

IBN SINA: THE MULTIFACETED ENCYCLOPEDIST OF THE MIDDLE AGES

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Abstract:

The article is devoted to the life and contribution of the outstanding encyclopaedist and ancient physician Ibn Sina (Avicenna). The author emphasizes his extensive knowledge in various fields of science, from medicine to philosophy, astronomy and mathematics. The article discusses the classification of sciences proposed by Ibn Sina, as well as the influence of his ideas on the development of subsequent generations of scientists.

Keywords: Ibn Sina, Avicenna, philosophy, medicine, scientific classification

Abu Ali Husayn ibn Abdallah ibn Sina, known in Europe under the name Avicenna, is an outstanding encyclopaedist of his time. He is the author of more than a hundred works devoted to various branches of knowledge. Ibn Sina followed Farabi in a number of fundamental issues of philosophy and was close to Beruni. Comprehensively familiar with ancient philosophy, he was strongly influenced by Aristotle.

Ibn Sina united almost all the sciences known before him both in Greece and in the East and sought to have his say in each of them, to give something new. Without any exaggeration, it can be argued that Ibn Sina in astronomy and chemistry, music and literature, physics and botany, mathematics and zoology, geology, etc. stood up to the requirements of that time. He tried to connect medicine with a practical experimental method, to build it on the basis, first of all, of experience and observations. He reveals, as far as was possible under the conditions of that era, the natural patterns of the most complex human body. He considers changes and anomalies in this organism to be natural phenomena caused by biological, chemical, climatic and other changes. He also connects the state of the body and its processes with the conditions of human social life. For him, housing, clothing, drinking, cleanliness, physical exercise, etc. are the most important conditions for maintaining human health.

Ibn Sina has a list of the sciences that existed in his time. In this detailed classification, which also includes such purely “applied” sciences as the “science of talismans,” he does not express his attitude towards them. He simply classifies the sciences as follows:

- Medicine, the purpose of which is the study of the human body in a healthy and diseased state, helping to eliminate disease, restore health and preserve it.
- Alchemy, the purpose of which is to take away the inherent qualities of various substances and give them the qualities of other substances in order to obtain gold and silver from cheap metals.

- The science of the movement of stars, based, as Ibn Sina says, on “assumptions.” Its purpose is to determine the destinies of kingdoms, countries and people by the stars and to correlate the position of the stars with earthly affairs.
- Physiognomy, the purpose of which is to find out the character of a person by his physique, expression and facial features, and also to determine what work he is suitable for.
- The science of talismans, which consists of the ability to create substances from various plants and minerals that can influence the course of events in the world.
- The science of explaining (interpreting) dreams. Its goal is to comprehend the wise advice gleaned from what the soul saw while “wandering in the world of the unknown” (that is, during sleep, when, as it was believed, the soul leaves the body for a while), and to be guided by these instructions in your life.
- The science of magic, the essence of which is to awaken in the elements of the earthly world “forces that have a miraculous effect on nature.”

Since 1952, the rich collection of oriental manuscripts stored at the Institute of Oriental Studies of the Academy of Sciences of the Uzbek SSR began to be systematically described in the collections “Collections of Oriental Manuscripts.” In the first volume of the “Collection”, published under the editorship of Academician A.A. Semenov, there is a description of the manuscript of the “Canon” containing its third, fourth and fifth books. The manuscript is superbly designed, each part has an artistically executed “urvan”, decorated with gold and paints “with coloured designs on a dark blue and gold background.” The text is framed by a frame of gold and coloured stripes and lines. The manuscript is written in clear nash (a type of script that replaced the Kufic style of the 12th century) on polished yellowish paper. Its creation dates back to 1601.

Ibn Sina's main work is devoted to medicine. The scientist worked on the “Canon of Medical Science” for many years. These were years of hard work, tireless observations and painstaking study of the works of predecessors and contemporaries. The “Canon”, i.e. establishment, code, was the fundamental encyclopaedia of medical knowledge of the medieval East. It can safely be called a brilliant creation of human thought, the greatest monument of human culture in its significance and content.

