AI-BIRUNI'S CONCEPT OF HISTORY

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Abstract. This article is devoted to the role of Abu Rayhan Biruni, a great figure of medieval science, culture, philosophy, economics, politics and history. It considers him as a founder of the modern scientific thinking and research methods, quantitative approaches in scientific research, experimental and observational methods and tools in science. His works, "Al-Asar-ul-Baqiya", "India", "Geodesy" and others prove that he was a devotee of the ideas of national and universal human values, reason and law, reasonable harmony of human duties and obligations, rights and freedoms, development and civilization, both in politics and social development. Research on his books "Mineralogy" and "Al-Qanun al-Masudi" confirm that his philosophy of history had a formative influence on the development of Eastern historiography and sociology of the Middle and Late Middle Ages, on the historical and social political views of Utbi, Bayhaqi, Yaqut, Ibn al-Athir, Ibn Abi Usaybiya, Abul Fido Qifti, Rashidaddin, Ibn Khaldun, and Maqrizi. And according to the concept of history, it is concluded that the aspect of historical research is not substantial, but relational, i.e. changing, updating and rising to a higher level.

Keywords: Biruni, Al-Asar-ul-Baqiya, Al-Qanun al-Masudi, concept of history, scientific thinking, research methods

Abu Reykhan Biruni, a great figure in Central Asia, Turkestan and world science, culture, philosophy, economics, politics and history in the Middle Ages, was the founder of the rules of modern scientific thinking and research methods, quantitative approaches in scientific research, experimental and observational methods in science, but also in politics, and in social development. He was an adherent of national and universal values, reason and law, reasonable harmony of human duties, rights and freedoms, development and civilization.

In the rich scientific heritage of Biruni, there are many works dedicated to the problems of historical science, methods, the uniqueness and essence of historical thinking, the formation and manifestation of the principles of modern historical research. This is especially true about Biruni's major works, such as "Al-Asar-ul-Baqiya" ("The Chronology of Ancient Nations"), "India", "Geodesy", "Minerology", "Al-Qanun al-Masudi" ("The Cannon of Masudi"), "Kitab-us-Saydana" ("The book of Pharmacology") and others. However most of his works have not reached us or manuscript copies have not yet been found, and among them are "Tanqih-ut-tawarikh", "Ad-dastur", "At-tarikh va-l-hay'ya", as well as his philosophical debate with Shaykh ur-Rais, as we can see in the preface, written to his teacher Abu Bakr al-Razi, where the list of latter's works and his own works were given [Беруний билан Ибн Синонинг савол жавоблари (1950); Beruni (1976): 234-271].

Biruni's philosophy of history had a formative influence on the development of Eastern historiography and sociology of the Middle and Late Middle Ages, on the historical and social political views of Utbi, Bayhaqi, Yaqut, Ibn al-Asir, Ibn Abi Usaybiya, Abul Fido Qifti, Rashidaddin, Ibn Khaldun, and Maqrizi. In this sense, Biruni is one of the mature forerunners of the science of history.

The entire humanity presented in Biruni's works, such as "Al-Asar-ul-Baqiya", "Tahqiqu molil-Hind", "Kitab ul-jamahir", "Kitab ul-Saydana", "Tahdid nihayat alamakin", "Mashahiri Khwarazm". They illuminate the unity of history, the orientation from past to future, from lower development to higher and advanced development, the objective existence of historical processes and eras, cultures, developments, interrelationship, communication, and relationship [M. Khairullaev (1973)]. To prove that history and its laws have a high, noble essence and meaning, these theoretical and methodological problems of the philosophy of history and methodology were founded by Biruni. The most important thing is that the research and knowledge of historical processes is fundamentally different from other knowledge, especially social and natural sciences. Biruni expressed the following in "Al-Asar-ul-Baqiya" that it has its own uniqueness, its method and principles specific to the science of history.

Biruni strongly emphasizes the uniqueness of the science of history, the closeness of historical knowledge to other social sciences, especially religious traditions, creeds, hadiths, specific sciences that are sharply different from knowledge, as well as the silence in the methods of history writing and research of his predecessors and contemporaries. While indirectly criticizing prejudices and preconception, he openly writes that he wanted to "put it among the exact sciences" in order to write history scientifically and impartially [Biruniy (1968): 40].

