THE SCIENTIFIC-THEORETICAL SIGNIFICANCE OF ABU RAYHAN BERUNI’S “RELICS FROM ANCIENT PEOPLE”

a Basriddin Karimov, b Farkhod Ziyaev, c Farkhod Adilov, d Tomaris Safarova

ABSTRACT

Objectives: This section outlines the main objectives of the article, focusing on the scientific-theoretical significance of Abu Rayhan Beruni's work, “Relics from ancient peoples.” It highlights the importance of studying this particular work and delves into the key goals the author aims to achieve in the analysis and discussion of Beruni's scientific contributions.

Methods: In this part, the methods employed in the examination of Abu Rayhan Beruni's work are detailed. It may include an exploration of the structure of the book, "Al-osor al-Baqiya an al-Qurun al-Khaliya," emphasizing the absence of traditional chapters and the use of the term "chapter" within the sections. Additionally, it may touch upon the linguistic aspect, noting that the work is written in Arabic.

Results: The results section presents insights derived from the analysis of Abu Rayhan Beruni's work. This could involve discussions on the structure, content, and linguistic nuances of "Relics from ancient peoples." The results section provides a deeper understanding of the work, shedding light on its key components and contributions to scientific thought.

Conclusion: The conclusion of the article summarizes the scientific-theoretical significance of Abu Rayhan Beruni's "Relics from ancient peoples." It may recapitulate the main points discussed in the objectives and results sections, offering a comprehensive overview of the importance of Beruni's work in the broader context of scientific literature. Additionally, the conclusion may provide insights into the lasting impact of the work and its relevance to contemporary scholarship.

Keywords: scientific-theoretical significance, Abu Rayhan Beruni, Arabic, Shams ul Maoli Qabus ibn Vashmgi.
O SIGNIFICADO CIENTÍFICO-TEÓRICO DAS "RELÍQUIAS DE PESSOAS ANTIGAS" DE ABU RAYHAN BERUNI

RESUMO

Objetivos: Esta seção descreve os principais objetivos do artigo, focando no significado científico-teórico do trabalho de Abu Rayhan Beruni, "Relíquias de povos antigos". Ele destaca a importância de estudar este trabalho particular e aprofunda-se nos objetivos-chave que o autor pretende atingir na análise e discussão das contribuições científicas de Beruni.


Resultados: A seção de resultados apresenta insights derivados da análise do trabalho de Abu Rayhan Beruni. Isso poderia envolver discussões sobre a estrutura, o conteúdo e as nuances linguísticas de "Relíquias de povos antigos". A seção de resultados fornece uma compreensão mais profunda do trabalho, lançando luz sobre seus principais componentes e contribuições ao pensamento científico.

Conclusão: A conclusão do artigo resume o significado científico-teórico das "Relíquias de povos antigos" de Abu Rayhan Beruni. Pode recapitular os principais pontos discutidos nas seções de objetivos e resultados, oferecendo uma visão abrangente da importância do trabalho de Beruni no contexto mais amplo da literatura científica. Além disso, a conclusão pode fornecer insights sobre o impacto duradouro do trabalho e sua relevância para a erudição contemporânea.


1 INTRODUCTION

Uzbekistan’s independence has led to positive changes in many areas. Including the names of hundreds of our ancestors who passed down in history and made a significant contribution to the development of world civilization, and their history was restored. Thousands of years ago, the foundation of the modern science was created on the basis of the scientific research and discoveries of the scientists who grew up in our country.

Each nation has its own history, and this history is based on sources, as well as the analysis and history of socio-economic, and cultural processes in Central Asia and neighboring regions, and the history of it has been researched by our scientists. One such priceless work is Abu Rayhan Beruni’s “Relics from Ancient Nations”.