The first book is devoted to the theory of medicine. It is divided into four sections: introduction, anatomy and physiology; the doctrine of the causes of diseases and the diseases themselves (general ethology); the study of the manifestations of diseases (symptomatology); the doctrine of nutrition and lifestyle (general dietetics); protecting health from diseases (prevention) and treating diseases (general therapy).

The second book consists of two sections: the doctrine of simple medicinal substances and their methods of action.

The third book contains questions devoted to the study of individual diseases and their treatment (special pathology and therapy).

The fourth book is devoted to surgery (treatment of dislocations and fractures), the general doctrine of fever (crises in illnesses). The book covers the main issues of the study of poisons (toxicology), skin diseases and issues of preserving the beauty of the body (cosmetics) 8. Ibn Sina offers medicines to strengthen hair, indicates how to dye it, offers remedies against tanning and skin irritation. He recommends remedies for excessive fatness and thinness.

The fifth book describes complex medicinal substances, poisons and antidotes.

The exact date of completion of work on "Canon" is not known. Ibn Sina completed this encyclopaedia in the 20s. XI century The first handwritten translation into Latin dates back to the 12th century. It was made by Gerard of Cremona (1114-1187) 10 - a famous translator of Arabic works. It was he who first translated Ptolemy's Almagest into Latin.

In 1279 in Rome, Nathan-ta-Meati (Gamma-ti) made a complete translation of the "Canon" into Hebrew. Subsequently, many of Gammati's compatriots turned to the translation of this work of Ibn Sina, for example, Zerahia ben Isaac from Barcelona and others. The manuscripts of these translations can be found in the book depositories of some countries.

In the 2nd and 5th books of the "Canon", Ibn Sina talks in detail about many medicines, explaining their effect on the human body and on animals. We can safely say that the "Canon" contains information about almost all medicines known at that time. At the same time, Ibn Sina describes not only traditional medicine, but also drugs obtained chemically, many of which he himself introduced into medical practice.

In his pharmacopoeia, Ibn Sina tries to combine the materials he collected into a specific system and connect them with his diverse clinical observations.

For example, describing "simple healing remedies" in the 2nd book of the "Canon," the scientist carefully studies their effect on the body and gives "rules for their external use." In the 5th book, he characterizes "complex medicines" and practically substantiates the need for their use. Here he dwells on the effect of various antidotes. Compiling recipes and producing potions, syrups and extracts, ointments, plasters, lotions, pills, tablets and wafers, porridges, Ibn Sina carefully systematized the received medicines. As a rule, when describing this or that medicine, Ibn Sina does not try to classify his knowledge. He reveals in detail how it is made and used. Ibn Sina sets himself the task of obtaining medicines that, in his opinion, deserve attention.

Ibn Sina was one of the first to introduce into medical practice such now widespread medicines as Alexandria leaf, rhubarb, and camphor. Many of the medicinal remedies he discovered were considered irreplaceable for several centuries, and some of them are still used today.

Based on the results of chemical research by Arab scientists, Ibn Sina was the first to use many chemical medicinal substances. For example, he uses sugar in various mixtures for medicinal purposes. With the help of sugar, Ibn Sina successfully preserves lemons, roses and violets and prescribes these medicinal syrups for various diseases.

