Islam. During this period, works related to occult sciences such as astrology, alchemy, algebra, geometry, astronomy, music theory, Aristotelian philosophy i.e. metaphysics, ethics and logic,

physics, zoology, botany, medicine, pharmacology and veterinary medicine were translated into Arabic.

Main part. The role of non-Arabs in the development of Arab culture was undeniable. It can be seen that the translators who made great contributions to the strengthening of relations between peoples also represent foreigners.

Astrology was one of the fields of science that the Arabs were most interested in. The Arabs, who were aware of علم النجوم – (ilm al-nujum – astronomy) from the time of Jahiliyyah, began to benefit from the success of neighboring nations in this field during the Abbasid period. So, they attract non-Muslim and non-Arab scholars to Baghdad. Naubakht (نوبخت) (d. 777) – originally from Persia – was the court astrologer of the Arab caliphs. He was in charge of Caliph al-Mansur's powerful group of astrologers. After his death, his son Abu Sahl ibn Naubakht (أبو سهل بن نوبخت) (d. 786), and after Abu Sahl's death his son al-Fadl ibn Naubakht (فضل بن نوبخت) (d. 815) worked as court astrologers. This task also involved the translation and distribution of works on astrology. In general, the Naubakht dynasty controlled astrology in the court of the six Abbasid Caliphs. Musa from this generation is known as the author of a number of works, he is called the first prominent astrologer of the Arabs (Holden, 2006, p. 104). The Arabs attached great importance to astrology, which can be seen in the caliphs consulting astrologers before military campaigns. Caliph al-Mutasim Billah consults astrologers before marching on the citadel of Ammuriah. Astrologers say that this campaign will be unsuccessful for the caliph. But the caliph ignored them and attacked Ammuria and conquered the rest. This event shows that in the 9th century occult sciences were not given much importance.

Once when Caliph Mahdi was going on a journey, one of his wives sent a message to the astrologer Theophil: "If you provoke the Caliph to go on this tiring journey, may God kill you." Astrologer Theophil replied to that lady: "I will die soon, but it will not be because of your curse, but because of God's writing." It won't be long after my death that ashes will fall on your head." 20 days after this writing, the astrologer dies, followed by Caliph al-Mahdi (Holden, 2006, p. 105).

Another astrologer, Abu Mashar Ja'far ibn Muhammad ibn Omar al-Balkhi (ابو معشر جافر بن محمد بن عمر البلخي) was originally from Persia. It is reported that he wrote about 50 works on astrology. Many works authored by Abu Mashar have been translated from Arabic into Greek (Kahil, 2007, p. 120].

Thus, the strengthening of intercultural dialogue results in the creation of translations into languages other than Arabic, as well as translations into Arabic. It is thanks to the Arabs that the samples of the ancient Greek and Roman culture are saved from being lost. Arabs pass the examples of this culture through the filter of Islamic thought and contribute to humanity again in a more perfect and enriched way.

Greek influence was strong in Damascus – the center of the caliphate during the Umayyad period. With the coming to power of the Abbasids, greater demographic changes began. A multicultural society was forming in Baghdad. Along with Arabs, Persians, Christians and Jews lived here. The Arabs themselves did not have a unified social influence. In addition to the Bedouin-rooted population that joined the settlement, there was also a sufficient number of sedentary people from cities such as Mecca, Medina, Hira, Taif, and Yemen.

Although Islam condemns "asabiyyah" (عصبية) – the attachment of an Arab to his tribe, tribal ties were still strong during both the Umayyad and Abbasid periods. The composition of the tribes also changed. The mawalis who were under the protection of the tribe sometimes even became real tribal fanatics, they were sincerely attached to the tribe of which they were the mawali.

After the initial Arab conquests in Syria, Palestine, and Egypt, the move of Arab rulers and tribesmen into Greek-speaking areas made translation from Greek into Arabic inevitable both in government circles and in everyday lifethroughout the Umayyad period. Necessity dictated that, for reasons of continuity, the early Umayyads keep both the Greek-speaking functionaries and the Greek language in their imperial administration in Damascus. It was only during the reign of ‘Abd-al-Malik

or his son, Hisham (r. 685–705–43 respectively), as Ibn- an-Nadīm mentions [F 242.25–30], that the administrative apparatus (dīwān) was translated into Arabic by some of the Umayyad bureaucrats, among whom Sargğūn ibn-Manṣūr ar- Rūmī, and his son, Manṣūr, are mentioned. Also related to the needs of the ruling elite in Umayyad times was the translation, sponsored by Hišām's secretary Sālim Abū- l-'Alā', of the Greek mirror for princes literature in the form of correspondence between Aristotle and Alexander the Great (Gutas, 1998, p. 22). In fact, multilingualism prevailed in Syria and Egypt, as well as in nearby areas, and some correspondence was carried out in two languages. The population knew both Arabic and Greek well. If we add the Syriac language here, we can see how rich the language landscape is.