2 THEORETICAL FRAMEWORK

In the work, Abu Rayhan Beruni says the following about why he wrote this work: “One of the writers asked me about the histories of (different) nations, their beginnings
and branches, that is, the disagreements of the historians on the months and years and the reasons for this conflict, famous holidays, (various) He asked me about the appointed times and days for work, other (rituals) of the nations, some of which are observed and some of which are not observed, and asked me to explain them as clearly as possible, so that the reader can understand them, without the need to search for (various) books and inquire about the owners of those books. ) invites” [1]. When the great scientist begins to write his work, he emphasizes that this work is not easy, that the narratives about the ancient peoples and their year calculations are finally confused, full of false legends and unfounded information. In order to be free from such falsehoods, “…the narratives about the ancient nations are to know the messages about the past generations, because most of them consist of the generations of those nations and their customs and rules. Those messages cannot be learned by reasoning, observing, comparing. This can only be known by following the “people of the book” and various religious figures, people of various professions and beliefs who follow these beliefs, always basing their concepts. Then it is known by comparing the words and beliefs that they bring for proof, after purifying themselves from the bad morals that degrade the nature of most people and the factors that do not allow them to see the truth. What I have mentioned is the best way to the true goal and the most powerful help to wash away the doubts that stain it. No matter how hard we try, we can't achieve our goal in any other way…” [1]. As it can be seen from these opinions, in the process of creating the work, many works and opinions of scientists were deeply analyzed and scientific, that is, scientific conclusions were given.

3 METHODOLOGY

This work is the first major work of the scientist, in its content, the book is not divided into chapters, but it consists of an introduction and 21 chapters. In the text of the sections, the phrase “chapter” is used for them. The work is written in Arabic, and its full name is called “Al-osor al-Baqiya an al-Qurun al-Khaliya”. This term is translated as “Relics from ancient peoples”. In the introduction of the work, Beruni pays tribute to his patron Shams ul Maoli Qabus ibn Vashmgir, dwells on the factors that led to the writing of this work and justifies his actions. “I learned that this work is difficult and the source is far away, and a person who knows it well does not have doubts in his heart, and does not submit to someone who wants to put it among the exact sciences. But, receiving strength from the supreme state of our master, the great emir Shams al-Maoli, who is the
owner of God's help and blessings, may God always be powerful, I gathered all my strength, used all the possibilities, and sometimes by hearing, sometimes by seeing and comparing, as far as I know, I decided to explain those things. Then, wearing the robe of blessed service and proving those things that were asked of me for the owner of the supreme throne, thereby serving Shams al-Maoli anew, putting on the robes of honor that will be inherited from me for generations to come, and to write this work. If the emir - may God always raise his opinion - turns a blind eye to the bravery of this slave, accepts his apology and honors him, inshallah he will have made the right decision” [1].

4 RESULTS AND DISCUSSION

In the work, we can see that Beruni knows the history, culture, mythology, and poetry of the peoples of Babylon, Egypt, India, Greece, Iran, Rum (Byzantium) very well. Alloma compares the lives of the peoples of the world, their religious beliefs, holidays, ceremonies, traditions, and countless important events that happened in the history of different countries. In this way, this work becomes a unique, unique, large-scale, historical and mythological collection of the peoples of the world. In this work, Abu Rayhan Beruni presents the most important events that happened on every day of the months in the calendar of different nations and his fair, independent, and impartial opinions about the reasons for their occurrence. In the first chapter called “day and night, a word about the essence of their combination and the time of its beginning”, it gives a brief report about the actions of the Sun and the Moon that create night and day. It dwells on the different states of the beginnings of night, day, and day” ... the Arabs assumed that the sunset points on the horizon are the beginning of the complex of night and day. According to them, the night is a period extending from sunset to sunset the next day. The reason why the Arabs came to this opinion was that their months were based on the movement of the moon sphere and deduced from its various movements. The beginning of the months is marked by the appearance of crescents, not by counting. Crescents are visible at sunset. Therefore, according to them, the time of appearance of the crescent was before the moon, and it stood before the day. That is why they are used to assigning nights to the days of the week, to put nights before days, for example, to say Friday night” [1].

In this regard, those who agree with the Arabs argue that the darkness precedes the light in the career, and the light rises above the darkness, and they say, “What is ahead should be put forward”. That’s why they consider inactivity better than activity, pleasure
and rest are the result of inactivity, activity occurs for some need and necessity, fatigue comes after necessity, so they say that fatigue is the result of activity. They also argue that if the elements earth, water, fire and air remain inactive for some time, it will not cause any calamity, but if the movement continues and prevails in them, earthquakes, hurricanes, waves and similar bad events will occur”[1]. During Jahiliyyah, that is, before Islam, the Arabs added a 33-day “Nasi” month every three years to match the number of days in lunar and solar years. However, in 632, when Muhammad was performing the “farewell pilgrimage”, the verse about the prohibition of the month of “Nasi” was revealed (Holy Qur’an, Surah “Tawba”, verse 37). After that, the 33-day Nasi month was removed from the calendar, and the Muslim year became a fixed lunar year of 354 days [1].

