

Astronomical Terminology in Ancient Armenian and Early Armenian Cosmology

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Abstract

This paper examines traditional astronomical terminology preserved in the Armenian language and discusses its significance for reconstructing early Armenian cosmological concepts. Armenian names of the planets are compared with their ancient Greek counterparts, revealing similarities in the original descriptive meanings assigned to these celestial objects. The myth of Vahagn, one of the principal deities of the ancient Armenian pantheon, is examined as an early cosmological narrative preserved in Armenian tradition. Particular attention is given to the description of his birth, in which the four classical elements—air, earth, water, and fire—appear as fundamental components of the surrounding world. The study demonstrates that language and mythology can serve as valuable sources for investigating early astronomical and cosmological ideas.

Keywords: *History of astronomy, language: Armenian language, Planets: Armenian names, ancient cosmology: Vahagn, birth of Vahagn: four elements.*

1. Introduction

Ancient astronomical knowledge has reached us through a variety of sources, including archaeological monuments, written texts, oral traditions, and language itself. Among these sources, language occupies a special position because it preserves concepts and terms that may have originated many centuries before their written documentation. The analysis of ancient terminology can therefore provide valuable information about the development of early scientific and cosmological ideas.

All ancient societies developed, independently or through interaction with neighbouring cultures, systems of knowledge related to the structure of the surrounding world. This knowledge included the identification and naming of celestial objects, legends explaining their origins, and fundamental concepts describing the organization of the universe.

The Armenian people, as one of the ancient indigenous populations of the South Caucasus and the Armenian Highlands, naturally developed their own understanding of the sky and the phenomena observed in it. These ideas were transmitted through different forms of cultural memory. The earliest evidence may be found in petroglyphs and other archaeological monuments. Numerous astronomical representations have been discovered in the mountains of Armenia. Among the surviving archaeoastronomical monuments, the stone structure of *Zorats Qarar*, often referred to as the Armenian Stonehenge, and the ancient observation site of Metsamor occupy a special place. These monuments have been extensively discussed in the works of Elma Parsamyan, Paris Herouni, Grigor Brutyan, Karen Tokhatyan, Hayk Malkhasyan, and other researchers.

In the present paper, we draw attention to another source of ancient astronomical knowledge: language itself. A language that develops together with its speakers preserves numerous traces of historical experience, including terminology related to the natural world. Comparative linguistic analysis can therefore reveal information about the origin, development, and antiquity of astronomical concepts preserved in Armenian.

The paper first examines traditional Armenian planetary terminology in comparison with ancient Greek names, then discusses cosmological concepts preserved in the myth of Vahagn and the traditional Armenian interpretation of the Milky Way.

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2. Names of planets

Planets were among the first celestial objects recognized by ancient observers as distinct from the fixed stars. When observing the night sky, people noticed that several bright star-like objects changed their positions relative to the background of stars. This apparent motion distinguished them from other celestial bodies and required a special terminology.

The ancient Greeks called these objects *planētai asteres*, meaning “wandering stars,” or simply *planētai*, “wanderers.” The modern term “planet” derives from this Greek designation.

The Armenian term for a planet, *molorak*, is linguistically different but conveys a remarkably similar concept. The word may be translated as “one who is lost,” “wandering,” or “astray.” In this sense, it reflects the same fundamental idea: an object that does not follow the fixed and regular pattern of the stars but appears to move along an unusual path across the sky.

Notably, the ancient Greeks did not initially use the mythological names Mercury, Venus, Mars, Jupiter, and Saturn for the planets. Actually, these are the third set of names, which represent the Romanized names of Greek deities. Before the mythological names became widespread, the planets were often designated by descriptive terms related to their apparent appearance in the night sky, including their brightness, color, and luminosity.

The traditional Greek names of the five planets were *Stilbon* for Mercury, *Phosphoros* for Venus, *Pyroeis* for Mars, *Phaethon* for Jupiter, and *Phainon* for Saturn. These names can be interpreted as descriptions of various aspects of celestial light: shining, bringing light, fiery appearance, brilliance, and visibility.

Interestingly, the Armenian language has preserved traditional planetary names that express very similar concepts. Alongside the internationally adopted Roman mythological names, Armenian astronomical terminology includes *Paylatsou*, *Lousaber*, *Hrat*, *Loosntag*, and *Yerevak*.

