The development of scientific and philosophical thought in the 9th-11th centuries

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Abstract: *Hundreds of scholars, such as Ibn Musa al-Khwarizmi, Ahmad Ferghani, Abu Yazid Bistani, Mansur al-Khallaj, Abu Bakr ibn Musa al-Wasiti, Abu Rayhan al-Biruni, Abu al-Qasim Firdawsi, Abdullah Jafar Rudaki, Yusuf Bolasoguni, Abu Bakr Narshahi, Abu Nasr al-Farabi, Abu Ali Ibn Sina, Ahmad ibn Abdullah, Ahmad ibn Abdullah Mavrazi, Ahmad Yugnaki, Yusuf Khos Khajib, Mahmud Kashgari, have contributed greatly to the emergence of progressive ideas.*

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Muhammad ibn Musa al-Khwarizmi (787-847) made a great contribution to the development of science and wrote many works on astronomy and mathematics. Khwarizmi worked in the House of the Wise under the leadership of Caliph Ma'mun. His work "Al-jabr wal muqabala" is especially famous. This work serves as a textbook on algebra for Arab and Eastern scientists. Khwarizmi's works such as "Astronomical Tables", "Treatise on the Sundial", "Treatise on Indian Calculation", "Treatise on History", "Treatise on Music", "Zij" are works of scientific and philosophical importance. These works are evidence that Khwarizmi was a great mathematician and encyclopedist. Although Khorezm did not write a special work on philosophy, there are countless scientifically proven philosophical thoughts, ideas, and theoretical teachings put forward in all his works on mathematics, geometry, astronomy, geography, history, and music. He is our compatriot who made an incomparable contribution to the development of world science with these works.

The people of Central Asia have a rich material, spiritual, and philosophical history. The people of this land were a country where agricultural irrigation and cities developed from the first centuries of our era. Their crafts established trade and cultural ties with European and Eastern countries. In economic life, such ideological and cultural spheres as architecture, sculpture, painting, literature, medicine, and philosophy also developed. These advanced sciences emerged in the struggle against the reaction of Arab invaders and local feudal lords.

Al-Farabi Abu Nasr Muhammad studied in Al-Farabi on the banks of the Sirdarya River, then in Damascus. He was a great linguist, logician, mathematician, chemist, physician, psychologist, ethicist, and musicologist. He was well versed in Greek culture and had advanced ideas in the field of natural

science and social and political thought. Al-Farabi was known as the second teacher after Aristotle. He was a great philosopher who accurately translated Aristotle's works. He translated Aristotle's works such as "Categories", "Analytics", and "Poetics". He himself wrote more than one hundred and fifty works. Although his works have been lost, several of them have come down to us. His works such as "Commentary on Metaphysics", "Ihsanul-ulum", "The Great Book of Music", "Assiyosat al-Mudayaniyyat", and "Treatise on the Origin of Sciences" have come down to us.

He views the material world as material objects. He tried to free Aristotle's progressive view from mysticism, and promoted progressive ideas. He believes in a force outside nature and says that it does not interfere in world affairs, saying that it does not have mass, quality, or properties.

There is a strong materialistic tendency in Farabi's philosophy. He does not deny matter, he considers it the first principle. In his opinion, other objects arise from the combination of water, air, fire, sky, and earthly things. He says that celestial bodies also arose from this.

So, in his opinion, there is matter and form in the world, but they are equal. Here we can say that he preceded Aristotle in science and philosophy. Aristotle said that form is primary, matter is secondary. Farabi's movement of matter is objective, because matter is objective. He shows that the source of movement of the material world is that things in the world are changing, and the cause of movement is the combination of different substances.

He says that material things are changeable - they come into being, they disappear. In his opinion, things consisting of material elements do not change, do not come into being again, do not disappear.