The policies of the early 'Abbāsid caliphs, and especially of al-Manṣūr (r. 754–75) and his son al-Mahdī (r. 775–85), are of paramount importance in the search for the origins of the Graeco-Arabic translation movement.

Al-Masudi reports that, al-Mansur was the first caliph to have books translated from foreign languages into Arabic, among them Kalīla wa-Dimna and Sindhind. There were also translated for him books by Aristotle on logic and other subjects, the Almagest by Ptolemy, the Arithmetic the book by Euclid [on geometry], and other ancient books from classical Greek, Byzantine Greek, Pahlavi [Middle Persian], Neopersian, and Syriac. These [translated books] were published among the people, who examined them and devoted themselves to knowing them (Gutas, 1998, p. 30–31). The Abbasid caliphs, who supported translation, also had their own political activities. For example, astrology "confirmed" the rightful authority to their authority and presented it as a divine decree. Medicine, it is known, was related to their health. Geometry was needed by the caliphs as a necessary science in the construction of architectural monuments. Alchemy still got gold lovers thinking. Geography was needed to hold the newly conquered territories. Philosophy has diverted people's interests from their powerful works to lengthy debates around unanswered questions.

Many sciences, especially medicine, are developing in Baghdad. Representatives of other nations played a major role in the development of medicine. Galen (131–201) had a great influence on Arabic medicine. According to Galen, medicine should have a philosophical capacity, and every doctor should also be a philosopher. His theory is enthusiastically accepted in the Muslim world.

Ibn Abi Usaybiyya (ابن أبي أصيبعة d. ١٢٧٠) devoted a separate chapter to Syrian doctors working during the Abbasid period in his work كتاب عيون الأنباء في طبقات الأطباء(A Literary History of Medicine: The ʿUyūn al-anbāʾ fī ṭabaqāt al-aṭibbāʾ of Ibn Abī Uṣaybiʿah) dedicated to medicine. One of them was George ibn Gabriel (Georgius) (جورجيوس بن جبرايل), the court physician of Caliph al-Mansur.

The Caliph appreciated George as a doctor and gave him gifts. Al-Mansur was very interested in translating Greek books into Arabic. He involves George in this work. Ibn Abi Usaybiyya shows that in the 148th year of the Hijrah, the caliph fell ill and suffered from stomach problems. No matter how hard the doctors tried, they could not cure him. His condition is getting worse day by day. He gathers the doctors and asks if there is a good doctor in another city. They tell him that such a doctor is George. At this time, George was practicing medicine in Jundishapur. George, who came to the Caliph's palace, addressed Caliph sometimes in Persian and sometimes in Arabic. The caliph is impressed by his learning. George, who completely cured the Caliph, gained great prestige in the palace (Ibn Usaybiyya, 1996, p. 140). An interesting aspect of George's story is that Caliph invited him to Islam:

يا جورجيوس اتق الله واسلم وأنا أضمن لك الجنة

"Oh George, fear God and convert to Islam, and I guarantee you heaven."

George says that whether it is heaven or hell, I want to stay in the religion of my ancestors. Then he continues and says that while healing you, I followed the path of Jesus and learned medicine from him (Ibn Usaybiyya, 1996, p. 140–141).

George's works on medicine in Syriac were later translated into Arabic by Hunayn ibn Ishaq.

One of the Syrian doctors and scientists is Bakhtyashu ibn George (بختيشوع). The meaning of the name بختيشوع means Abdul-Masih (عبد المسيح). He was the son of George ibn Gabriel. Like his father, he also represented the Jundishapur medical school. He was the doctor of Harun al-Rashid (حارون الرشيد). The next doctor of the family was Jabrail ibn Bakhtyashu ibn George. Ibn Abi Usaybiyya shows that when Jafar al-Barmaki fell ill, Harun al-Rashid ordered Bakhtyashu to heal him. Bakhtyashu says, "My son Jabrail can do this job well" (Ibn Usaybiyya, 1996, p. 143).

