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RESEARCH ON ARMENIAN ARCHITECTURE

VARDZK

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TWO NEWLY-FOUND CRYPTOGRAMS IN RSHTUNIK

by Emma Abrahamian

Pieces of writing in code date back to the depth of centuries and are found in almost all the written languages of the world.

In written Armenian, there existed a number of modes of encoding messages: they are defined as alternative forms of conveying speech in writing.

Armenian cryptograms are mostly found in manuscripts, whereas their number in lapidary inscriptions is rather small.

The oldest lapidary cryptograph known to science dates back to the '30s of the 7th century—it is a bilingual text (in Armenian and Greek) carved on the eastern facade of the church of Avan, Yerevan (it is encoded by means of letter substitution ciphers and mentions Catholicos Yezr).[1]

The next encrypted text is engraved on the rear of a cross-stone (10th to 11th centuries) placed inside a church standing a km west of Artzvanik Village, Syunik Region, RA. It is created with the application of six encryption methods at the same time—line and dot substitution, dot substitution, letter substitution, numeric value addition (addition ciphers), as well as right-to-left and double-clue (right-to-left writing and preceding letter substitution) ciphertexts.[2]

In 2006 while working in two different sites in Rshtunik District, Vaspurakan Province, Armenia Maior, we found two heretofore completely unknown cryptograms on cross-stones. One of them is in the cemetery (it is now totally destroyed) of the ancient village of Shatvan,[3] and the other in the graveyard (located at 1,936 metres above sea level) of St. Thomas Monastery near Gandzak Village, not far from the southern shore of Lake Van.

Let us start with the latter. The cross-stone, only the lower part of which is preserved (dimensions of the surviving part: 58 x 44 cms), is sculptured of hard bluish sandstone and has an irregular contour. Its centre is decorated with the tree of life from which the main cross emerges, enclosed within an apse-shaped design known as 'khoran' in Armenian miniature paint-

GANDZAK VILLAGE, RSHTUNIK (GYAVASH) DISTRICT. St. Thomas Monastery and a cross-stone with a ciphertext of line and dot substitution in its cemetery

1 **Դաֆթարյան Կ.**, Ավանի երկլեզվյան արձանագրությունը [**K. Ghafadarian**, The Bilingual Inscription of Avan] (Yerevan, 1945); ibid., Երևան. միջնադարյան հուշարձաններ [Yerevan: Medieval Monuments] (Yerevan, 1975), 190-192.

2 **Աբրահամյան Ա., Շահինյան Ա.**, Արծվանիկի հայերեն նորահայտ ծածկագիրը և նրա վերծանությունը [**A. Abrahamian**, **A. Shahinian**, "The Newly-Revealed Armenian Cryptogram of Artzvanik and Its Decipherment"], «ՊԲՀ» [*Historico-Philological Journal*], no. 3 (1975), 113-125. Also see **Աբրահամյան Ա.**, Հայկական ծածկագրություն [**A. Abrahamian**, Armenian Cryptography] (Yerevan, 1978), 180-189.

3 It should be stated that part of the cross-stones of the cemetery were saved from destruction simply to be used as tables on which salt was put for sheep.

SHATVAN VILLAGE, RSHTUNIK (GYAVASH) DISTRICT. A cemetery

ing ('khoran' is the Armenian equivalent for 'apse' - translator). A small simple cross is carved within each of its pillars the capitals of which are embellished with a pair of quadrifoliate flower reliefs. The two-line inscription, only the second line of which is preserved, was engraved between the wings of the main cross of the composition and on the lower part of the cross-stone. It represents an encrypted writing of line and dot substitution.

In this cryptograph, the vertical lines—they are 1 to 4 in number—stand for the units, tens, hundreds and thousands of the numeric system of the Armenian alphabet, while the dots found on their right show the next numbers of the sounds:

|||||: |. ||||⁝⁝ |⁝ ||: ||||:
Ս ա ր գ ի ս
(S a r g i s)

The ciphertext is entirely decoded as follows:
... | Յ(իսու)ս Ք(րիստո)ս, | Սարգիս:
...Jesus Christ, Sargis.

The stylistic and artistic peculiarities of the cross-sone, as well as its comparison with other similar monuments found in the same region trace it back to the period between the 14th and 15th centuries.

The other monument with an enciphered piece of writing is situated in the ruined cemetery of Shatvan Village, which extends at an altitude of 1,926 metres above sea level. Its medieval khachkars, which amounted to about twenty, were mostly removed from their original places and broken to fragments. In their midst we found one of bluish basalt only the lower half of which is preserved at a height of 120 cms and a width of 130 cms.

The cross-stone has the following composition: the main cross emerges from the tree of life, with similar smaller crosses, resting on finely-carved rosettes enclosed within frames, on both its sides. Another cross carved in the same style, which is even smaller than these, is found on the right side of the lower wing of the main cross. On both sides, the composition is bordered with two pillars which join each other through an apse-like arch (their capitals are decorated with plant reliefs).