Knowledge of history through the scientific and exact sciences of astronomy, mathematics, geodesy, cartography, calendaring, methods was especially applied and demonstrated by Biruni in the works "Geodesy", "Minerology", "Al-Qanun al-Masudi" (The Cannon of Masudi), and "Kitab-us-Saydana" ("The book of Pharmacology"). On the other hand, Biruni admits that according to the conditions and possibilities of his era, especially according to the methods and traditions of learning, researching and writing history, this is a " difficult work and the source is far away (difficult to reach)" [Biruni (1968) 40]. In addition, he writes that scientific research methods, used in the natural and exact sciences, are more traditional under the influence of Greek figures; however historians, philosophers use only rational knowledge, logical rules, observation, and experimental methods, which are not enough, the historical truth cannot be known without research on the historical process: "Mentally it impossible to know those messages without providing evidence, comparing them with observed (things)" [Biruniy (1968): 40].

The following definition of the methods of historical knowledge, its uniqueness, given by Biruni, in our opinion, differs from the definitions given by specialists in the philosophy of history and historical knowledge [Filosofiya istorii (1999): 338-374] in its deep-rooted, comprehensive and complete, closeness to historical processes. It is distinguished by a number of advantages. Biruni writes that history "is the knowledge of the narratives of ancient nations, the news of past generations, because most of them consist of the generations of those nations and their rules of art and style, which only

"people of the book" (in general, these are the Judaism and Christianity, with the true prophets - S.Z.) and following different religious figures, people of various professions and beliefs who follow these beliefs, is known by 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. Even if we try hard and suffer great hardships, we cannot achieve the goal in any other way" [Biruniy (1968): 40-41]. It is possible that these ideas are still superior to the definitions of researchers of the philosophy and methodology of history!

The peculiarity of historical knowledge, discovered and emphasized by Biruni, is that a certain historical fact, a proven fact, as in other, especially natural, exact sciences, is often suddenly "discovered" by one person for a short time, stating it as a certain "completed truth". In opposed to this, it is a problem of acquisition, proof and becoming the truth of history as a result of the successive cooperation of several historians. The reason for is that, according to Biruni, the historical concept, the setting of problems in the middle are abstract concepts, very high and fundamentally variable, which are fundamentally different from natural sciences, which are based on purely quantitative, concrete indicators, and can be strongly influenced by different spiritual, ideological, and social aspects. Historical understanding of the existence of problems in the form of messages, narratives, traditions, values, which differ from scientific or often historical evidence, and the existence of each person's free, personal opinion about them. Due to the fact that this historical message, narration is often passed from mouth to mouth without being recorded, they contain various empirical evidences, life experiences, personal, spiritual experiences, emotions, even lies, erroneous information, and exaggerations. One human life is not enough for this. "A human life is not enough to find out (all relevant) messages about a person. How can it be enough to know the messages (about) all nations? This is impossible" [Biruni (1968): 41], - writes Biruni.

On top of that, historical events and processes are often observed or recorded in the form of fragments in an objective way, and are often passed down from generation to generation in the form of word of mouth, oral tradition. However, in any science, it is not only impossible to express a scientific, specific, complete opinion and judgment, based on a single piece of information, but also it is extremely dangerous from social and scientific aspects. One must be able to see that they really are such in a long period of time and therefore it is necessary to investigate historical events and processes accordingly and draw conclusions consistently and naturally. In this way, a successor creative cooperation, working towards one goal, i.e. division of labor, which cannot be recorded in any official documents, takes place between modern historians and historians of the future. "When the work goes this way, we should take the closest and most famous narrations to our time, and then the closest and more famous ones (one after the other). We accept (some) of them from their own people and correct what can be corrected, and we leave others as they are. Then the narrations that we have given will help the seeker of truth and sense of wisdom to work on other narrations and guide him to achieve things that are not possible for us" [Biruni (1968): 41]. Therefore, according to Biruni's concept

of history, the aspect of historical research is not substantial, but relational [B. Toraev (1992)], that is, changing, renewing and rising to a higher level.

First, historical truth cannot be ascertained until a wide range of data covering periods as large and long as a changing field of inquiry is established.

Secondly, the collection and research of this large-scale historical empirical information is not the work of one historian, but "true" knowledge and conclusions can be obtained only as a result of research conducted in different historical periods.

