

CHAPTER

9

TRANSLATION'S ROLE IN BUILDING INTERNATIONAL CULTURAL FOUNDATIONS

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9.1 INTRODUCTION

"Internationalization" refers to the process by which different cultures interact with each other and exchange knowledge and values. One of the most important building blocks of this process is the translation activities between civilizations throughout history. The transfer of literary, scientific, and philosophical texts into different languages has formed the cultural basis of internationalization and created a common civilizational heritage by transferring knowledge between societies. Of course, there have been civilizations on the stage of history that were unaware of each other. For example, it cannot be said that there was no contact between the Mayan, Aztec, and Inca civilizations and the ancient Greek civilization. However, cultural transitivity between the nations bordering the Mediterranean basin has certainly been experienced, and this interaction has even contributed to the birth and rise of civilizations. This intercultural interaction is, of course, multidimensional. Although economic and political relations take the first place in the formation of interaction, social interaction constitutes

another important pillar. This social interaction manifested itself through the sharing of art, philosophy, and religious beliefs and transforming each other over time. Factors such as trade, war, migration, marriages, and education have paved the way for the intertwining of cultures. This interaction also accelerated scientific and technological developments; each society had the opportunity to develop its own knowledge system by benefiting from the knowledge accumulation of the other. In this way, the cultural richness that emerged as a result of civilizations feeding each other has left permanent traces both locally and globally. These lasting traces have had an impact on a wide range of fields from architecture to philosophy, from art to scientific thought. The transfer of knowledge, values, and beliefs between societies located close to each other, especially in the Mediterranean basin, contributed to the formation of a common civilizational heritage. The methods and knowledge that different civilizations learned from each other led to innovations in many fields from agriculture to astronomy, from medicine to mathematics. Translation activities have been one of the most important elements of knowledge transfer in this process and have enabled the transfer of cultural and scientific heritage to the next generations through different languages. This intercultural knowledge transfer is at the heart of internationalization in the modern sense. Each culture has been influenced by the knowledge and thought systems of the other through translations, and this interaction has created a global accumulation of knowledge and values. For this reason, cultural interaction and translation activities throughout history have laid the foundations of today's international relations, cooperation and cultural fusion, and created a structure that makes internationalization culturally possible.

9.2 FROM ANCIENT WISDOM TO ANCIENT GREECE

Hilmi Ziya Ülken states that the driving force in the awakening periods of civilizations is translation movements and that translation is not only a dry transfer activity but also a chemical interaction between two

cultures and two languages (Ülken, 1997, pp. 14–15). The transfer of knowledge from ancient wisdom to ancient Greece constitutes one of the most important examples of cultural and scientific transition between civilizations. In this process, especially the knowledge of the ancient Egyptian and Mesopotamian civilizations deeply influenced the Greek world. For example, the two most influential figures in the Ancient Greek revival were Thales of Miletus and Pythagoras of Samos. Thales brought Sumerian wisdom, and Pythagoras brought Egyptian wisdom to Greece. Especially the Ancient Egyptian understanding of life after death and the soul led Pythagoras and later Plato to create an alternative worldview to the traditional Ancient Greek mythology. Pythagoras' conception of soul transmigration was inspired by Egyptian beliefs about life after death, and Plato further expanded these views and introduced the idea of the immortality of the soul. These ideas provided a new basis for moral and existential inquiry in Greek philosophy (Arslan, 2006, pp. 25–38). The Sumerians are recognized as the inventors of writing and the written legal system. They have highly developed knowledge in astronomy. The astronomical knowledge of the Sumerians enriched the Greek understanding of the sky. They have a rich literature in mythology and epics. This knowledge of the Sumerians was carried to Greece by sages such as Solon and Thales, who were engaged in trade and travelling. This transfer of knowledge paved the way for the shaping of not only knowledge but also a different world view in Greek thought. Especially in Greek philosophy, it led to questions about the structure of the universe, human nature, and moral values and enabled natural philosophers to deal with the universe in a more systematic way. In this framework, in addition to knowledge of nature, topics such as ethics, cosmology, and the understanding of the soul were reinterpreted in Greek thought. (Demir, 1998, pp. 389–393). This intellectual wealth, transmitted from ancient Egypt, Phoenicia, and Mesopotamia, made possible the transformation of Greek thought and the creation of a high civilization. Egypt was part of a highly advanced civilization, not only in religious and mythological terms but also in science, mathematics, astronomy, and philosophy. In this context,

Greek philosophers, especially Pythagoras, Herodotus, Plato, and Aristotle, took great interest in the wisdom and culture of Egypt and integrated this knowledge into their own intellectual systems (Erdoğan, 2003, pp. 60–63).

Around 3000 BC, the Sumerians began to shape world history by establishing the first written language and city-state organization in Mesopotamia. The legacy of the Sumerians is of great importance, especially in the fields of written language, law, astronomy, mathematics, literature, and religious thought. Literary genres such as myth and epic were adopted by cultures that came after the Sumerians, and works such as the Epic of Gilgamesh influenced Greek literature. In Homer's epics such as the *Iliad* and *Odyssey*, it can be observed that especially mythological and heroic themes have parallels with Sumerian epics. The Sumerians developed the number system of 60, which laid the foundation for many of today's mathematical systems, such as time measurements and circumference measurements. Sumerian scholars studied the sky and made early observations of the movements of the planets. This information was influential on Greek astronomy and mathematics. The Sumerians developed one of the world's first legal systems. Legal texts such as the *Urukagina* and later the *Code of Hammurabi* regulated the organization of the state and society. For example, thinkers such as Solon, Plato, and Aristotle were indirectly influenced by these early legal texts when thinking about the structure of the state and law. The civilizations of Mesopotamia, especially Babylonian and Assyrian, had an influence on Greek thought. Babylonian astronomical data and mathematical theories played an important role in the development of Greek science. By recording the movements of the planets, Babylonian scholars built up a deep knowledge of celestial cycles. This knowledge was a fundamental source for Greek scholars to understand planetary movements. Greek scholars such as Ptolemy used Babylonian observations of the sky to develop the geocentric model of the universe. The Babylonian zodiacal system and star charts were taken up and further developed by Greek scholars. Greek philosophers developed their philosophical ideas by deepening

