

THE ROLE OF ROCK ART CLUSTERS IN MYTHOLOGY, RELIGION AND MAGIC: THE CONCEPT OF THE KNOWLEDGE SPIRAL

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The article proposes the concept of rock art cluster modelling for knowledge relationship (studying, interpretation, and learning) between the teacher (nature) and the pupil (prehistoric man). The concept allows us to expand the role and influence of rock art on the formation and development of mythology, religion and magic. It allows us to present rock art in the form of clusters of knowledge (natural philosophy and metaphysics), tied to territories. We identified three main types of Armenian rock art clusters: the simple cluster, the mega cluster and the hyper cluster (Vahanyan, 2014; Vahanyan, Vahanyan, 2013;



Fig. 1. The mega and hyper clusters of the Armenian Highland (photo by K. Tokhatyan).

Vahanyan, Vahanyan, 2010; Vahanyan, Petrosyan, 1991).

A simple rock art cluster is a set of petroglyphs around a small lake, which is usually located on the slopes of volcanic mountains or on the top (craters). On Geghama Ridge in Armenia in the vicinity of the volcano is Lake Akna (Aknalich), which means 'eye' in Armenian. On Geghama Ridge is a frozen volcano, Mount Azhdahak. In the crater of the volcano there is a lake with many petroglyphs and ancient stone monuments (*vishapakars*). A mega rock art cluster is a set of simple clusters located around a large lake or sea (for example, near Lake Sevan, Lake Van and Lake Urmia, around the Black Sea and the Caspian Sea in the Caucasus).

A hyper rock art cluster is a collection of mega rock art clusters, petroglyphs located around the mountains of Ararat and the Caucasus mountains. Typical examples of clusters are shown in Figures 1, 2 and 3.

In the rock art clusters we have identified visual databases of coded explicit and tacit knowledge represented in mythology, religion and magic. Using visual language, the language of rock art (Anati E., Fradkin A., 2014) and the language of the rock art clusters (knowledge clusters), we make it easier to study the explicit and tacit knowledge perceived than the verbal language of myth, religion and magic.

There are four types of process for creating new knowledge for studying the myths, religion and magic of ancient people, for example Greeks and Armenians, whose ancestors spoke in a common language (Khorenatsi, 1990): socialization, externalization, combination and internalization (Nonaka, Toyama, Konno, 2000; Nonaka, von Krogh, Voelpel, 2006; Collins, 2001; Sanchez, 1996).

Socialization

This process focuses on tacit to tacit knowledge linking. Tacit knowledge goes beyond boundaries and new knowledge is created by using the process of interaction, observing, analyzing, spending time together or living in the same environment. The socialization is also known as converting new knowledge through shared experiences. The clusters of rock art gain new knowledge from outside their boundaries by interacting with other clusters of rock art.



Fig. 2. A simple cluster of Armenian rock art (photo by K. Tokhatyan and A. Kolyan).

Externalization

This process focuses on tacit to explicit knowledge linking. It helps in creating new knowledge as tacit knowledge comes out of its boundary and became collective group knowledge about the clusters of rock art. With this process we can say that knowledge is crystallized. The process of externalization is often driven by metaphor analogy and models.

Combination

Combination is a process where knowledge of the clusters of rock art transforms itself from explicit knowledge to explicit knowledge.

Internalization

By internalization explicit knowledge is created using tacit knowledge, and it is shared across the clusters of rock art. When this tacit knowledge is read or practised by individuals, then it broadens the learning spiral of knowledge creation. The cluster of rock art tries to innovate or learn when this new knowledge is shared in the socialization process. The clusters of rock art provide training programs for people at

different stages. By reading these training manuals and documents people internalize the tacit knowledge and try to create new knowledge after the internalization process.

For example, the Greek Prometheus was chained to a rock in the Caucasus mountains. The Greek Argonauts looked for the Golden Fleece in the Caucasus, Colchis. The gods from Asaland and Vanaland, located near the Black Sea and Lake Van, are the inventors of runes and other cultural values.

Only in the Armenian clusters of petroglyphs were there identified traces of all kinds of forms of written culture. In the area of Lake Van the legendary Hay built the first temple of knowledge. According to legend, the first priest of this temple was his grandson Cadmus (Cadmus or Kid). Cadmus, the grandson of the legendary Armenian hero Hay (Khorenatsi, 1990), is the legendary inventor of the Phoenician and Greek alphabets. We identified the cultural connection between Armenian rock art symbols and the visual



Fig. 3. Armenian rock art (photo by K. Tokhatyan)

culture of Old Europe (Stereo and Vince).

The present author constructed a table of the world's iconic, mythological and religious symbols using Armenian rock art clusters. The principles of natural philosophy and metaphysics are shown in Armenian clusters of petroglyphs in various forms, in particular all known forms and types of the cross and the swastika, the eight-pointed star and other geometric figures (circles, oblique, straight and winged cross, triangle, square, etc).

In the Greek mythology Cadmos means 'east', that is the territory where there is light (knowledge). In the Armenian old song about the birth of the first man Vahagn (Khorenatsi, 1990), the God of Thunder, the Dragonslayer Vahagn, is the deity of the sun, light and fire, described as a result of the interaction of four forces of nature. The word 'van' (Van, One, Wan, is associated with water as a source of life (*wasser*, water, *aqua*, swastika), as a simple cluster of rock art. Among the ancient names of the cities of Armenia – Vaspurakan, Van, Tatvans, Mihravan, Tornavan, Yerevan, Nakhichevan Zarehavan, Vanadzor, Ijevan – we can find the 'water', 'van'. According to some scholars, Eden is located between Lake Van and Lake Urmia. Vaspurakan (Armenian 'garden, park of water, lakes and rivers') is the biblical Garden of Eden, according to legend. In the Bible Eden is the source of the four sacred rivers.

The capital of the ancient kingdom of Mitanni (about 1500 BC), was located in Vashshukkani (Vassokkanne or Vaspourakan, a region around Lake Van). The population of Mitanni spoke in a language that had spread in Asia Minor, as well as in the kingdom of Urartu from Lake Van (Sanchez, 2014).

Thus, the function of the Armenian rock art clusters is the function of the spiral of knowledge, which has preserved and transmitted explicit knowledge. The hidden knowledge becomes a source of mythology, religion and magic.

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