One can compare the names in two languages to reveal that the meanings of these Armenian names correspond closely to the descriptive meanings of the ancient Greek terms. *Paylatsou* refers to shining or glittering, *Lousaber* to the bringing of light, *Hrat* to fire or fiery appearance, *Loosntag* to a luminous or light-related attribute, and *Yerevak* to visibility or brilliance.

Table 1. Traditional descriptive names of the planets in ancient Greek and Armenian traditions.

Planet	Greek name	Meaning	Armenian name	Meaning
Mercury	<i>Stilbon</i>	Shining	<i>Paylatsou</i>	Glittering
Venus	<i>Phosphoros</i>	Light-bringer	<i>Lousaber</i>	Light-bringer
Mars	<i>Pyroeis</i>	Fiery	<i>Hrat</i>	Fire-related
Jupiter	<i>Phaethon</i>	Bright	<i>Loosntag</i>	Crown of light
Saturn	<i>Phainon</i>	Shining	<i>Yerevak</i>	Visible, brilliant

Evidently, they are similar, and the similarity between these two traditions is noteworthy. However, the available historical and linguistic evidence does not allow us to determine whether the Armenian and Greek terms are directly connected, whether one tradition influenced the other, or whether both preserve elements inherited from an earlier cultural background. Nevertheless, the preservation of such descriptive astronomical terminology in Armenian demonstrates that these concepts were deeply rooted in the ancient perception of the night sky.

The comparison presented in Table 1 demonstrates that both Greek and Armenian astronomical traditions preserved descriptive names reflecting the visual characteristics of planets observed in the night sky. These names are not merely arbitrary designations but an attempt to describe and classify celestial phenomena according to their observable properties.

Moreover, the preservation of such terminology in the Armenian language provides evidence that astronomical observations formed an important part of the ancient cultural and intellectual tradition. Language, in this case, acts as a historical record, preserving traces of how ancient observers interpreted the celestial world around them.

3. The Myth of Vahagn as an Early Cosmological Narrative

Ancient myths often contain early attempts to explain the origin and structure of the surrounding world. Although these narratives are fundamentally different from scientific theories, they preserve important

information about how ancient societies perceived natural phenomena and the organization of the cosmos.

Elements of such early cosmological thinking can be found in Armenian oral traditions, folk narratives, and epic literature. Among these sources, the legend of Vahagn occupies a special place. Vahagn was one of the principal deities of the pre-Christian Armenian pantheon and was associated with thunder, lightning, fire, courage, and victory. His epithet in Armenian *Vishapakagh*, usually translated as “Dragon Slayer” or “Dragon Reaper,” reflects his mythical role as a hero confronting cosmic chaos.

The etymology of the name Vahagn has been discussed in connection with ancient Indo-European linguistic roots. One interpretation associates the first part of the name with the Indo-European root **vah-*, meaning “to carry” or “to bring,” while the second part is connected with **Agni**, the ancient Indo-Aryan deity of fire. According to this interpretation, the name Vahagn may be understood as “the bringer of fire.”

This interpretation corresponds well with the famous account of Vahagn’s birth, preserved by Movses Khorenatsi (Movses of Khoren, 410-490 CE), in which the god emerges from a fiery element with hair and a beard resembling flames.

Movses Khorenatsi wrote the most comprehensive medieval historical account of Armenia in the fifth century CE. His work combines historical traditions with mythological narratives and is the earliest known written source to preserve the legend of Vahagn.

Only two fragments of the much longer song about Vahagn have survived. Both fragments are related to the structure of the surrounding world and therefore provide valuable evidence about ancient Armenian cosmological imagination.

The first fragment describes the birth of Vahagn: It tells how Vahagn was born and goes like this:

*In travail were heaven and earth,
In travail, too, the purple sea
The travail held in the sea the small red reed.
Through the hollow of the stalk came forth smoke,
Through the hollow of the stalk came forth flame,
And out of the flame a youth ran!
Fiery hair had he,
Ay, too, he had a flaming beard,
And his eyes, they were as suns!*

The description of Vahagn’s birth contains a remarkable combination of natural elements that later became central components of ancient philosophical models of the physical world. The text mentions heaven, earth, sea, and flame as fundamental parts of the environment from which Vahagn emerges. These elements correspond to air, earth, water, and fire — the four classical elements that were later formulated in ancient Greek philosophy.