the knowledge they received from Egypt and Sumer. This long-term transmission of knowledge has played a critical role in the evolution of scientific, philosophical, and religious ideas (Arslan, 2006, pp. 35–63).

The cultural heritage of the ancient Greek civilization was not only limited to Greece but also reached three continents and contributed to the nourishment of other civilizations through the efforts of the Macedonian King Alexander the Great, who was taught by Aristotle. Alexander the Great's conquests enabled the Greek cultural heritage to spread to a wide geography in Asia, Africa and Europe. Alexander, who was a student of Aristotle, carried Greek knowledge to the lands he conquered not only with his military power but also with his interest in philosophical and scientific thought, causing it to blend with different cultures such as Egypt, Mesopotamia, Persia, and India. This heritage was preserved by Ptolemy, who ruled in Egypt in the 2nd century after the fall of the Alexander Empire, gathering the scattered and unprotected Greek scholars in Alexandria and creating the Library of Alexandria by collecting all the scientific and philosophical works of the period. In this library, studies were carried out in many fields such as mathematics, astronomy, geography, medicine, and philosophy; an intellectual synthesis was created by bringing together Greek, Egyptian, Persian, Babylonian, and Indian knowledge. The library also became a meeting point for scholars and thinkers from different geographies; names such as Euclid and Archimedes, who worked here, made important contributions to the world of science. As a result, Alexandria in Egypt became a temple of science and philosophy. (Ülken, 1997, pp. 34–36). In Alexandria, ancient Greek wisdom was re-blended with ancient Egyptian wisdom, and the philosophy of Neo-Platonism was born, which would later profoundly influence Christian and Islamic philosophies. Neo-Platonism is a more mystical and metaphysical reinterpretation of Platonic thought in Ancient Greece. In the 3rd century, this philosophical movement, led by Plotinus, was later combined with the doctrines of the Christian faith by the Christian philosopher St. Augustine in the 4th century. This synthesis of Augustine contributed to the development of the mystical aspects of Christian

thought, deeply influenced the understanding of metaphysics, and was influential in Western thought throughout the Middle Ages. In the 5th-century Roman period, with the rapid spread and strengthening of Christianity, which was reinterpreted by Paul of Tarsus, this philosophical heritage of Ancient Egypt and Ancient Greece gradually lost its influence. Paul reinterpreted Christian doctrine independently of both Jewish tradition and Greco-Roman philosophical thought. When Paul's interpretations became the fundamental dogmas of Christianity and the official religion of the Roman Empire, ancient wisdom and philosophical thought were abandoned (Özbey & Coşkun, 2017).

9.3 FROM ANCIENT GREECE TO ISLAMIC CIVILIZATION

The first contact of Muslims with Ancient Greek civilization began with the conquest of Egypt in the 7th century. The conquest of Egypt and especially the capture of Alexandria were one of the most critical stages of this period. Although the Library of Alexandria did not have its former splendor in the 7th century, it contained a great accumulation of ancient Greek and Egyptian philosophy. Discovering this heritage, Muslim scholars began to translate the works into Arabic. These translations not only ensured the preservation of ancient scientific texts, but also stimulated scientific and philosophical thought in the Muslim world. These texts opened new horizons for Muslim thinkers in the fields of philosophy, science, mathematics, and medicine. It was through the Library of Alexandria that Muslims first became acquainted with philosophers such as Aristotle, Euclid, Hippocrates, Galen, Plotinus, and Ptolemy, who would later profoundly influence their scientific and philosophical thought. (Ülken, 1997, pp. 36–42). The main contact of Muslims with ancient Greek, ancient Egyptian, Indian, and Iranian wisdom was with the translation movements that started during the Abbasid period. In the 2nd century of the Hegira, cultural interaction gained momentum when Muslims took over the centers of science and philosophy of the ancient world, such as Alexandria, Antioch, Harran,

Urfa, Nusaybin, Kinnesrin, Jundishpûr and Baghdad. Although the translation of Indian and Persian sources in the field of medicine into Arabic began in the Sassanid-era Jundishâpûr madrasah during the Umayyad period, the main activity started in the 9th century with the translation school known as Beytûlhikme, which was established in Baghdad by order of the Abbasid caliph Al-Me'mun (Sezgin, 2008a, pp. 2–19). Many works in different languages were translated into Arabic during this period. The translations made during this period not only transmitted ancient scientific and philosophical texts into Arabic but also expanded the cultural and intellectual horizons of Islam and enabled the production of new knowledge by further developing this heritage (Gutas, 2022, pp. 23–37). During this period, Caliph al-Ma'mûn openly expressed his interest in and support for science and philosophy, and made a great effort to turn Beit al-Hikma into a world-class scientific center. It was not only a center of translation but also an academic environment where scientific debates, discoveries, and new ideas were generated (Türker, 2003, pp. 96–102).