The cross-stone bears two cryptograms, one of which consists of two lines carved between the wings of the main cross, the other comprising 2 lines on its lower part and a single one on its left edge. Each of the inscriptions is remarkable for a peculiar mode of encoding.

The initial line of the first inscription is enciphered in the line and dot substitution way described above.

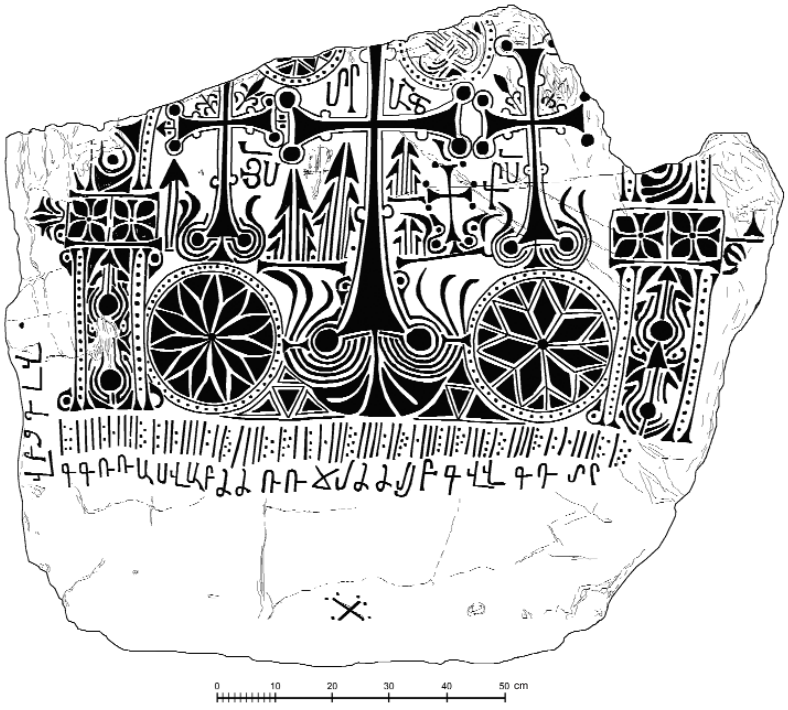
|⁝⁝ ||||: |. ||||⁝⁝ |⁝ ||: ||||: ||⁝⁝ ||||⁝⁝ |⁝⁝ ||⁝ |. |||⁝⁝ ||||:
զ Ս ա ր գ ի ս կ ր զ խ ա չ ս

||⁝⁝ |. ||||⁝ ||⁝⁝ ||||⁝ |⁝⁝ ||||⁝⁝ |: |. ||||⁝⁝ |⁝⁝
կ ա ն կ ն ե ց բ ա ր է

It should be deciphered with the addition of several letters which are either omitted or were not engraved at all:

ԶՍարգիս կր(աւնաւոր) զխաչս կանկնեց(ի), բարէ(խաւս):

I, clergyman Sargis, erected this cross to protect [me].


0 10 20 30 40 50 cm

One of the lines of the other ciphertext is carved according to the method of numeric value addition, for the decipherment of which, several clues exist—here the arithmetic operation of addition is applied, namely, the numeric value of a single enciphered letter forms the sum of two others (thus for instance, «ԳԳ» (3+3) is equal to the numeric value of the letter «Զ» (6), the only exception being the letter «Ա», which is used in its sound value):

ԳԳՌՌԱՍՎԱԲԺԺՌՌՃՄԺԺՍՅԲԳՎՎԳԴՏՐ
զ Ս ա ր գ ի ս յ ի շ ե ց է ք
May you remember Sargis

The third line is encoded in the preceding letter substitution mode, in the application of which, every letter stands for the one preceding it:

Վ Բ Ց Դ Լ Վ
Ս ա ր գ ի ս
S a r g i s

The completely-deciphered inscription reads as follows:

Տ(է)ր Ա(ստուա)ծ | Յ(իսու)ս Ք(րիստո)ս, | զՍարգիս կր(աւնաւոր) զխաչս կանկնեց(ի), բարէ(խաւս), | զՍարգիս յիշեցէք, | Սարգիս:

Transl.: *Lord Jesus Christ. I, clergyman Sargis, erected this cross to protect [me]. May you remember Sargis, Sargis.*

To summarise, we would like to point out that these two cross-stones with cryptograms share evident artistic and stylistic peculiarities; moreover, they are typical specimens of Vaspurakan's unique school of cross-stone sculpture of the 14th to 15th centuries.

As for the name of Sargis, which is mentioned on both these cross-stones, we think that they were dedicated to the same person, clergyman Sargis of Rshtunik. This supposition is further substantiated by the fact that the sites where the cross-stones are found are quite close to one another.

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RAA Foundation expresses its gratitude to the Ohanians for their donation of over 200 books on Armenian Studies and art history to the RAA library.
Apart from its great value and usefulness in our everyday work, that collection is also of special significance to us as it will keep our senior friend and great patriot Aram Ohanian s (Karmir Aram) memory ever living in our hearts.

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