Ibn Sina is well acquainted with the arsenal of medicines of that time. According to him, he is engaged in the “knowledge of the natures” of simple drugs through testing and comparison, and also studies the “knowledge of the powers” of simple drugs: their general effect on the body - warming, cooling, etc. and specific actions - “the usefulness of the medicine in cancer, useful for kidney problems - haemorrhoids, jaundice,” etc.; the scientist is trying to identify the greatest effectiveness of a particular drug. He tests them under various conditions - after “cooking, burning with fire, washing; cooling,” etc. At the same time, he concludes that “there are medicines that change their properties when mixed with other medicines,” while others completely lose their effect from rubbing. According to Ibn Sina, thanks to the proximity, “medicines acquire extraneous qualities and their actions even change...”. The doctor must “be aware of this property of drugs and avoid the proximity of different types of them to each other. Regarding the effect of mixing, we can say that as a result of mixing, the powers of drugs sometimes increase, and sometimes these mixing forces disappear. Sometimes the properties of the medicine from mixing improve, and their harmfulness disappears.”

The scientist emphasizes the importance of using various means that dilute the body’s juices, and first of all, infusions of hyssop, thyme, etc. At the same time, he gives purely practical advice: how, when to take a laxative, in what cases should the patient vomit, etc. Among the many laxatives described by Ibn Sina, it is necessary to note the so-called gentle laxatives, which he first introduced into medical practice. The scientist attaches great importance to treatment with mineral waters containing salts of gold and silver and other metals.

Ibn Sina recommends using laxatives in the form of decoctions, mechanical mixtures and pills. To prepare them, he uses sea onion, Chinese rhubarb, colocynth, agaric, saffron, etc. The scientist prepared medicines intended for children in liquid form so that, if necessary, they could be poured directly into the child’s mouth.

As already noted, Ibn Sina advocates the use of medicinal syrups, as well as various fruit juices, especially quince and poppy with the addition of wormwood juice. Along with recipes for making medicinal herbal decoctions, the “Canon” talks about medicinal oils that can be obtained by distillation from plant juices. Ibn Sina writes that from some plants, such as wormwood, oil can be obtained by heating in the sun. Testing and obtaining new medicines, Ibn Sina widely used some medicines recommended by Hippocrates.

Scholars have a very limited number of Ibn Sina's autographs. Basically, Ibn Sina’s rich handwritten legacy has come to us in the form of numerous copies made by scribes.

Therefore, the most valuable for us are those manuscripts that are closest in time to the originals, which have not yet been found, but perhaps are available somewhere in the richest repositories of manuscripts in different countries. An example is the 12th century manuscript, stored at the Institute of Oriental Studies of the USSR Academy of Sciences (Leningrad), “The Canon of Medical Science.” As is known, Ibn Sina created the “Canon” in the 11th century,

and, probably, the “Leningrad version” is one of the first copies of the original, containing the least number of errors and distortions of the text.

The bibliographic list of Ibn Sina’s works also dates back to 1664. It is written "nastaliq". The name of the compiler is unknown. The manuscript was published in the fifth volume of the Collection.

There are reports in periodicals that new valuable works by Ibn Sina are discovered from time to time. These manuscripts are of various dates. In 1956, the manuscript fund of the Academy of Sciences of the Azerbaijan SSR was enriched with the valuable manuscript of 1142 - the second book of the “Canon of Medical Science”. It was rewritten 110 years after the death of the scientist by the old “nash”. At the end of the book, some names of drugs taken from Greek and other languages are given, as well as weight measures used in the 12th century. The manuscript collection of the Academy also includes the first book of the “Canon”, rewritten at the end of the 13th century, a commentary on the “Canon” by the Shiraz physician Gutbeddin and the manuscript of the “Book of Healing”. Since 1960, the Republican Museum of the History of Material Culture and Art of the UzSSR (Samarkand) has kept the first book of the “Canon”, the manuscript of which is dated 1670.

In his numerous works, the scientist not only summarized the knowledge accumulated before him. He developed them in many ways, enriching them with the results of painstaking observations and research, and brought them into a harmonious, unified system. Enormous ability to work, the ability to observe, extraordinary memory and excellent erudition helped Ibn Sina become a true encyclopedist scientist. This is evidenced by his numerous scientific works, for example, the famous “Book of Healing,” which sets out the scientist’s views on the origin of the world, astronomy, mathematics, chemistry, physics, meteorology, botany and zoology.

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