Syriac translators played a major role in these translation activities. Latin, Persian, and Sanskrit texts were first translated into Syriac and then into Arabic. Syriacs played an important bridging function both in the ancient Christian world and in the transmission of the ancient wisdom heritage. In particular, translators belonging to the Syriac Orthodox and Nestorian sects were among the first translators in Western Asia to transmit the works of ancient Greek and Iranian cultures. They played a decisive role in the transfer of ancient Greek philosophy to the Islamic world. The texts, which were first translated into Syriac, were then translated into Arabic. This translation movement, especially the works of Greek philosophers such as Aristotle, Plato, Hippocrates, Galen, Euclid, Ptolemy, and Plotinus, was translated into Arabic (Eker, 2021, pp. 363–405). Syriac translators also translated works of the Indian language. The works of Indian mathematicians were translated into Arabic through Syriac translators. Syriac translators translated not only scholarly works but also cultural works from both Christian and pagan traditions, so that Muslims became acquainted

with ideas not only from ancient Greece but also from ancient Iranian, Indian, and Egyptian cultures. One of the important figures who played a role in these translation activities in Baghdad was the Arab philosopher Al-Kindi. His Arabic translations in the fields of medicine, philosophy, mathematics, physics, chemistry, music, and theology helped to raise great thinkers such as Al-Khwarizmi (Alkarismi), Ibn Sina (Avicenna), Farabi (Alpharabius), Ibn Rushd (Averroes), Bîrûnî (Albiruni), Ibn Heysem (Alhazen), Ibn Tufeyl (Abentofail) (Ülken, 1997, pp. 57–69).

In particular, Aristotle's works such as *Metaphysics* and *Organon* deeply influenced the works of Islamic thinkers on logic, existence and ethics. Aristotle's *Metaphysics* deals with deep philosophical issues such as existence, causes, God and the structure of the universe. This work had a great influence on Islamic thinkers, especially in the ontological and theological sense. Some of the basic concepts of Aristotle's metaphysics have become the cornerstones of Islamic philosophy (Bayraktarlı, 2011, pp. 201–229). Aristotle defines God as the "first cause" and argues that God is immobile and unchanging. This view was adopted by thinkers such as Ibn Rushd and formed the basis for the acceptance of God as an absolute being in Islamic philosophy. Aristotle's idea of God as the "first mover" explaining the motion of everything outside of God led to an understanding developed by blending with the theological perspectives of Islam. Ibn Sina expanded Aristotle's concept of "first cause" and defined God's existence as "necessary being" and harmonized the Aristotelian view that everything has a cause with Islamic belief. The *Organon* is the sum of Aristotle's writings on logic and is one of the first systematic works on logic and reasoning. Aristotle's understanding of logic had a great impact on the Islamic world and was used as an important tool in developing rational thought and the scientific method. Aristotle's *Organon* has an important place in Islam as a tool for understanding the relationship between reason and revelation. Ibn Sina, Ibn Rushd and al-Fârâbî used Aristotle's logic, especially deductive reasoning, to solve problems in Islamic philosophy. Al-Fârâbî did not only regard the *Organon* as a book of logic but also as the basic method for human beings to reach correct knowledge

through reason. (Kaya, 2014, pp. 71–99). Aristotle's ethical views, especially his understanding of virtue and the middle way in his *Nicomachean Ethics*, had a significant impact on Islamic thinkers. The basic principles of Aristotle's ethics, concepts such as virtue, the middle way and the good life were deeply studied in Islamic philosophy and ethics and adopted by the leading Islamic philosophers of the period. Aristotle's understanding of the middle way is parallel to the concepts of *ihsan* and justice in Islamic ethics. Aristotle argues that extremes should be avoided for a virtuous life. Ibn Miskawayh explained Aristotle's understanding of the middle way by combining it with the moral teachings of Islam. Aristotle identifies happiness with a virtuous life. According to him, true happiness is achieved by leading a virtuous life in line with one's natural purpose. This happiness does not only consist of temporary pleasures but also refers to the inner peace of the human being and the good life achieved through reason and virtue. Ibn Sina adopted Aristotle's understanding of happiness, but he said that this happiness can be achieved through approaching God and spiritual maturation. Similarly, al-Fârâbî based Aristotle's understanding of happiness on the foundations of a virtuous society and considered moral development not only as an individual but also as a social goal. Aristotle argued that virtue can be acquired through education. Virtue is acquired through constant effort and education. Ibn Rushd also argued that virtue can be acquired through reason and education for a virtuous life (Özturan, 2021, pp. 293–358).

One of the important currents in the transition from ancient Greece to Islamic civilization was Neo-Platonism. Islamic philosophers adopted Plotinus' and other Neo-Platonist thinkers' conceptions of being and God and combined them with the fundamental beliefs of Islam. Concepts such as emanation, unity, spiritual ascension, and reason had a significant impact on Islamic metaphysics, ethics, and mysticism and were discussed and developed in depth in Islamic thought. Ibn Sina was significantly influenced by Neo-Platonism and developed the hierarchy of being. Ibn Sina defines God as One and explains beings with concepts such as first cause and first intellect derived from the One. Ibn Sina's understanding

