

A MODERN SCIENTIFIC VIEW ON THE STUDY OF NIZAMI GANJAVI'S CREATIVITY

*Adalat ATAI**

Head of Department Planet and small celestial bodies of ShAO ANAS, PhD, associate professor

The plots and themes of Nizami Ganjavi, who is considered to have the deepest knowledge of his time, were studied by world-renowned thinkers and used to make the essence of their works more meaningful. For example, the genius Leo Tolstoy, who read Nizami's works from the original Persian, benefited from Nizami's treasury in his War and Peace. It is clear that Mirza Kazim bey, who spoke to L. Tolstoy about Nizami's greatness, also taught him Persian. It was in this language that Leo Tolstoy realized that Nizami was a genius and that the Azerbaijani people had scientific and cultural values Nizami wrote in "Seven beauties":

Dünyada nə qədər kitab var belə

Çalışıb əlləşib gətirdim ələ

Ərəbcə, dəricə yeri düşərkən,

Buxari, Təbəri əsərlərindən...,[1]

The poet emphasizes that he strives for deep knowledge and also learns Dari. Dari language (dari دری is the language of Tajiks, Hazaras, provinces and other ethnic groups living in Afghanistan and is one of the languages of Iran. The Constitution of Afghanistan also stipulates that one of the two official languages of Afghanistan is Pashto.

It is clear that Persian cannot be the poet's mother tongue in this way. On the other hand, the idea that Ganja was a city of Iran in the 12th century is wrong. How could Ganja be an Iranian city where Iran itself was part of the Seljuk Empire during Nizami's time? Ganja was also the capital of the Azerbaijani Atabegs,

* E-mail: atai1951@yahoo.com

who were Turks. Hence, the stubbornness of the Persian chauvinists is also inappropriate.

Then, in "Seven Beauties", the poet is ready to write his thoughts:

İzlədim yolunu səyyarələrin,
Nə ki, elmlər var, gizli və dərin,
Oxudum xəbərdar oldum da vardım,
Varlıqlar sirrini yer-yer axtardım.
Əlimə yetişən hər bir varaqdan
Nüsxələr bağladım mən zaman-zaman.
Onda ki, fikrimi saldım səhməna,
Dedim ki, qoy onu düzüm dastana.

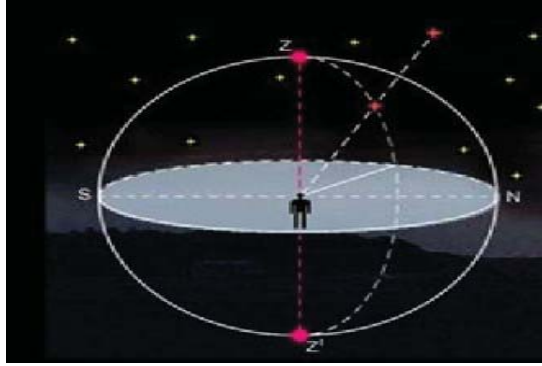
Nizami shows that he wrote his works after studying the works of Bukhari Samarkandi and Abu Jafar Tabari, after mastering the secrets of science by observing the movements of stars and planets in the sky. In "Leyli and Majnun", he notes that he tries to get a detailed description of the world around him and information about the world, and is concerned about the lack of knowledge in this area:

Göyün sirr pərdəsi ki, bərqərarlıdır,
Gözlə görünməyən bir sirri vardır.
Nə qədər oraya at çapsam da mən,
Bir xəbər öyrənmək gəlmir əlimdən.
Göyün lövhəsində yanar rəqəmlər,
O saf ulduzları mən birər-birər
Nə qədər oxuyub öyrəndim, heyhat
Yenə də qəlbimi görmədim rahat.(L.M.)

The celestial sphere is an arbitrarily large-radius sphere with an observer at its center. Celestial bodies are projected onto the inner surface of this sphere, including the Sun, Moon, and planets. The center of the celestial sphere is an arbitrary point. Each observer has his own sphere. The angular measurements on the surface of the sphere do not depend on its radius (Figure). Z - the zenith point is at the top of the observer's head,

Z' - Nadir is on a straight line passing through the zenith and the observer, and is a point on the opposite side of Z. N - North and S - South.