Both Arabs and Persians believed in a good doctor, regardless of their religion or ethnicity, and the superiority in this field belonged to the Syrian Christians. However, we also see that court life is not easy for doctors. When Harun al-Rashid fell ill, another Christian doctor, a bishop, informed the caliph that Gabriel had not treated him properly, and the caliph was enraged and sentenced Gabriel to death. However, the courtier Fadl ibn Rabi (فضل بن ربيع) was in no hurry to carry out the order. Soon, Harun al-Rashid, who was treated by the bishop, dies. After that, Jabrail becomes Amin's court physician (Ibn Usaybiyya, 1996, p. 144).

George ibn Gabriel's generation achieved great success in the field of medicine. They did not spare their help from poor and destitute people. Caliphs rewarded them generously. During the era of the reign of Harun Al-Rashid, their monthly salary was 50,000 dirhams. In addition, the caliph gave a large monetary reward to his doctor on the Christian Easter (Al Azhari, 2022).

Abu Zayd Hunayn bin Ishaq al Ibadi ranks as the finest medical and scientific mind of the early Abbasid era. Born in 809 to an apothecary in Al Hirah, Hunayn went to Bagdad to study medecine as a young man. There he enrolled in the earliest known private medical schoolin Islam under the direction of Yuhanna bin Masawayh. After mastering the available Greek medical texts, Hunayn undertook a program of private translation of these works into Arabic. At the same time, Abbasid caliphs, in particular Al-Mamun initiated a poliy of rendering Greek classics on science, engineering and medicine into Arabic in order to make to make them available to a wider audience. When word of Hunayn's personal efforts reached Al-Mamun in 830, the physician was placed in charge of the Bayt al Hikmah, the Abbasid supported instituion for translation and promotion and dissemination of classical writings (Tschanz, 2003, p. 39). Hunayn quickly established himself as a reliable translator. He traveled around Syria and Byzantine territories, collecting manuscripts of medical works, and translating the best and most authentic examples into Arabic. Hunayn's translations were precisebut not overly literal. The quality of these translations was such that Hunayn was paid for them by their weight in gold. Within fifty years Hunayn and his students completed the monumental task of rendering in Arabic and Syriac all of the most important Greek medical texts written over a millennium (Tschanz, 2003, p. 39). His "Al-masail fi at-Tibb" (مسائل في الطب) – Introduction to the healing arts – quickly gained fame as a book on medicine in the Arab-Islamic world. In addition, he writes up to ten works in the field of anatomy, ophthalmology, psychology. Like any genius, what he knew could sometimes turn against humanity. A ift developed between al-Mutawakkil and Hunayn when the caliph asked Hunayn to make poison to kill one of his enemies, and Hunayn refused. The caliph grew angry and had Hunayn thrown in prison for a year. After serving his sentence, Hunayn told the caliph, "I have skill only in what is beneficial, and have studied nothing else." Hunayn was released (Stonstreet, Sunshine, 2021).

As it's mentioned, Hunayn ibn Ishaq also wrote a number of original works. One such work is his work أدب الفلاسفة (Adabu-l-falasifah – Literature of the Philosophers). In this work dedicated to Greek philosophy, it is noticeable that he gives very little space to Plato. Another work is devoted to the interpretation of the Hippocratic Oath (Tschanz, 2003).

Hunain is not satisfied with the translation of works of Greek philosophers only. He also writes works about those philosophers themselves and the world of ideas. One of such works is his work "A short book about the elements found in the book of Gale" (كتاب مختصر وجيز في الاسطقسات استخرج من كتاب جالينوس) (Galen, 1986) which he dedicated to the ideas of Aristotle and Gale about the elements. Here,

giving the word element as أسطقسّ (ustuguss) rather than as عنصر (unsur) indicates the individual style shown by Hunain in the translation. In the work, he makes a comparative analysis of Aristotle's and Galen's considerations about the elements, referring to other Greek philosophers as appropriate. It focuses on the four main elements – earth, water, air and fire. It tries to determine the place of these elements in existence.