of being overlaps to some extent with Plotinus' teaching. According to him, God is the source of everything, and everything in the world emerges as a reflection of God or a mental actuality. Similarly, al-Fârâbî accepted the divine unity and the uniqueness of creation and used Plotinus' concept of emanation to describe the relationship between intellect and being. According to al-Fârâbî, everything that comes from God is connected to a first intellect, and this intellect represents the reality of all beings. Al-Fârâbî establishes a relation of emanation between the intellect and God; that is, everything that derives from God is a reflection of God. Ibn Rushd, similar to the Neo-Platonist understanding of unity, states that creation is realized through the divine intellect. Ibn Rushd emphasized that the relationship between reason and being is the only link between God and man. Ibn Arabi accepted the idea of unity in Neo-Platonism and argued that the ascent towards divine unity is possible through a spiritual journey. He adopted the understanding of the unity of beings (*wahdat al-wujud*) and saw God as the true source of existence of all things. Al-Fârâbî also adopted the idea of spiritual maturation and getting closer to God through reason and argued that human beings can reach divine truths through reason. Al-Fârâbî's views such as understanding and approaching God through knowledge and wisdom are similar to the intellectual ascent in Neo-Platonism. Ibn Sina stated that the highest goal of a virtuous life is to attain divine knowledge. According to Ibn Sina, man can reach the real truth through reason and knowledge. This is similar to the intellectual journey in Neo-Platonism, in which man must ascend through knowledge and wisdom in order to get closer to God. (Bayindir, 2016, pp. 89–118).

In addition, *Euclid's Elements* served as an important source for Muslim mathematicians, significantly influencing the development of mathematical thought. This work not only focuses on geometrical theories and the axiomatic system but also demonstrates how to construct mathematical reasoning in a logical and organized manner. Islamic scholars such as Al-Khwarizmi, Avicenna, and Ibn Rushd adopted Euclid's systematic approach, advancing mathematics even further. This methodology facilitated the creation of many significant works on geometry within the Islamic world and contributed to the

establishment of a systematic framework of thought in this field (Sezgin, 2008b, pp. 125–126). Al-Khwarizmi built his foundational work on algebra upon the numerical concepts and equations derived from *Elements*, establishing a new mathematical discipline. Al-Battani and Al-Farabi extended Euclid's geometric principles to astronomical calculations, improving the understanding of celestial movements. Al-Battani specifically utilized Euclid's geometric framework to refine Ptolemy's astronomical model, enabling more accurate computations of planetary motions. Similarly, Ibn al-Haytham, in his groundbreaking studies on optics, applied Euclid's geometry to explore the visual and physical world, employing geometric principles of light. In addition to Euclid, the works of other prominent mathematicians such as Archimedes, Pythagoras, Hipparchus, and Ptolemy were translated into Arabic by scholars like Thabit ibn Qurra and Hunayn ibn Ishaq. These translations played a pivotal role in preserving and expanding the mathematical and scientific (Aslan, 2013, pp. 63–87).

In addition, the works of Hippocrates and Galen in the field of medicine had a wide influence in the Muslim world. Hippocrates is considered one of the most important figures in the history of medicine. Hippocrates' medical approaches also had a profound impact on the Islamic world and were an important source in laying the foundations of Islamic medicine. In particular, the Hippocratic Oath and his understanding of medical ethics played a major role in the development of Islamic medicine. Similar ethical rules were developed in Islamic medicine. Important Islamic physicians such as Ibn Sina, Ibn Rushd, and Al-Razi (Rhazes) adopted and developed Hippocrates' understanding of medical ethics. In Islamic medicine, ethical rules such as empathizing with patients and applying treatment in an honest and impartial manner were inspired by Hippocrates' principles. In this context, the medical practice of Islamic physicians aimed not only to cure physical diseases but also to achieve moral and psychological healing. Hippocrates regarded medicine as an art and a science and argued that diseases were caused by natural causes and not by the wrath of the gods or evil spirits. This means that medicine is recognized as an

approach based on natural sciences. This view was also adopted and developed by Islamic medicine. Al-Razi, taking the medical understanding of Hippocrates, argued that microbes cause diseases and that diseases are natural processes. El-Razi stated that diseases should be treated by taking into account natural causes, and in parallel with Hippocrates' approach, he attached great importance to natural treatment methods. Ibn Sina, on the other hand, developed a more comprehensive medical system by combining Hippocrates' views on anatomy and physiology with Galen's medical knowledge in his *Law of Medicine*. Ibn Sina used the Hippocratic point of view in understanding the causes of diseases and treatment methods. Galen is recognized as one of the most important figures of ancient Greek medicine, especially for his contributions in the fields of physiology, anatomy, medical theory, and therapeutic methods. Galen's work formed the basis of medicine from the Middle Ages to the Renaissance and also had a significant impact on the Islamic world. Galen's medical knowledge was adopted by Muslims in translations from the mid-7th century onwards and played a decisive role in the development of medical science in the Islamic Golden Age. Among the best-known translations are medical texts such as "*Kitab al-Tibb*" and "*Kitab al-Muhir fi al-Tibb*", two of Galen's most important works. These texts had a wide influence on Muslim medicine in both theoretical and practical fields. Galen's anatomical, physiological and pharmacological views were accepted especially by great Islamic thinkers such as Ibn Sina and Er-Râzi. Galen's views on anatomy and physiology constituted a fundamental source of reference on the functioning of the body in traditional Islamic medicine. Muslims largely accepted and developed Galen's views in these fields in Ibn Sina's "*Al-Qanun fi't-Tib*". Muslims took Galen's views on herbal medicines, their properties and treatment methods and used them in their own medical practice. Galen's medical practice had a great influence on the practical areas of Islamic medicine. Galen left important writings on patient examination, treatment methods, and surgical techniques. In terms of the development of surgical medicine,

Galen's works were adopted by great surgeons such as Ibn Zuhra and Ibn Jazle. (Kutluer, 1993, pp. 32–34).