“However, peoples other than the Arabs - Romanians, Iranians, and those who agree with them - considered the day and night as the time elapsed from the rising of the sun from the eastern horizon until the next day when it rises again from the same horizon, because the months they accepted were determined by calculations, and also according to the moon sphere and the position of other lights. Their nights begin early in the day. So, according to them, day precedes night. They argue that light is existence and darkness is non-existence. Those who say light before darkness say that action is better than inaction, because action is not nothingness - it is existence, it is not death - it is life. These people oppose those who say that night precedes day with words similar to their sayings: the sky is better than the earth, the worker and the young man are healthier (than the old man), and flowing water does not spoil like stagnant water” [1].

According to astronomers, the night begins when the earth revolves around the sun and ends when it encounters the same circle the next day. This is a concept between the two different words mentioned above, which, according to them, is the reason for the appearance of night and day. Astronomers based their calculus on this idea, and determined the positions of the luminaries based on their correct movements and readings in their annual books.

According to Beruni, “There are several reasons why astrologers chose the nifs-nahar circle instead of the horizon circle. One is that they discovered that day and night are different and inconsistent everywhere. For example, this inconsistency is particularly evident during solar eclipses, especially with sensory perception. This is due to the different movements of the Sun in the constellations, sometimes fast and sometimes slow,
and the continents of these constellations passing through the circles at different speeds. They have had to moderate their pace in order to lose this diversity. These velocities of passage are generally equal everywhere in the half-day circle of the constellations when the sun rises, because this circle is one of the true horizons of the celestial sphere, and its integral qualities are invariable everywhere on earth. Astronomers have not encountered such a situation in the circles of horizons, because those circles are different everywhere, each horizon of latitude is different from another horizon of latitude, and the speed at which the continents of the constellations move through those circles is different. Therefore, it will not be fair and orderly to work with circles of horizons” [1].

One of the most important chapters of the work is the third chapter called “Essence of the Era and the Disagreements of Nations about it”. It contains a number of messages of a historical nature. Beruni first defines an era, then admits that different peoples have their own eras, and emphasizes that there are differences among different peoples on this issue. In particular, he said that the beginning of human history and the era related to Adam are “mixed with fabrications and legends”, and that the reason for this is that there is no reliable, clear scientific basis for that event, that is, there were no records at that time, and these were the opinions of some people. As an example, Beruni cites the disparity between Christians and Jews. That is, as if the Jews say, “From Adam to Alexander, 3448 years passed” [1], Christians say that “5180 years have passed” [1]. Then Beruni intervenes in the debates of Jews and Christians on this matter and comments on the texts of the Torah and the Bible. So, before he wrote the work “Relics from Ancient Nations”, it is evidence that he was familiar with the ancient Jewish, Syriac and Greek languages, as well as with the religious books of those nations. For example, those who analyze the various texts of the Torah and the Injil, find that there are great discrepancies and inconsistencies in them, and come to the conclusion: “Therefore, neither the Bibles nor the books of the prophets (i.e., the five books of the Torah) are reliable” [1].

Among all the ancient eras, Beruni is the first reliable, real era of ancient Babylon. avv. It is considered the era of Nabonassar or Bukhtunassar I, who reigned from 747-733. Nabonassar’s era used in Ptolemy’s “Al-majisti” it began on February 26, 747, the date of Nabonassar’s accession to the throne [1].

First of all, if we look at the history of the beginning of this humanity, we will find many disagreements about it among those nations. The differences are that the Iranians and the fire worshipers claimed that the life of the universe is twelve thousand
years according to the number of constellations and moons. Zarathustra, the founder of their shari’a, claimed that three thousand years passed from the beginning of the universe to the time it appeared. Then he found a flaw in the quarter days that is always found in the years, and he justified the calculation by adding the quarters and making the years correct.