And thirdly, historical processes and events are not frozen and unchanging, but real, full-blooded, alive, changing, developing, enriching, and rising. This process also requires a truthful approach to the above-mentioned objective process of change, not according to the subjective will and desire of the historical researcher, because the content of the historical process - the objective basis that ensures the coherence of the changing reality, which reflects the historical reality, is not only based on historical events and processes. The underlying natural causal chain, and most importantly, the internal driving force of the historical process, which sets in motion an important historical process, encourages improvement and growth - these are based on hereditary relations. [M. Khairullaev, D. Shorakhmedov (1972)]. Hereditary connection, necessity, successional repetition, that is, historical legitimacy, manifests itself in the essence of eras, centuries, and year calculations.

Fourthly, although the historical researcher does not have the right to interpret objective historical events and processes according to his own knowledge, at the same time, his worldview, imagination, approach and methods of interpretation depend primarily on his inner tones, spiritual experience, dreams and goals. Moreover, Biruni specifically emphasizes that, no matter how objective, impartial, and determined the historian is, the historical research aspect depends on the uniqueness of the ways of knowing:

- 1. The influence of sacred religious tradition;
- 2. Influence of authorities;
- 3. Influence of some socio-political forces;

4. It cannot remain free from the impressions of changing political and historical events and cannot take them into account [Biruniy (1966): 218-219].

This, according to Biruni, makes it difficult for the historian to be objective and ultimately consistent. The intrusion of subjectivity into the historian's research can open the way for distortions, falsifications of narratives, messages, and stories. Nevertheless, every historian, knowing about objective historical events and processes, trying to determine the most accurate ones, especially those that can be verified by measurements, calendars, including works of other researchers, compares knowledge, information, ideas of different periods in order to draw an impartial conclusion. Historian must be able to distinguish what he is capable with his own strength, intellectual potential, and correct and create a source and research base for restoring the truth of history in creative collaboration with others, especially historians after him, conveying to the next the truth of history without destroying it, as it is. This basis is the continuity of relations between various historical events, processes, and also historians, their ability to be objectively impartial - for the continuity of the direction, allowing you to get the perfect historical truth about historical changes.

This historical phenomenon, the historical change, rise and perfection of the processes, in the eyes of Biruni, show that the whole history has a common, necessary, legal, noble meaning, essence and purpose that unites great historical periods, and that history guides it in a rational and noble direction. "All this is not accidental, nor in vain, but due to the Original, Wise Owner, Composer and Creator [Biruni (1966): 20, 42, 103, 104]."

Of course, Biruni's conclusions can be interpreted as a sidestepping of the sacred beliefs of the ruling religious ideology of his time, that is, as a method of theological history, which assumes that the historical process, the development of events, is the goal set by God and the emergence of truth.

However, even though Biruni emphasizes that this holy belief, that is, the noble meaning, essence and direction of the historical process, and moreover, there is a guide, but to determine the truth of this history, first of all, by scientific and logical methods, an objective process, a historical event, the objective of the times taking into account the adequate adaptation to the process of change, he set the goal of determining the scientific truth about historical processes steadily and consistently, without allowing subjective distortions and interpretations, and directed his successors to this goal. Historians of the future generation recognized Biruni's methods of historical research as the most perfect method for scientific objectivity and consistency. This recognition was expressed not only by his contemporaries, for example, Bayhaqi and others, not only by Muslim historians, but also by the most powerful historical thinkers who flourished in the West. In the 19th-20th centuries, in a completely new environment, such thinkers as Eduard Sachau, Arnold J Toynbee, I. Y. Krachkovsky, S.P. Tolstov and others mentioned him in their works.

Although Biruni's works such as "Al-Qanun al-Masudi", "Minerology", "Geodesy" are devoted to the problems of special sciences, astronomy, mineralogy, geodesy, the new understanding of historical studies, historical thinking and impartial interpretation, are promoted by Biruni. It also serves as an appendix to historical research methods, empirical and quantitative analysis. For example, the book "Al-Qanun al-Masudi" summarizes the progress of almost a thousand years after Ptolemy (Batlymus) and Aristarchus in the sciences of astronomy and natural sciences, in addition to promoting a number of new solutions and interpretations [Biruni (1973-1976)], in different nations comparative study of popular calendar systems - Greeks, Romans, Copts, Jews, Byzantines, Persians, Syrians, Arabs, Indians, Turks, Khorezmians, Bactrians and other peoples, and various dynasties that allow to show their peculiarities and principles and benefits. A number of tables are given which determine the periods of reigns (beginning and end), the dates of the declaration and outbreak of wars, the places and years of rebellions, extensive agricultural works, and especially the periods for the payment of taxes and other obligations, which can be correctly read, understood, and interpreted impartially. According to the contemporary historian Mustagil (on the basis of Biruni's tables can solve many research problems on a high scientific basis, with mathematical and astronomical precision and on the basis of the primary, most reliable source -Biruni's calculations and conclusions, and draws new conclusions.