Ancient Greek philosophy had a profound impact on the intellectual development of Islamic civilization, and these interactions made significant contributions to the development of science, philosophy, logic, medicine, mathematics, and astronomy. The Islamic world not only preserved Greek thought but also blended it with its own beliefs and knowledge. Islamic civilization embraced the Greek heritage through a process of both interpretation and development and historically became the light of science and philosophy during the Middle Ages, laying the foundations of the Renaissance. This interaction built a cultural bridge and played a fundamental role in shaping intellectual developments in human history.

9.4 FROM ISLAMIC CIVILIZATION TO WESTERN CIVILIZATION

The wisdom from Ancient Egypt, Ancient Greece, India, and Persia was collected in Arabic as a result of translation activities that started in Baghdad in the 9th century. This accumulation provided the intellectual ground for the Western awakening through Latin translations following the Muslim experiences in Andalusia and Sicily in the 12th century. Especially the city of Cordoba was a place where Muslim, Christian, and Jewish scholars came together and exchanged ideas. The library established by the Muslims in Cordoba was the center of the transfer of Arabic scholarship into Latin in the 12th century. (Azimli, 2009, pp. 63–82). Another important center for translations from Arabic into Latin in the same period was the Toledo School of Translation, established in the north of Andalusia. Raymond, the archbishop of Toledo, and Bishop Gerardus Cremonensis were both supporters of these translation activities and translated many Arabic works into Latin. The Toledo Translations include not only scientific texts but also philosophical, medical, mathematical, and astronomical works. The translation of these works into Latin through the Muslim experience in Sicily and al-

Andalus prepared the Renaissance, which the West calls akin to the revival of Ancient Greece. The rational and scientific approaches developed in the Islamic world influenced scholastic philosophy in the West and led to the replacement of the dogmatic ideas of the Middle Ages with more rational and empirical approaches. These cultural interactions in centers such as Toledo and Cordoba laid the intellectual foundation for the rebirth of Western civilization and were the starting point for the Renaissance period. (Ülken, 1997, pp. 215–224).

Especially the translations of Kindi's works and Ibn Rushd led to the emergence of Scholastic philosophy by questioning Patristic philosophy. Kindi showed great interest in Greek philosophy and adapted the works of Aristotle and Plato to Islamic thought. While laying the philosophical foundations of Islamic thought, Kindi tried to balance the relationship between reason and faith and aimed to unite Greek logic and Islamic beliefs. This approach was also effective in the development of scholastic thought. Ibn Rushd is one of the most important figures of Islamic philosophy, and he had a profound influence on Western thought. Known for his philosophical works and interpretations of Aristotle, Ibn Rushd left a great mark on Western philosophy in the Middle Ages and especially contributed to the development of scholastic philosophy. One of Ibn Rushd's most important contributions is that he explained the teachings of Aristotle's philosophical system, especially in the fields of metaphysics, ethics and logic, in a simple and systematic way. These in-depth analyses of Aristotle's philosophy were adopted by the thinkers who shaped scholastic philosophy in the Western world and formed the cornerstones of the developing medieval scholasticism. In addition to logic, his studies on epistemology and metaphysics contributed to the development of philosophical rationalism in the West. Ibn Rushd's ideas on the relationship between reason and faith led to the emergence of a philosophical school called Averroism in the West, and his philosophical views were followed especially by Anselmus, Abelard, Lombardos, Thomas Aquinas, Willam of Ockham, Albertus Magnus, and John Duns Scotus, the leading figures of the Western revival. Ibn Rushd provided Western thinkers with an important example of combining

philosophical reasoning with religious beliefs. Ibn Rushd's interpretation of Aristotle has been adopted among Western philosophers as an endeavor to resolve the distinction between reason and faith (Ülken, 1997, pp. 240–284).

Al-Fârâbî is one of the most important figures of Islamic philosophy and had a great influence on Western thought. He tried to reconcile Aristotle's teachings in logic, metaphysics and ethics with Islamic thought. He argued that reason and virtue must be united to achieve happiness. Al-Fârâbî emphasized that for a virtuous life, right actions should be taken under the guidance of reason. Al-Fârâbî's ethical theory influenced the scholastic ethics of thinkers such as Aquinas in the West and deepened the theological ethics in Western philosophy. Al-Fârâbî's views on politics and statecraft also influenced Western thought. Especially in his work on the virtuous state (*Medinat al-Fadhila*), he defended the idea of a peaceful social order by combining Aristotelian understanding with Platonic ideals. Al-Fârâbî's conception of the virtuous state was also adopted by Western scholastic philosophers and combined with orthodox Christian thought. Al-Fârâbî's approach to the concept of virtue influenced the Renaissance thinkers' understanding of individual freedom and virtue in the West and contributed to the Enlightenment thinkers' understanding of human rights and social contract. In particular, Western thinkers such as John Locke and Jean-Jacques Rousseau were inspired by al-Fârâbî's philosophical emphasis on the relationship between state, individual and society. (Karlıağa, 2023b, pp. 119–123).

Al-Bîrûnî, who lived in the 11th century, is recognized as one of the greatest scientists of the medieval Islamic world. Bîrûnî attached great importance to the use of the experimental method and observation, especially in scientific studies. This approach became one of the cornerstones of scientific thought in the West. The scientists of the Renaissance period in the West, especially Galileo Galilei and Johannes Kepler, were based on the use of observation and experimental data in natural sciences. al-Bîrûnî's observationalist understanding of science and his attempt to model nature mathematically were an important

source of inspiration for the development of the modern scientific method in the West (Sparavigna, 2013, pp. 52–63). Bīrūnī's works in the fields of astronomy and physics, especially his analyses of the movements of the moon and the sun, his techniques for determining the positions of the stars, and his efforts to calculate the diameter of the Earth influenced scientists such as Kepler and Copernicus in the West. For example, al-Bīrūnī laid the foundation of astronomical studies in the West with the methods he developed to calculate the distances between stars and the rising and setting celestial bodies. Such calculations had an impact on Copernicus' and later Galileo's investigations into the structure of the universe. Bīrūnī (n.d.) made geographical coordinates and calculations of length and latitude quite accurately, and this information inspired geographers and cartographers in the West. Portuguese geographers and explorers in the West used Bīrūnī's methods and recognized his importance in geographical discoveries.