There are two hundred and fifty-eight years between the appearance of Zoroaster and the beginning of the era of Alexander. So, from the beginning of the world to Alexander, three thousand two hundred and fifty-eight years have passed. But if we count it from the beginning of the era of Qayumars, who is considered the first man among the Iranians, and if we add the era of every king after that - because the kingdoms of the Iranians have been connected continuously - the total of these numbers will be three thousand three hundred and fifty-four years until Alexander. Therefore, it does not correspond to the totality of the periods calculated separately.

At the same time, Iranians and Romanians do not agree about the period after Alexander. Then Beruni mentions some more real eras. One of these is the era of Philip; this was confused by Berunius with Alexander’s father, Philip, when in fact he was not Alexander’s father, but his demented brother, Philip Arrideus, who was proclaimed king after Alexander’s death and mil. avv. He ruled from 323 to 317. Philip’s era. avv. It started on November 12, 324. After that, the era of Alexander, that is, the millennium. avv. The era of Seleucus Nicator, which began on October 1, 312, comes; then comes the era of King Augustus, the era of Antonine, the era of Diocletian (from 284 BC) and the Hijri era of Muhammad (622). At the end of the chapter, Beruni gives valuable information about the ancient history of Khorezm. He said that the ancient Khorezm people “counted the year from when people began to settle in Khorezm, which was nine hundred and eighty years before Alexander (that is, 980+312= 1292 BC). After that, they counted years from the arrival of Siyovush ibn Kaikovus to Khorezm, and from the reign of Kaykhusrav and his descendants in Khorezm. At this time, Kaykhusrav moved to Khorezm and established his rule in the Turkish kingdom. This event took place ninety-two years after the settlement of Khorezm (i.e. 1292–92= 69 1200 BC)” [1]. So, according to Beruni's report, Khorezm was the first in mil. avv. Turks settled in 1292, then avv. In 1200, the Siouvushites, who belong to the Iranian group, settled and established their rule over the Turks. Then Beruni mentions the name of Khorezmshah Afrig, belonging to the Siyovushi dynasty, who sat on the throne of Khorezm in 305 AD. This dynasty ruled
Khorezm until 995. Beruni himself served the last representative of this dynasty, Abu Abdullah Muhammad, who was killed in this year.

At the end of this chapter, Beruni gives information of great importance from the point of view of the history of Khorezm, that is, he mentions the names of several Khorezm Shahs from the African dynasty that ruled Khorezm from 305 to 995 [1]. His information gave impetus to historical archeological research in Khorezm regions in the 20th century. As a result of these studies, avv. It was found that two dynasties ruled Khorezm from 20 or 10 years, and the Africans were the second of them. They ruled Khorezm from 305 AD [1].

In order to determine the identity of the king who received the nickname Zulqarnayn, in the chapter on the conflicts of different nations, there is no way without telling the story related to this name, i.e. Zulqarnayn, because if this story comes in while I am talking about history, it would interrupt the order in which the histories are being told.

The fact is that whoever recites the verses related to the messages of Zulqarnayn, his stories narrated in the Qur’an are known and clear. According to the content of those verses, Zulqarnayn was a righteous and powerful person. God gave him a great kingdom and power, and set him on a mission to conquer the cities of the east and the west, to possess the countries, to subdue the nations, and to gather the kingdom of the earth into one hand. God commanded him to set foot in the kingdom of darkness in the north, to see to the farthest lands of the nations, to fight with the people, and to prevent the rising of the earth and the northern sides of Gog and Magog from going up to the countries near their places, to repulse their attacks and repulse their harm, as is now seen in the work of the artisans, connecting iron pieces with molten copper, made it possible to make a barrier to their exiting caves [1].

In the fifth chapter of the work, called “A word about the qualities of the months used in calculations of the mentioned year”, Beruni mentions the names of the calendar, months and days of many peoples. Among them are the “people of Qubo”, that is, the people of the city of Quva in the Ferghana Valley and its surroundings, “the people of Bukhortak”, that is, the calendar of the Sugdians of the village of the same name near Bukhara, the Jahili and Muslim periods, the Thamud tribe of the Arabs, “all Jews”, Persians, “ancient Sijistans”, Sugdians, Khorezmians, Western Turks, Syriacs, Romanians, Greeks, Egyptian Copts, “Maghreb people”, Indians, Eastern Turks bring
calendars. The table given by the scientist is worth studying both from the historical and linguistic point of view.