He divides the material world, things in motion and change into the following parts: 1) celestial bodies, 2) minerals, 3) plants, 4) animals, 5) people. These are infinite phenomena that differ in quality. He considers matter to be the cause of quality change. This is spontaneous dialectics and simple materialism. Al-Farabi also put forward progressive ideas in the theory of knowledge. Man, his intuition appeared before reason, and reason is a product of the material world. He says that man differs from animals with his mind. He says that human knowledge rises from perception to intellectual thinking. This is materialism in the theory of knowledge. Al-Farabi believed that human knowledge cannot illuminate the mystery of the material world. Al-Farabi says that the body dies with the exit of the soul.

Thus, Al-Farabi's philosophical views embody progressive ideas.

One of the thinkers of Central Asia is Abu Raykhan al-Biruni. He is considered a great encyclopedist scientist. With his achievements in the field of natural science, he occupies a significant place in the history of science, he developed the calendar and the calendar. His work "India" is related to philosophy, geography, astronomy, and mineralogy. Matter, in his opinion, changes existing things, creates the shape of things. Matter is also the basis of thought. He believes in the ability of a person to know, and is wary of religious superstition. Matter is the basis of

everything, creates everything, everything changes, grows, comes into being, and perishes. He says this is a natural process. He says that matter has a creative nature.

The great thinker of that time is Abu Ali ibn Sina. Abu Ali ibn Sina was born in 980-1037 in the village of Afsona near Bukhara, in the family of an official of the Samanid court, Nuh ibn Mansur. During this period, Central Asia was ruled by Arabs. But after that, it became a center. Science and culture developed. Ibn Sina is a physician, pharmacologist, writer, chemist, astronomer, philosopher, ethicist and scientist who contributed to the development of other sciences. He wrote more than 500 works. 60 of them have survived to our time. The works are kept at the Institute of Oriental Studies of the Academy of Sciences of Uzbekistan. Abu Ali Ibn Sina is placed alongside Hippocrates, Galen, and Aristotle of ancient times. His work “Kitab al-Aqun fittib” has been and continues to be a guide for physicians. From it until the 18th century, it was used as an encyclopedia of anatomy, physiology, therapy, diagnostics, prevention, and pharmacology. This work was published more than 30 times in Latin in Lyon, Rome, Naples, and Venice.

He demands impartiality in the relationship between natural science and religion. At that time, he secretly studied anatomy, treating patients. He showed that the mental state of a person depends on his condition in the body, that in order to know mental activity, it is necessary to study biological processes and the nervous system well, as well as that rest, travel, physical education, weather and preventive measures are necessary for human health. Even before the discovery of microbes, he showed that diseases spread through water. He paid attention to the issue of the unity of theory and practice. In the field of natural science, he expressed scientific and philosophical thoughts about volcanoes, mountains, and their movement.

Ibn Sina's works related to philosophical scientific natural views are "Kitab ash-Shifo", "Donishnama", "Najat". He recognized that physics is the doctrine of nature, logic is the way of knowing nature and man, metaphysics is the science of knowing being, philosophy is the science of being. Ibn Sina is a follower of Aristotle in this field. He developed his own ideas without accepting Aristotle's erroneous views. He explained that the universe is eternal, uncreated. He called existence matter. Eternal matter exists, objects emerge from matter. Matter is the source of existence. Form is in contact with matter, he says.

He rejected Aristotle's abstract form. Ibn Sina put forward materialistic views in the theory of knowledge. In his opinion, reason is an active force, a tool of knowledge. He puts human experience first, understanding comes later. The material world is primary, understanding is secondary. The human mind arises through sensory perception through labor over a long period of time. He founded Aristotle's science of logic.

There are also internal contradictions in Ibn Sina's philosophy. Theology does not interfere with the work of the material world, it develops on the basis of objective laws. He says that there is no vacuum in space, space is a property of

matter, the material world is in motion, matter is connected with motion, and time is connected with things, they cannot be separated.

If we turn to the socio-political views of Ibn Sina, he fought against injustice. In his opinion, both priests and statesmen, writers, and military men, in other words, everyone should be in their place. It is not surprising that this idea arose from the social conflicts of that time.

The 1000th anniversary of Ibn Sina's birth (in 1982) was celebrated with a view to his place in world culture and the development of science. Thus, Central Asian thinkers occupy a special place in the history of philosophy.

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