Jabir bin Hayyan, one of the most important chemists and scientists of the Islamic world, left deep traces both in Islamic civilization and in the West with his works in the field of chemistry. Considered one of the founders of chemistry, Jabir was known as Geber in the West. Jabir transformed chemistry from alchemy, a mystical endeavor, into a scientific discipline. Using the experimental method, he developed a systematic approach to chemistry based on observation and experimentation. He was the first scientist to describe in detail the synthesis of chemical substances such as sulfuric acid, nitric acid, and hydrochloric acid. Jabir's writings were translated into Latin in the 12th century, and his book "Summa Perfectionis" (Summaries of Perfection) became one of the cornerstones of chemistry literature in the West. These works became the reference source for the study of alchemy and chemistry in Western Europe. Medieval European scholars such as Roger Bacon and Albertus Magnus were inspired by Jabir's works and worked on chemistry and natural philosophy. (Sezgin, 2008c, pp. 97–108).

Ibn Heysem (Alhazen) left a great impact on the Western world with his contributions in the fields of optics, physics, ophthalmology,

and experimental sciences. Alhazen's most important work is known as "Kitab al-Manazir". This work is one of the first systematic and experimental works on the science of optics. Alhazen explained the theories of light and color, the mechanism of vision, and optical phenomena such as reflection and refraction. Roger Bacon was one of the first Western scientists to be influenced by Alhazen's works. Bacon tried to develop a scientific method using Alhazen's theory of light and experimental method. Johannes Kepler was influenced by Alhazen's ideas on the nature of light and the theory of vision. Kepler further developed Alhazen's theories in his research on the function of the lens of the eye, refraction of light and vision. Great scientists such as Leonardo da Vinci used Alhazen's theories of the eye and light in their works. Galileo Galilei was also inspired by Alhazen's scientific approach while contributing to the popularization of the experimental scientific method in the West. Another important contribution of Alhazen in the study of optics is that he explained optical phenomena using mathematical methods. He solved geometrical optics, i.e., the reflection and refraction of light and the shape of lenses, in a mathematical language and described the movement of light in a geometrical framework. In particular, Isaac Newton, Johannes Kepler and René Descartes adopted Alhazen's geometrical and mathematical methods in their work on optics and light. (Pattabanoğlu & Uymaz, 2021, pp. 141–165).

Al-Khwarizmi is one of the greatest mathematicians and scientists of the Islamic golden age in the 9th century. He is particularly known for his contributions in the fields of mathematics, astronomy and geography, but his best-known work, "Kitab al-Mukhtasar fi Hisab al-Jabr wal-Muqabala", had a great impact on the Western world. (Yavuz, 2021, pp. 49–58). Al-Khwarizmi laid the cornerstones of algebra and laid the foundation for the first algorithms used in solving equations. His work on algebraic terms and equation solutions inspired Western mathematicians, especially Pierre de Fermat and René Descartes, to develop algebraic thinking. Al-Khwarizmi ensured the use of Indian numbers in the Islamic world and discussed this openly in his work

"Kitab al-Jabr". In the West, Hindu numerals were Latinized and started to be recognized and used as "Arabic numerals" from the 11th century onwards. Fibonacci laid the foundations of modern mathematical calculations in the West by introducing these numbers in his work *Liber Abaci*. These numbers played an important role in the development of calculation and trade in the West and also helped lay the foundations of calculators and computer science. Al-Khwarizmī made astronomical calculations, analyzed the movements of celestial bodies, and created more accurate star tables. Western scholars made use of al-Khwarizmi's astronomical works, especially to update the data in Ptolemy's *Almagest*.

Ibn Sina lived between 980–1037 and was considered to be the pinnacle thinker of Islamic philosophy, which began with Kindi. He worked in the fields of philosophy, medicine, logic, astronomy, and mathematics. His works directly influenced both Islamic and Western thought. Ibn Sina's works were studied by many Western scientists and thinkers in the fields of medicine, philosophy and logic in medieval Europe, and his teachings were Latinized and spread in the West. (*Ibn Sina*, n.d.). Towards the end of the 12th century, Ibn Sina became known to Western scholastic philosophers, and his first work translated into Latin was *al-Shifa*. The work was presented to Jean, the archbishop of Toledo at the time. Shortly after the impact of this work, Ibn Sina's most important work in the field of medicine, "*El-Kanun fi't-Tib*" was translated into Latin. This work deeply influenced medical education in the West. After the work was translated from Arabic into Latin, it was accepted as a basic medical book in universities in the West, especially from the 13th century onwards. His philosophical works such as "*Kitab al-Shifa*" and "*Kitab al-Najat*" became an important source in philosophical schools in the West. Ibn Sina's medical knowledge was one of the cornerstones of medical education in medieval Europe for 400 years. Ibn Sina took Aristotelian philosophy and created his own philosophical system with the influence of Plato and Islamic thoughts. In this system, basic philosophical problems such as existence, reason, theory of knowledge, soul, and God are discussed. Ibn Sina defined God as the first cause and necessary being, and this understanding influenced

Western philosophical thinkers. Especially the ontological arguments in the West and the debates on proving the existence of God were influenced by Ibn Sina's metaphysical philosophy (Karlıağa, 2023b, pp. 123–135).