In the work “Memorials from ancient peoples”, Beruni describes in detail the calendars, Eids and famous days of the peoples known to him: Greeks, Romanians, Iranians, Sogdians, Khorezmians, Hulanites (star worshipers), Copts, Christians, Jews, pre-Islamic Arabs and Muslims. Many issues of astronomy and mathematics are explained in the work. Beruni is the first among Muslim scholars to provide systematic information about the Jewish calendar. It is not limited to the issues covered in the work “Relics from ancient peoples”. It contains many historical events, important information about different nations and religions, prophets and false prophets, kings, famous historical figures and scholars as well as scientific information.

The sixth chapter of the work, entitled “Counting some eras from others, a word about the various traditions regarding the beginning of the reigns of kings and the duration of reigns”, is the largest chapter, and a number of tables of kings are given. In this, Beruni lists the Muslim governors of the Near and Middle East - caliphs, kings and sultans - in Islam and in his time, starting from the ancestors in the Torah and the Bible. Beruni, in his very first table in this chapter, compares the years of life of “the father of mankind” and his descendants according to the opinions of Christians and Jews. Before quoting the table, Beruni said: “Whoever examines the years in the table up to the time of Abraham, peace be upon him, will see how great is the difference between the words of the Jews and the Christians” [1].

We have seen above that the author said that the representatives of these two religions have big differences about the era of Adam in the beginning of the work. In the very first line of the table, saying “Adam, the father of mankind” is a reflection of the tradition in the Torah and the Bible. After that, all names of ancestors listed in the table are in Hebrew. If, according to the tradition of the Torah, it is recognized that the first man, Adam, was a Jew, and his descendants were also Jews, then it is necessary to recognize the nonsense that the Jews were created first in the world [1].

In the article “Essence of Histories” and “Controversies of Nations about this”, Abu Rayhan Beruni talks about the debates between the scholars of Jews, Zoroastrians, Christians, about the translation of the Torah book into Greek by seventy-two scholars during the time of Ptolemy, one of the generals of Alexander the Great, or the Jews. that he does not recognize it as corrupted, that the Sumerians helped the Babylonian king
Bakhtunasr and moved the Jews to Palestine, that the contents of the four different books of the Bible do not correspond to each other. The Flood of Nokh, Qayumars, Era of Alexander, Abu Mashar Balkhi’s opinion that the flood of the universe will begin every 180,000 years when the celestial luminaries converge in one place is controversial. In this work, he disagrees with the opinion of Jewish, Christian, and Persian scholars that the history of mankind begins in three or four thousand years, and says, “If the calculator answers, “Thousands of millions of years,” he says, “There is no need to blame him”.

In this chapter, the tables dedicated to the life and activities of Muhammad, the Khulafai Rashidin and the period of the Umayyad caliphs can be said to be a brief history of Islam in the first century of the Hijri era. In the first table dedicated to the life and activities of the Prophet (pbuh), one of the most noticeable aspects is that Beruni gave great importance to the lives of Muhammad, peace be upon him, and listed the names of their wives. At the beginning of the list is Khadija bint Huwaylid, the first wife of Muhammad, peace be upon him. According to Islamic sources, it is said that Muhammad was 25 years old and Khadijah (RA) was 40 years old when they married her. In the table given by Beruni, the list of Muhammad’s wives is not complete [1].

Another important aspect of this table is that at the end of it there is information that the month of Nasi was forbidden when the Prophet (pbuh) performed the farewell Hajj (hajj al-vida). The fact is that the Arabs used the lunisolar calendar almost from the beginning of Christ until that Hajj, that is, until the beginning of 632. The main feature of this calendar was that, since the lunar year is 354 days long, the 11 days of the lunar year (365 days) were kept in mind for two years (“nasi”), and in the third year, one 33-day month, called “nasi”, was put at the end of the year. Then the days of three lunar years were equal to the days of three solar years. When the Prophet (pbuh) came to Makkah to perform the farewell Hajj, it was the middle of this month of Nasi. Then, during the Hajj, the verse about the prohibition of the month of Nasi, i.e. the 37th verse of Surah Tawba of the Qur’an, is revealed [1].