Such astronomical, mathematical, natural-scientific, historical research Algorithms of Biruni's tables are numerously presented in both books of "Al-Qanun al-Masudi", especially in the second book.

Based on the above-mentioned tables in Biruni's work "Al-Qanuni al-Masudi", the famous historian and scientist Professor A.Z.V. Toghan wrote in 1928-1939 and was published in Egypt in the old Arabic Uzbek alphabet "Today's Turkestan and the recent history". And later in his work "All Turkish People of Turkestan and Recent History", he proved that it was five thousand years since the foundation of the Uzbek-Turkish statehood in the 1930s. Toghan wrote: "According to the Old Khorezm tradition narrated by Al-Biruni, they believe that they came at the invitation of a Turkish king and settled in the land from which they got their name in 982 before the Seleucid calendar, i.e. 1292 BC, and they consider this date as the beginning of their calendar, they know that. In the chapter of this story narrated by the author of the 10th century, Muqaddasi, it is reported that the Khorezm people came to the "King of the East" as 400 soldiers, that the king thought of the 400 Turkish girls he gave, and in this way, a nation (people) with mixed Iranian and Turkish blood was born [Toğan (1981): 92].

P.G. Bulgakov, who learned from A.Z.V. Toghan to calculate the historical date or solve the problem by calculating from the "Al-Qanuni al-Masudi" tables, also said that the date of the revolt of the ancient Egyptians against the rule of Darius II has not been determined until Biruni, who was able to solve it. Biruni in his "Al-Qanuni al-Masudi" shows that this event took place in the 14th year of the reign of Darius, that is, in 410 AD [Bulgakov (1972): 38-39]. But in the first book of the Uzbek edition of "Al-Qanuni al-Masudi" this date is indicated as follows: "Darius II, in the 15th year of his reign in 5085, the Egyptians rebelled and freed themselves from the Iranians" [Biruni (1973): 137] (table). This date is 5 years more accurate than the date of this uprising, which is now conditionally accepted [Vsemirnaya istoriya (1956): 199-822].

Another aspect of the fact that the philosophy of history, developed by Biruni in "Al-Asar-ul-Baqiya", "Al-Qanun al-Masudi" and "Geodesy" has different scientific and historical research methods on the classical period and middle ages. According to P.G. Bulgakov's apt conclusion, based on the collection of rare, mostly lost, ethnographic data on the ethnography of the peoples, Biruni "emerges as the founder of comparative ethnography in the Middle Ages in the East: he describes Indian rituals, traditions, family-marriage and other relations before Islam and compares with the same relations of Arabs, Persians and other peoples" [Bulgakov (1972): 41].

The most interesting aspect of the concept of history and the method of historical research of Biruni, which surprised modern Western scholars, is his impartial and frank study of the history of various religious beliefs, philosophical and moral teachings and sectarian movements of the peoples of the world. His purely objective approach to the research question, which is very consonant with our time, lies in the fact that "comparative ethnography" and "comparative theology", even the holy books of world religions, such as the Torah, the Bible, the Holy Koran and other monuments, were turned into front of "scientific-comparative criticism" as clearly cultural monuments.

Important directions and problems of Biruni's historical research method specially researched and illuminated by A.B. Kholidov, B.G. Erman [A.B. Kholidov, B.G. Erman

(1963): 34-47], M.A. Usmanov [M.A. Usmanov (1973): 39-52], A. Zokhidov [A. Zakhidov (1979)].

It is known that in the medieval Arab Muslim literature, the study of religious and philosophical teachings, beliefs, and sectarian sects created a separate "Ilm ul-firaq", and a special field of history that studies sects, teachings, and heretics, that is, heresiography. This was first formed among the Shiites, Kharijites and Mu'tazilites, and the need to fight against them was created by the Sunni heresiographic literature and its following major representatives - heresiographic historians and their religious sects, folk beliefs, scientific and philosophical teachings, which world science today recognizes as classical monuments. Its emergence led to the creation of the main works on the essence and genealogies of the sect's teachings:

1. Al-Ash'ari (died - 935) "Kitab maqalat al-Islamiyyin wa ikhtilaf al-musallin" (Sayings of Muslims and Differences between Those Who Pray) [Al-Ash'ari (1963)].