Among Hunayn ibn Ishaq's translations, we should especially mention his translation of the work of the Greek author Theomnestus Nicopolitanus on veterinary medicine. The work was translated under the title كتاب البيطرة (Kitabu-l-baytara – Book on Veterinary Medicine). Robert Hoyland credits this translation with great importance for the study of both Greek and Arabic veterinary science. According to Hunayn, this work later played a major role in the development of veterinary medicine in Islamic countries, as well as stimulated the development of the field of veterinary medicine related to horses as a separate science (Hoyland, Kennedy, 2004, pp. 161–162).

Thus, translation work gives a great impetus to the development of various sciences. On the other hand, it brings Christian and Muslim scientists closer to each other and creates a foundation for the ethnic-religious diversity of the scientific environment. It is no coincidence that a number of prominent doctors, veterinarians, astrologers and philosophers came out of the translators. Gusta ibn Luqa (٢٨٠–٣١٩) (قصتوس بن لوقا الرومي) who played a major role in the art of Arabic translation was of Greek origin. Christian Gusta ibn Luga was engaged in translating Greek works into Arabic throughout his life. Qusta ibn Luqa belonged to the Christian sect. He was born in 820 in Baalbek, Damascus. Gusta translated works in the fields of astronomy, medicine, algebra, and philosophy into Arabic, as well as wrote original works in these fields. As Gustan's works spread throughout the Muslim East, he gained fame as a scholar. He was fluent in Greek and Syriac. Gusta, who lives in Baghdad, attracts the attention of many people. Gusta's connections were very important for his scientific activity, as the scientists of this period were financially supported only by the help of the seers (Kheirandish, 2007, p. 948). It is said that Qusta ibn Lugan surpassed even Hunayn ibn Ishaq in the field of translation.

It is noted that Gustan has up to 60 original works. Most of these works are related to medicine, algebra, philosophy and astronomy. Among Gusta's works on medicine, his "Book on Insomnia" (كتاب في السهى – Kitab fi-s-suha) occupies an important place. Qusta ibn Luqa associates sleep with moisture of the brain, and sleeplessness with drying of the brain (Kahil, 2007, p.313]. Another of his works is called "Medical Regime for the Pilgrims to Mecca: رسالة في تدبير سفر الحج – The Risala Fi Tadbir Safar Al-Hajj". This work discusses in a concise and logical manner the best regime for the traveller, the diseases which may befall him and their treatment. It is an eloquent witness to the author's profound knowledge of the works of ancient physicians, especially those of the Byzantine physician Paul of Aegina. After an exposition of the best regimen for the traveller, Qusṭā mentions the different diseases which may befall him, namely, fatigue, earache, diseases of the bronchial tubes and those caused by dust. Recommended remedies are simple and compound drugs, bathing and massage. Qusṭā then discusses criteria to determine the quality of water, means to improve bad water, and means to quench one's thirst. In the next chapters Qusṭā treats the prophylaxis against vermin and the treatment of stings and bites caused by them. After a lucid exposition of spontaneous generation, Qusṭā concludes his treatise by discussing the occurrence of the Dracunculus medinensis and its treatment (Hogendijk, 2008). The scientific works of Qusṭā include several astronomical compositions, which cover both the theoretical and the practical aspects of astronomy:

1. كتاب العمل بالكرة الفلكية في النجوم Kitāb fī al-ʿamal bi-ʾl–kura al-nujūmiyya (On the use of the celestial globe)
2. هيأة الافلاك Hayʾat al-aflāk (On the configuration of celestial bodies)
3. كتاب المدخل إلى علم النجوم Kitāb al-Madkhal ilā ʿilm al-nujūm (Introduction to the science of astronomy – astrology)

Qusṭa composed كتاب في المدخل إلى علم الهندسة the Introduction to Geometry (Kitāb fi l-madkhal ilā ilm al-handasa) for Ali ibn Yahya, mawali of the Caliph (Al-Mutawakkil). The Introduction consists of material that he had collected from Greek sources, some of which may be lost today. The Introduction to Geometry is the probable place where some of this Greek material entered the Arabic tradition (Galen, 1986, p. 165).

Conclusion. All this indicates the ethnic, religious and cultural diversity of the Abbasid society. The inhabitants of Baghdad, the center of the caliphate, who spoke Arabic, Persian and Aramaic, mingled with each other. In a (multilingual) society like Babylon, Arabic was the main medium of communication. But foreign words, foreign word formations and phonetic elements were entering the Arabic language. It seems that Arab culture experienced its golden age in the 8th-10th centuries as a result of this nobility and multicultural system. This diversity was more evident in the Christian territories conquered by the Arabs – Andalusia and Sicily.

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