This table ends with the death of Muhammad and his burial in the house of Aisha (r.a.). Beruni does not stop at the end of this table, nor at the beginning of the next table dedicated to the caliphs and imams, about the issue of the successor of Muhammad (pbuh), that is, the imam. However, at that time it was the most important issue for Muslims to resolve.
As we have explained, the history can be determined by comparing one with the other, but according to the people of the book, only the era of Adam and the era of the flood have not been determined. First, we will explain how to determine the beginnings of Jewish years, months, periods, and years, and then we will go on to introduce the beginnings of other nations’ years.

In the eighth chapter of the work called “About the era of people who claimed prophethood and their deceived community (may the curse of the Lord of the worlds be upon them)”, the “prophet” of the fire worshipers mentions Zarathustra among the false prophets. In this chapter Beruni exposes the fraud in Christians. In particular, Marcion and Ibn Dyson, who lived in the 2nd-3rd centuries AD, said that they published two Bibles in addition to the four main Bibles, but these Bibles cannot be trusted. The ninth chapter of the work, called “A word about holidays and famous days in the Persian months”, describes the holidays celebrated by fire-loving Persians throughout the year. According to Beruni, the Persians celebrated Navroz on the first day of the new year when the Sun entered the sign of Cancer, that is, on June 22, and later they moved Navroz to the beginning of Hamal, that is, on March 21. The tenth chapter called “A word about the holidays of the Sugdians” is dedicated to the holidays of the Sugdians, which are celebrated throughout the year. In the early Middle Ages, the lands of Samarkand, Bukhara and Kashkadarya regions of present-day Uzbekistan, and the northwestern regions of Tajikistan were called Sughd, and the inhabitants were called Sughds. The Sughds, like the Persians and the Khorezmians, were fire-loving Zoroastrians. Their languages, such as Khorezmian, belong to the Eastern Iranian language group and are quite different from Persian and Tajik, which belong to the Western Iranian language group.

Beruni makes an excellent point at the beginning of this chapter, namely that the Persians first lived in and around Balkh and then migrated to the lands of Persia and Babylonia, and as a result their calendars changed and differed from those of the Sugdians. It should be said that the information given by Beruni in his works is based on some written sources and in some cases oral reports. The messages presented here are likely to apply to the latter case. The following conclusions can be drawn from Beruni’s messages:

1. The kings of Persia (that is, the Persians in general) once lived (probably at the beginning of the millennium BC) in Balkh and its surroundings, that is, in the
ancient Bokhttarzamin and Aryanam Vayjeh, later they moved to the lands of Elam and Sumer, which were called Persia.

2. In those times, there was no significant difference between them and the Sughds in their annual accounts and calendars. After the Persians moved south, they changed their calendar to suit their new location. The Sughds did not change their calendar.

3. Despite being so close to the Sugdians when the Persians were in Balkh, both ethnic groups had their own kings and separate states.

4. The migration of the Persians from Balkh coincided with the time when Zarathustra came to Balkh with his teachings [1].

Science does not have a clear idea about the time of Zarathustra's appearance. These ideas take place in time between 1500-700 BC. So, if it is proven exactly when Zarathustra came to Balkh, it will be clear when the Persians came to the lands of Elam and Sumer.

The eleventh chapter of the work “Monuments from ancient peoples” is dedicated to the months and holidays of the ancient Khorezm people. At the beginning of the chapter, Beruni states that the beginnings of the year and the months of the Khorezms correspond to those of the Sugdians and are different from those of the Persians. By this he refers to the days and festivals celebrated by the Persians in the lands they later migrated to. Therefore, the festivals of the Persians during their time in Balkh corresponded to those of the ancient Khorezm, because the Khorezm Aryanam of that time formed the northwestern regions of Waijeh.

In this chapter, Beruni states that the Khorezm people knew astronomy better than the Arabs of the Jahiliyyah period before Islam, and that the names of the lunar positions in the Khorezm people were more precise than the names given by the Arabs. At the end of the chapter, he gives the Arabic, Sugdian, Khorezmian names of the moon’s addresses.