2. Abd al-Qahir al-Baghdadi (died in 1037) "Al-Farq bayn al-Firaq" (The difference between the sects and the statement of the sect that survived them) [Al-Baghdadi (1910)].

3. Ibn Hazm (died in 1064) "Kitab ul-Faisal-fi-l-milal wa-l-ahwa' wa-n-nihal" (The Book of Judgement regarding the confessions, inclinations and sects). [Ibn Hazm (1899)]

4. Muhammad ibn Abd –al-Karim Ash-Shahrastani (died in 1153) "Kitab al-milal wa-nihal" (Book about religious and philosophical beliefs) [Аш-Шахрастани (1984)].

5. Ali Ibn Muhammad al-Fakhri (died in 1430s) "Kitab Talhis al-bayan fi dhikr firak ahl al-adyan (A brief explanation of the list of followers of different faiths " [Ал-Фахри (1988)].

Of course, Biruni at least had a good approach of the above-mentioned religious, scientific-philosophical sects, as well as the listed authors, in general, the apocryphal Torah, the Bible, the Holy Qur'an, and the beliefs and teachings of other religious sects. Biruni himself, as mentioned in "Al-Asar-ul-Baqiya", even wrote a special heresiographical book such as "Akhbar ul-Mubayida wal-l-Qaramita" which has been lost or not yet found. Moreover, "India", left us such rare, rich and diverse information about religious and philosophical beliefs, doctrines, sects, communities that Western scholars, such as T. Haarbrucker, Steiner, Steinschneider, H. Ritter, O. Fisher, S. Prozorov and others only in the 19th-20th centuries conducted similar studies.

A.B. Kholidov wrote in the preface to V.G. Erman's work on Biruni's "India", that when he studied scientific-philosophical, religious-sectarian, moral teachings, according to a certain trend, sect, introduced the primary sources of religious-philosophical teachings into scientific use and noted that he very carefully and painstakingly translated philosophical written monuments, at least when it was impossible to give the text directly, he managed to clearly explain the meaning of the original text [A.B. Kholidov, Erman V.G. (1963): 26]. It is especially true in the spirit of Vedanta that the concept of "God" is given in the concept of "Brahma", in sources such as "Patanjala" and "Bhagavad Gita" the function of "cause" is "Ishvara", and the concept of God in the other world with the concept of achievement Nirvana, is the path of liberation - the path of knowing God.

An important aspect of Biruni's concept of history, historical thinking and research method is that he was the first to use archaeological, epigraphic, and paleontological methods in the historical research. Especially in his "Al-Asar-ul-Baqiya", "Geodesy", "India", "Al-Qanuni al-Masudi", "Kitab-us-Saydana" and other works, this method was

widely used. It is in these mentioned works, especially in the work "Geodesy", that Biruni used the process of observation, vision, and experiments in studying important problems related to the geology, geodesy, cartography, paleontology, zoology, and works of his spiritual teacher Abul Abbas Iranshahri, Razi, Khojandi, or others. Using the reports given by scientists, travelers, and diplomats, he drew conclusions about "The land replaced the sea and the sea replaced the land" [Biruni (1966): 94] and this was confirmed by the examples of the Arabian sands and the Karakum desert, where were found the remains of fish bones, traces of water waves and by other paleontological evidence. At the same time, Biruni was not limited to these archaeological, paleontological, zoological, geographical, ethnographic, etc. evidences, but based on their comparison with ancient Greek, Arabic, Persian or Turkish written sources, historical events, he came to firm scientific conclusions. The famous Uzbek geologist O.M. Akramkhojaev rightly writes about this: "He describes the shells or remains of ancient animals that came out from under the earth so accurately that any modern paleontology or zoologist would envy" [O.M. Akramkhojaev (1973): 33].

Finally, we come to the conclusion that the philosophy of history of Biruni, the method of historical research he proposed, especially his fundamental scientific and practical rules, can be used correctly and adequately, leaving the class approach and ideology characteristic of the Soviet era, and raising the question of the authenticity of the history of peoples and states, making possible to effectively and consistently solve a number of unresolved problems of historical research.