When the poet speaks of a curtain, he imagines the celestial sphere as a hemisphere of equal radius, and shows that even if I ride a horse towards the dome



(or rather, the line connecting the hemisphere to the Earth), I cannot get any information. It remains a mystery. I am also worried about this.

In *The Treasure of Mysteries*, Nizami makes it clear that God created the entire material world "out of a drop of His grace." It is known that no one in the Soviet era would agree with Nizami's opinion. The origin of matter from nothing was unacceptable from the point of view of Soviet science. However, one of the founders of Soviet science, the world-famous scientist YB Zeldovich, said in an interview with the *Izvestia* newspaper in 1986, shortly before his death:

"Although it may seem paradoxical, my considerations and calculations have led me to the conclusion that the matter of the universe came into being out of nothing."

Nizami, who does not believe in superstition, looks at the issue of doomsday from a scientific point of view and thinks that one day the celestial bodies will end, their current order will collapse, and the current stability between the Sun, Moon, Earth and other planets will be disrupted. That is, the existing stability is relative, there is no absolute stability. Modern science calls such an event quasi-stable. It is necessary to talk about a fact that confirms Nizami's opinion. The moon creates a 50 cm amplitude on the Earth's surface.

The Earth's own axis of rotation is 30 times the speed of the Moon's rotation around the Earth. Thus, the Moon reduces the speed of the Earth. Such a delay in the lunar-Earth system leads to an increase in the period of the Earth's rotation (lengthening of the day) and the Moon's distance from the Earth.

Calculations show that a billion years ago, the Earth's rotation period was 20 hours (20 hours a day). The distance to the Moon is measured by laser beams for about half a century. It has been determined that the Moon moves 3 cm away from the Earth every year, and in 5 billion years the period of the Earth's rotation will increase 41 times to about 1,000 hours. In fact, there will be nine nights and nine daylights a year on Earth. Today's views on the association and evolution of celestial bodies in modern astrophysics are consistent with Nizami's.

The analysis of such views is interesting [3]. N. Ganjavi is interested in the formation and development of the universe and its current state, as well as the issue of its catastrophic collapse. He also wonders if there are Earth-like objects in the universe. That is, he understood the unity of the world.

Nizami's works contain a lot of information about the ancient way of life and customs of the peoples of Iran, the Middle East and Azerbaijan. He can be considered an ethnographer, a geographer, in the modern sense of the word. Describing Mahin Banu's way of life in "Khosrov and Shirin", the poet says that what has not changed, in modern scientific terms, must evolve:

Fələklərin sürətlə sıçrayışla hərlənməsindən,
Necə, bəla gələcək Yerin başına, biləsən.
Göydə yanan, partlayan, batıb gedən hər nə var,
Yer üçün bir nümunə, bir timsaldı apaşkar.

The study of the works of such a genius thinker, who sees the distant future in his thoughts and understands the process of evolution, needs to be filtered by experienced, natural scientists who have mastered modern science.

In the modern conditions of rapid development of science, to add the results of 400-500 years later in the works of Nizami Ganjavi should not be considered as respect for our great poet. For example, the idea that the planet Saturn has a ring is also wrong to attribute to the great poet. This was not enough, while the other described Saturn, saying that it did indeed hang from his waist, that is, that it had the "belt" now known. One small mistake in the translation created two misconceptions. Maybe such confusion was released during the translation from ancient Persian? Here it is necessary to know the opinion of experts. But the question arises: could Nizami Ganjavi see the rings of Saturn? In 1607, it was able to magnify glass in the form of the intersection of two circles. Such glasses are called "lens" in German and "merci" in Azerbaijani.

In 1609, Galileo built the first telescope with a magnification of thirty times, and said that the Moon consisted of the mountains, the phases of Venus, the four large satellites of Jupiter, spots on the disk of the Sun, and the Milky Way star clusters at the equator of our galaxy.

When Galileo called his mother and showed him Jupiter's satellites with a telescope, he replied, "I've seen them since I was a girl, and you see them with your glasses." But Galileo could not see Saturn's rings with a telescope 30 times magnified. He thought that because Saturn was spinning so fast, there was a slight protrusion in the equator. This means that no one could see Saturn's rings with a telescope with a magnification of 30 times. In 1656, with the help of a 50-magnitude refractor (lens) telescope designed by the famous musicologist H.