The thirteenth chapter of the work, called “About the known holidays in the months of the Romans”, describes the months and holidays of the Byzantines and other peoples dependent on their state. Beruni dwells not only on the famous days of the months, but also on the meteorological conditions in them. In this, he uses the information of the ancient Greek scholars Democritus, Meto, Callippus, Dosiptheus, Metrodorus, Euctemon, Eudoxus and others. Hence, it appears that he has scientifically analyzed these Greek works or their reworked copies.
The fourteenth chapter of the work is devoted to the holidays celebrated by the Jews. From this and other chapters above, it is clear that Beruni was well acquainted with the language, religion and customs of the Jews. Considering that Beruni was not in Palestine and in the 8th-10th centuries, Khorezm’s territory included the eastern and northern shores of the Caspian Sea and bordered Khazaria, located in the North Caucasus, Beruni may have received his information about Judaism from that Khazaria, because Judaism was the state religion in Khazaria. But Muslims also lived in Khazaria, and it is known that most of them, especially their imams, were Khorezm. Beruni may have received his information from them. However, Beruni’s great compatriot Muhammad al-Khwarazmi wrote a special 81 work entitled “Treatise on the Jewish Calendar” [2]. The great importance given to the Jewish religion and customs by the great scientist of both Khorezm suggests that there was Judaism in Khorezm itself, for example, in the parts bordering Khazaria, on the left shores of the Caspian Sea.

In the fifteenth chapter of the work entitled “A word about the days celebrated by Meliki Christians in Syriac months” - the religious sect of the Byzantine Greeks is called “melikia” in Syriac, which corresponds to “malikiya” in Arabic writing, and it refers to the orthodox (pravoslavie) sect of the Byzantines - this sect of Beruni Christianity in Khorezm openly says that it was. This indicates that some of the Khorezm people believed in this sect of Christianity or that some of the Greeks (Byzantines) lived in Khorezm.

Chapter XVII is devoted to the feasts of Nestorian Christians, this stream of Christianity is associated with the name of Nestorius (died 440), who was the patriarch of Constantinople in 428-431, and according to his teaching, it is said that the natures of divinity and humanity were not embodied in Jesus Christ. "Nestorianism" was condemned at the secular council held in Ephesus in 431, and the supporters of this religious doctrine were expelled from the Byzantine Empire. After that, the Nestorians fled to the East, to the cities of Central Asia. Their big churches were in Marv, Samarkand and Toros before and after Islam. From the above, it can be said that in this work, Beruni paid attention to almost all the fields of science and craft known in his time. Despite the fact that Beruni’s main goal in his work is to describe the annual holidays and other customs of peoples of different religions and languages, he analyzed and used the historical works of peoples of different religions and languages written in their own languages.
5 CONCLUSION

Due to his meticulous and observant nature, Beruni observed that various aspects and aspects of life are closely interconnected, and he prioritized science in the study of these connections. For example, while covering issues related to history and chronology, he also discusses related issues of meteorology, astrology, astronomy.

Beruni deeply studied the sciences that were known throughout the East and in ancient Greece. Being the greatest encyclopedist of his time, Beruni enriched each of those sciences with evidence and new ideas on such a large scale that in some places, for example in India, he was considered a magical man. This was, from the point of view of that time, a very high assessment of the scientist by his contemporaries. As a highly educated and brilliant philosopher and natural scientist, Beruni tried to explain many of the main issues related to the physical world from a spontaneous materialistic point of view. It should be mentioned that we can see many contradictions in Beruni’s view of the structure of the world and the issues of the universe in general, and some of his ideas are no different from religious-idealistic views, which are explained by the social conditions of that time. This is explained by the fact that science at that time was at a low level compared to the depth and breadth of some of the issues that Beruni was able to raise, and could not fully answer them. However, this is very characteristic, first of all, Beruni sometimes consciously and sometimes unconsciously felt the advantage of explaining nature, its secrets and phenomena, and the reliability of this way in the search for truth, rather than other religious-idealistic ways of explaining, based on nature itself.

Secondly, Beruni was forced to express his advanced and sharp thoughts in a traditional form, following the requirements of his time and the rules of tactics. From an objective point of view, in whatever form and form, Beruni’s ideas are scientifically sound.
REFERENCES