REFERENCES:

- Al-Ash'ari, Ali ibn Isma'il (1963). *Maqalat Islamiyyin Wa Ikhtilaf Al-Mushalliin* [Sayings of Muslims and Differences between Those Who Pray] Dar Nashr Faranz Shtainir, Fisbadin, 366 pages
- Al-Baghdadi, Abd-ul-Qadir (1910). *Kitab Al-Farq Bayn al-Firaq wa Bayan al-Firqa al-Najiya Minhum*. [The difference between the sects and the statement of the sect that survived them] Published by Matba'at al-Ma'arif, Cairo, 355 page
- Ал-Фахри, Али ибн Мухаммад ибн Абдуллах (1988). Китаб Талхис ал-байан фи зикр фирак ахл ал-адйан (Краткое разъяснение к перечню последователей разных вер [Kitab Talhis al-bayan fi dhikr firak ahl al-adyan (A brief explanation of the list of followers of different faiths)]. Facsimile of the manuscript. Translated into Russian by S.M. Prozorov, Moscow, Nauka, 171 pages
- Аш-Шахрастани (1984). Книга о религиях и сектах. [Al-Shahrastani. Book about religions and sects]. Translation from Arabic to Russian by S.M. Prozorov, Moscow, Nauka, 1984, 272 pages
- Akramhozhaev O.M. (1973). Беруний геологик ходисалар, минераллар ва жавохирларни ўрганган дастлабки тадкикотчи. [Biruni the first researcher who studied geological phenomena, minerals and gems.] *Beruni. A collection dedicated to the 1000th anniversary of the birth.* -Tashkent, ФАН, р. 33

- Беруний билан Ибн Синонинг савол жавоблари (1950) [Beruni and Ibn Sina's questions and answers]. Translated from Arabic into Uzbek by A. Rasulev and M. Abdurahmonov)Tashkent.: Uzbek Fan publishing house, pp. 234-271.
- *Материалы по истории прогрессивной общественно-философской мысли в Узбекистане* (1976) [Materials on the history of progressive socio-philosophical thought in Uzbekistan.]-Tashkent, Fan, 587 pages
- Beruni. (1968) *Танланган асарлар* [Selected works], vol. 1. Tashkent, Nauka, 478 pages
- Beruni. (1973) Танланган асарлар [Selected works]. Volume 5, Tashkent, Nauka, p. 137
- Beruni. (1954) Al-Qanuni al-Masudi. Hyderabad. 1., pp. 156.
- Biruni (1966). desy. Izbrannye proizvedeniya. Tashkent, Nauka
- Beruni (1973-1976). Selected works. 5-j. 1-2 books, -Tashkent, Nauka
- Bulgakov G.P. (1972) Жизнь и труды Беруни. [Life and Works of Biruni]. Tashkent, Fan, 428 pages
- Kholidov A.B., Erman V.G. (1963) Predislovie [Preface] Biruni. *Izbrannye proizvedeniya*. T.2. India. -T., Science, pp. 34-47
- Hayrullaev M.M., Shorakhmedov D. (1972) Маданият ва Мерос [Culture and Heritage]. –Tashkent, Literary and Art Publishing House named after Gafur Ghulam, 237 pages
- *Философия истории* (1999) [Philosophy of History] Учеб. Пособие / Под ред. проф. А.С. Панарина. Моscow, Гардарики, 432 pages ISBN 5-8297-0020-4
- Sadikov H.U. (1973). Ал-Бируни и его работы по астрономии и математической географии [Al-Biruni and his work on astronomy and mathematical geography]. – Moscow, Gostekizdat, 342 pages
- Toğan A.Z.V. (1981). *Bugunku Turkeli Turkestan ve yakin tarihi* [Today's Turkeli Turkestan and its recent history]. Istanbul. 2. baski. Vol. 1. Enderun library, page 92.
- Vsemirnaya istoriya (1956) [World History] Volume 2. -Moscow, Nauka, pp. 199-822
- Toraev B.O. (1992). Пространство. Время. Развитие. [Location. Time. Development] Tashkent, Fan, 250 pages
- Usmanov M.A. (1973). Проблемы религии в мировоззрении Бируни [Biruni's problem of religion and worldview] "Biruni's 1000th birthday". -Tashkent, Fan, pp. 39-52
- Zakhidov A. Formirovanii i osobennosti razvitiya svobodomysli Sredney Azii v period rannego srednevekovya. Diss-ya na soisk. three.step.kand.philosoph.nauk. Tashkent, 1979, 45 pages