It is important to note that the presence of these elements in the Armenian myth does not necessarily imply a direct historical connection with Greek philosophical theories. Rather, it demonstrates that ancient cultures often attempted to explain the origin and structure of the world through a limited number of fundamental natural principles. The Armenian narrative preserves an early example of such cosmological imagination expressed through mythological language.

The concept of four fundamental elements became one of the most influential ideas in ancient Greek philosophy. Early Greek philosophers discussed the nature of the basic substances constituting the world, and Plato later used the term sounding as *stoicheîon* in connection with the classical elements: earth, water, air, and fire.

The terminology associated with these concepts also reflects interesting linguistic developments. The Greek word *stoicheîon* gave rise to the scientific term “element” in many languages, while in Russian the related word *stikhiya* acquired the meaning of a natural force or disaster. In Armenian, the word *tarr* expresses the meaning of “element,” while the plural form *tarerq* is traditionally associated with natural forces or phenomena.

Unlike the first fragment, which describes the origin of a cosmic hero, the second narrative provides a mythological explanation of a visible structure in the night sky.

The second surviving fragment of the Vahagn legend concerns another remarkable astronomical phenomenon: the Milky Way. According to the legend preserved by Movses Khorenatsi, Vahagn stole straw from the Assyrian king Barsham during a cold winter night and carried it back to Armenia. While crossing

the sky, some of the stolen straw was scattered along his path, creating the luminous band visible across the night sky.

This mythological explanation is reflected in the traditional Armenian name of the Milky Way, sounding *Hardagoghi chanaparh*, which can be translated as “the Way of the Straw Thief.” The name itself preserves a direct connection between a celestial phenomenon and the cultural narrative associated with its origin.

Interestingly, a similar association between the Milky Way and the concept of straw is preserved in Neo-Aramaic traditions. In Assyrian Neo-Aramaic, the Milky Way is known as *shvil tivna*, meaning “the way of straw,” while another traditional expression, *urha d’gannave*, refers to “the path of thieves.”

Although the exact historical relationship between these expressions remains uncertain, their similarity demonstrates the persistence of a shared symbolic interpretation of the Milky Way within the region’s cultural traditions.

The Armenian scholar Anania Shirakatsi (Anania of Shirak, 610–685 CE), one of the earliest medieval Armenian scientists, also mentioned the Milky Way in his works. Describing its nature, he referred both to the Greek astronomical terminology and to the traditional Armenian name, preserving the legend inherited from earlier generations.

However, Shirakatsi clearly distinguished between mythological interpretation and scientific explanation. He noted that the Milky Way was not actually composed of straw but consisted of countless stars, in agreement with the views of ancient scholars.

The examples discussed above demonstrate that ancient Armenian astronomical knowledge was preserved not only through written scientific texts but also through language, mythology, and traditional names. These sources provide valuable evidence for reconstructing how ancient societies observed and interpreted the sky. The existence of specific astronomical terms and narratives indicates that celestial phenomena were not only observed but also incorporated into the cultural memory of the Armenian people. Language thus represents a long-lasting record of humanity’s earliest attempts to understand the structure of the cosmos.

4. Conclusion

The examples discussed in this paper demonstrate that language can serve as a valuable historical source for reconstructing early astronomical and cosmological concepts. Unlike archaeological monuments or written scientific works, linguistic evidence is often preserved through continuous use over many generations and may retain traces of ancient observations and interpretations of the natural world.

The traditional Armenian names of the planets show that astronomical observations were incorporated into the linguistic system of ancient Armenian culture. The legend of Vahagn and the traditional name of the Milky Way further demonstrate how celestial phenomena were interpreted and preserved through mythology and oral tradition.

Words and terms do not appear randomly in a language. In ancient societies, the creation of a term usually reflected the need to describe, classify, or explain a particular phenomenon. Therefore, the existence and preservation of ancient astronomical terminology provide evidence that observations of the sky occupied an important place in the intellectual life of past cultures.

Further studies combining linguistic analysis, ancient texts, mythology, and archaeological evidence may reveal additional information about the earliest human attempts to understand the structure of the Universe. Such interdisciplinary research can contribute to a broader understanding of the development of astronomical knowledge and the cultural history of science.