Ibn Tufayl was an Andalusian philosopher, writer, and scientist who lived in the 12th century. Ibn Tufayl's best-known work, *Hayy bin Yaqzan*, had a significant influence on Western thought. This work presented ideas on natural philosophy, epistemology, and the nature of man that transcended the traditional thinking of the time. Ibn Tufayl's *Hayy bin Yaqzan* was translated into Latin in the West in the 14th century. This translation had a great impact in the West and attracted the attention of rationalist and empirical thinkers. The work inspired utopian writers such as Thomas More, Campanella, and Francis Bacon. The Latin translation of the work allowed Western readers to delve deeper into the natural sciences, epistemology, and philosophical anthropology (Yazıcı & Gündoğdu, 2022, pp. 531–542). In *Hayy bin Yaqzan*, it is argued that a person should acquire knowledge only through observation and reason. Ibn Tufayl argued that a person who studies nature can reach scientific knowledge through reason and experiment to understand the order in nature and the functioning of the universe. This approach contributed to the development of empiricism and rationalism movements in the West. Ibn Tufayl's influence in the West is related to the philosophical debates on the relationship between man and nature, especially during and after the Renaissance. Philosophical figures such as Leibniz, Descartes and Spinoza found traces of Ibn Tufayl's ideas in their ideas on natural philosophy and the nature of man. In particular, there are parallels between Descartes' idea of "Cogito ergo sum" and Ibn Tufayl's views in *Hayy bin Yaqzan*, who tried to explain the relationship between reason and self-consciousness (Karlıağa, 2023a, pp. 343–345).

Hilmi Ziya Ülken states that the transition of philosophical interest from Islamic civilization to Western civilization took place in three stages. He states that the first phase began when many people from Italy, Spain, and France came to study at Islamic madrasas in Andalusia and Sicily. Ülken argues that the second stage was the establishment of

similar Islamic madrasas in Italy, and the teachers in these madrasas were educated in Islamic madrasas, and that the third stage was the establishment of the universities of Oxford and Cologne, followed by the establishment of the Boulogne and Montpellier madrasas in France and England by the teachers educated in the madrasas in Italy. According to Ülken, this philosophical interest, which began with the translation movement from Arabic to Latin in the West, also led many Western thinkers to deepen their research by making scientific journeys to the East. (Ülken, 1997, pp. 215–223). Prof. Dr. Fuat Sezgin, who is known worldwide for his studies in the field of Islamic history of science, showed that the transfer of scientific thought from Muslims to Christians started with translation movements from Arabic to Latin in Andalusia in the 11th century and continued until the 16th century through different routes. (Sezgin, 2008a, pp. 160–167).

9.5 CONCLUSION

Throughout history, civilizations that have succeeded in producing high cultural products have become the focus of attention of other nations, and these cultural products have enabled cultural transitivity between nations through translation activities. Western Civilization, which carried out the Renaissance and Reform movements by transferring the products of the previous high culture into its own language, has managed to produce high cultural products since the 17th century and has managed to be the center of attention of other nations until the 21st century. The French, English, and German works of Western civilization are still being translated into their own languages by nations who wish to be a part of its high civilization. The philosophy, science, and art produced by Western civilization still set the trends of the contemporary world. Today, as in the past, this cultural transfer between nations through translation activities also provides the cultural basis for internationalization. The idea of uniting all nations under a single high civilization has been tried countless times throughout history by nations that have succeeded in creating a high civilization. Each high civilization has made every effort, both

theoretically and practically, to make its philosophy dominant. Today, thanks to the opportunities provided by the technology of the period we live in, the interaction between cultures is evolving to a different dimension. In the 21st century, first the internet revolution, then the mobile phone revolution, and finally the artificial intelligence revolutions have transformed intercultural interaction into a timeless and spaceless form. Now, thanks to the internet, mobile phones and artificial intelligence tools, every single person can instantly access both the entire intellectual accumulation of humanity and the sharing of someone producing content on the other side of the world in their mother tongue. When the 21st century is considered as a period in which individualization has reached its peak, this situation shows that humanity is on the verge of a new transformation when evaluated from a historical perspective. Technological opportunities now allow individuals from different cultures to interact with each other not through a dominant culture but equally. In particular, artificial intelligence-supported translation technologies almost completely eliminate the barriers between different languages and cultures and prepare ground for communication on equal terms. These developments present a promising picture for the future of internationalization. In this new technology-supported era, the interaction of cultures can contribute to the formation of a more inclusive and richer human accumulation by preserving diversity and originality, rather than creating a uniform civilization. Cultural interaction can transform from a one-way flow into a multi-directional dialogue.

REFERENCES

- Arslan, A. (2006). *İlkçağ felsefe tarihi (1 cilt)* [History of ancient philosophy (Vol. 1)] (1st ed.). İstanbul Üniversitesi.
- Aslan, İ. (2013). Öklit dışı geometriye giden yolda İslam dünyası matematikçileri [Mathematicians of the Islamic world on the way to non-Euclidean geometry]. *Dört Öge*, 3, Article 3.