Huygens, he announced to the scientific community that there was a ring around Saturn with remarkable beauty. Galileo could not see the rings of Saturn (He died in 1642).

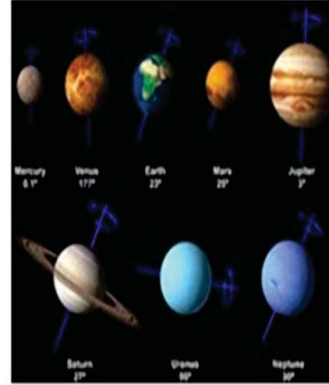
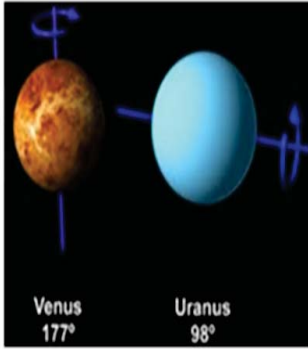
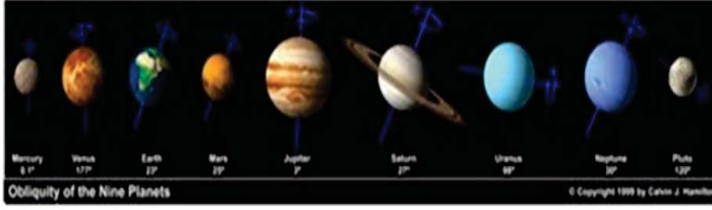
So Nizami could not distinguish Saturn from the star. Although many noted the inaccuracy of Ptolemy's teaching, Biruni explained the first step in detail. Omar Khayyam linked the centralization of the Earth as the biggest flaw in Ptolemy's teaching.

Omar Khayyam considered Biruni's opinion to be the biggest step in this direction.

For example, [3, 4], Nizami writes in a note about himself: "In a short time I learned all the sciences between Saturn's circle and the center of the Earth and became aware of all the sciences." (How can this sentence be understood?) they give. However, Nizami uses an interesting expression in the same note, not "Earth", but "Earth's center". This confirms that the Earth is spherical. Of course, in this example, since space is a cosmic space, logically, the concept of "center" is not plane (as in ancient simple notions), it must be spherical. This expression also shows Nizami's interest in geology, geophysics and natural sciences. Such an approach to Nizami's work is unacceptable. Misunderstanding of a simple truth has led to big mistakes.

It is clear that in Nizami's time, the last planet was Saturn, and the phrase "I have knowledge up to Saturn's circumference" is taken from the center of the

Earth, and it is correct to have knowledge within Saturn's circumference. What



is not pleasant is that young graduate students and doctoral students also use these writings of well-known researchers and spread such mistakes without thinking. Therefore, when writing an article about Nizami Ganjavi, it is necessary to correctly translate his works from the original, and when commenting on his views, it would be useful to know the opinion of natural scientists. It would be meaningful to complete N. Ganjavi's article with optimistic thoughts on the way to study the universe:

Anlayıb, düşünək hər şeyi gərək,
 Hər sirri açmaqla hünər göstərək.
 Yərləri, göyləri öyrənək bir-bir,
 Qalmasın bizimçin açılmamış sirr.
 Görək, kim yaratmış bu təbiəti,
 O kimdir, işinin nədir hikməti?
 Bu vərəq üstündə çəkilən hər xətt
 Sənətkar əliylə yaranmış, əlbət.
 Qurğusu düz olan bu şeylər bir-bir
 Mahir bir ustada canlı şahiddir.
 Səni, öz adıyla düz yol göstərən
 O böyük allaha and verirəm mən,

Hələ açılmamış elm ilə göylər,
Lakin hər elm də gülür bir səhər.
Bir qara pül olsun, bir arpa əgər,
Onda dörd gövhərdən tapılar əsər.

REFERENCES

1. Tajiks 15-18 m; Hazaras 3-3.5 m; Regions 3.5-4 m
2. "The Afghans - Language Use". United States: Center for Applied Linguistics (CAL). June 30, 2002. Archived from the original on May 4, 2011. Date of use: 24 October 2010
3. H.B. Abdullayev, M . Vəliyev, Nizami Ganjavi's world of science. Baku-Azerneshr-1991
4. Timuchin Efendiyev, prof. "People's" ("Xalq") newspaper.- 2012.- April 7.- P. 5