- Azimli, M. (2009). Sicilya'daki İslam medeniyeti'nin Avrupa'ya etkileri [Effects of Islamic civilization in Sicily on Europe]. *Marife Dini Araştırmalar Dergisi*, 9(2), Article 2. <https://doi.org/10.5281/zenodo.3344048>
- Bayındır, A. (2016). İslam felsefesi [Islamic philosophy]. *Namık Kemal Üniversitesi İlahiyat Fakültesi Dergisi (NKUIFD)*, 2(2), Article 2.
- Bayraktarlı, İ. Y. (2011). İslam felsefesinin doğuşunda Eflatun-Aristoteles felsefesinin etkisi [The influence of Plato-Aristotle philosophy on the birth of Islamic philosophy]. In *TYB AKADEMİ* (p. 271).
- Bîrûnî. (n.d.). TDV İslâm Ansiklopedisi [TDV Encyclopedia of Islam]. Retrieved November 14, 2024, from <https://islamansiklopedisi.org.tr/biruni>
- Demir, N. (1998). Felsefe'nin menşei üzerine bazı düşünceler [Some thoughts on the origin of philosophy]. *Cumhuriyet Üniversitesi İlahiyat Fakültesi Dergisi*, 2, Article 2.
- Eker, N. (2021). Tercüme faaliyetleri ve Mu'tezilî oluşuma etkisi -Felsefi düşüncenin İslam kelamına dahil olması bağlamında bir değerlendirme- [Translation activities and its effect on Mu'tazilite formation -An evaluation in the context of the inclusion of philosophical thought into Islamic theology-]. *Batman Akademi Dergisi*, 5(2), Article 2.
- Erdoğan, İ. (2003). Felsefenin menşei ile ilgili görüşler [Views on the origin of philosophy]. *Fırat Üniversitesi İlahiyat Fakültesi Dergisi*, 8, 0–0.
- Gutas, D. (2022). *Yunanca düşünce Arapça kültür* [Greek thought, Arabic culture] (L. Şimşek, Trans.). Kitap Yayınevi.
- Karlıağa, B. (2023a). *İslam düşüncesi'nin Batı düşüncesi'ne etkileri (Cilt 1)* [Effects of Islamic thought on Western thought (Vol. 1)]. Mahya Yayınları.
- Karlıağa, B. (2023b). *İslam düşüncesi'nin Batı düşüncesi'ne etkileri (Cilt 2)* [Effects of Islamic thought on Western thought (Vol. 2)]. Mahya Yayınları.
- Kaya, V. (2014). Aristü el-Hakim: Aristoteles'in İslam düşüncesindeki dönüşümü üzerine notlar [Aristü el-Hakim: Notes on the

- transformation of Aristotle in Islamic thought]. *Cogito*, 78 (Aristotelesçilik 20. Yıl Özel Sayısı).
- Kutluer, İ. (1993). Cālīnūs [Galen]. In *Türkiye Diyanet Vakfı İslâm Ansiklopedisi* (Vol. 7, pp. 32–34). TDV Yayınları.
- Özbey, A., & Coşkun, A. (2017). Pavlus Hristiyanlığından Protestan Evanjelizmine misyonerlik süreci [The missionary process from Pauline Christianity to Protestant Evangelicalism]. *Yönetim Ekonomi Edebiyat İslami ve Politik Bilimler Dergisi*, 2(2). <https://doi.org/10.24013/jomelips.349838>
- Özturan, H. (2021). *Ethostan ahlaka antik Yunan ahlak literatürünün İslam dünyasına intikali ve alımlanışı* [From Ethos to Ethics: The transmission and reception of ancient Greek moral literature into the Islamic world]. Klasik Yayınları.
- Pattabanoğlu, F. Z., & Uymaz, T. (2021). Modern bilimsel metodolojinin temellerini İbnü'l Heysem'de aramak [Searching for the foundations of modern scientific methodology in Ibn al-Haytham]. *Kutadgubilig: Felsefe Bilim Araştırmaları*, 43, 141–165.
- Sezgin, F. (2008a). *İslam'da bilim ve teknik (1 Cilt)* [Science and technology in Islam (Vol. 1)]. İstanbul Büyükşehir Belediyesi (Kültür A.Ş.) Yayınları.
- Sezgin, F. (2008b). *İslam'da bilim ve teknik (3 Cilt)* [Science and technology in Islam (Vol. 3)]. İstanbul Büyükşehir Belediyesi (Kültür A.Ş.) Yayınları.
- Sezgin, F. (2008c). *İslam'da bilim ve teknik (4 Cilt)* [Science and technology in Islam (Vol. 4)]. İstanbul Büyükşehir Belediyesi (Kültür A.Ş.) Yayınları.
- Sparavigna, A. C. (2013). The science of al-Biruni. *International Journal of Sciences*, 2(12), 52–63. <https://doi.org/10.48550/arXiv.1312.7288>
- Türker, S. (2003). *İslâm düşüncesinin gelişiminde tercüme faaliyetlerinin rolü* [The role of translation activities in the development of Islamic thought]. <http://acikerisim.mu.edu.tr/xmlui/handle/20.500.12809/8808>
- Ülken, H. Z. (1997). *Uyanış devirlerinde tercümenin rolü* [The role of translation in periods of awakening]. ÜLKEN.

- Yavuz, T. (2021). Cebrin semantiği: Hârizmî cebrinin felsefi açıdan değerlendirmesi [Semantics of algebra: A philosophical evaluation of Khwarizmi's algebra]. *Journal of University Research*, 4(Özel Sayı). <https://doi.org/10.32329/uad.1004370>
- Yazıcı, M., & Gündoğdu, Y. B. (2022). Thomas More ve Tommaso Campanella'nın ütopyalarında erdem anlayışı [The concept of virtue in the utopias of Thomas More and Tommaso Campanella]. In *İnsan, din ve erdemlilik* (1st ed., pp. 531–542). Ensar Neşriyat.