# **Derivatives of Nostratic Root Morpheme** \*Ya - "To Shine, To Glow, To Get Warm" in Turkic Languages

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## Abstract

The paper is devoted to the morphonologic development of the root morpheme \*ya- "to shine, to glow, to get warm", which is considered one of the ancient word-nest. In Turkic languages it is possible to restore many of the original word roots through method of word-nest. In the study, on the basis of rich factual material, it is proved that the origin of many derivative word roots come from the root morpheme \*ya- "to shine, to glow, to get warm". The novelty of the study is that here is manifested a systematic attempt of determining morphological ways of arising new roots from one word-root in the languages of different system.

**Keywords:** Turkic, root, morpheme, family of words, derivative

## 1. Introduction

Turkic languages have such word-nests that gave birth to tens of new words afterwards. The Nostratic root morpheme \*ya- "to shine, to glow, to get warm" can be considered to be one of them. In this paper we intend to describe, on the basis of the nest \*ya-, the division of this ancient root into different allomorphs and isomorphs in Turkic and non-Turkic languages.

In Turkological studies some comments can be found on this Nostratic root. G. Clauson (Clauson, 1972) states that the verb yal- "to flame" in the pre-thirteenth Turkic languages derived from the root \*ya-. According to B. Yunusaliyev (Yunusaliyev, 1959), the root morpheme for the Kirghiz jak- "to burn", Altaic yalkın "lightning", yalı- "to flame, to be on fire", Khakas yal- "to flame", Buryat and Mongolian zula "candle" is \*ja- "to flame". The turkologists E. Sevortyan (Sevortyan, 1971), V. Aslanov (Aslanov, 2003), A. Zayanchkovsky (Zayanchkovsky, 1961) also associate the origin of the verbs yan- "to flame" and yak- "to flare up" with the root morpheme \*ya-.

The vestiges of this ancient root are also observed in non-Turkic languages, as Chinese yao- "to shine, to glitter, to glimmer" (The Grand Chinese-Russian Dictionary, 2009), in Egyptian hieroglyphs with y reduction aaā "fire, to burn, be on fire" (Budge Wallis, 1920), old Indian \*yasah "glitter" (Anikin, 1998), old Indo-Iranian yah- "to boil, to seethe; warm up" (Gerçenberg, 1972). In turkological studies this root has only been reviewed in the context of the Turkic languages. Note that even in Turkic languages, this root with front y has undergone various sound transitions.

## 2. Discussion

Two views on the etymon of the root exist in Turkic studies: a group of turkologists reconstruct the root as CVC, the other as CV. Our investigation proves that it is true to reconstruct the etymon in the form of CV, because in this case it is possible to observe the morphonological development of the new allomorphs aroused historically from that word-nest. Both in old and contemporary Turkic languages the root \*ya- "to shine, to burn, to get warm, to warm up" has various derivates. The difference between our and the above-mentioned turkologists' studies is the fact that we prove that this word root is of Nostratic origin. The root \*ya- has the following allomorphs:

The allomorph \*yan: The verb yan - "to flare up" in modern Azerbaijani is one of the allomorphs of the root \*ya-. Note that in Chuvash the verb yan-, as the result of  $y \sim c$  substitution has a variant cun- (Yunusaliyev, 1959). New words derived from this allomorph in different Turkic languages, e.g. Soyot yandan "iron stove" (Rassadin, 2012). In other Altaic languages the initial d substitutes y: Buryat den "candle" (Rassadin, 2012). Cf: Russian den "day". A. E. Anikin (Anikin, 1998) associates Baltic \*dьnь,\*dьne "day, day and night" with old Indo-European root \*dī- "to shine, to glimmer". Cf.: Semitic \*qin "fire" (Orel, Stolbova, 1995), Chinese yān "smoke", yan- "to catch fire" (The Grand Chinese-Russian

Dictionary, 2009).

The analyses show that the root \*din- // \*dein -"the part of a day when it is light" in the Baltic and Slavic languages derived from the semantics "light" (Anikin, 1998). If we rest upon this analogy, the word gün "sun" in Turkic languages seems to arise from that root. The existence of the word kön "to flare up" (Zayonçkovsky, 1961) in Old Turkic language also proves this assumption. So this root is observed with k reflex in anlaut (initial position). The form is preserved as lengthening in modern Khalaj: kö:n "to flare up".

This root with front y // q // d reflex has paralels as *qeniu* "to burn; fire" in Egyptian writings (Budge Wallis, 1920), *dian* "to light up, to brighten, lightning" in old Chinese (Schuessler, 2007), and  $ya\eta$  "light" in old Chinese dialects (Schuessler, 2007). Taking into account the y // s // z // d reflex of this root, it can be assumed that English sun, Tungus siun, Manchurian sun "sun" (Ramsdet, 1951), old Sumerian sun "star; to shine" (Halloran, 1999) are homogeneous with that root.

The allomorph \*yak-: In modern Turkish, the verb yak- "to burn" is used as an independent root. The word yax- "to burn, to flame up" also exists in some Azerbaijani dialects. The words yaqtuluk in the Kazan Tatar language and yaqtu in old Uzbek are in the meaning "light". One can find the word yaxtuluk "light" in the 11-14-th century Turkmen sources (Muhamedova, 1973), and yakış- "to flame up" in old Uzbek (Fazilov, 1966).

Remember that the Indo-European reconstructed root \*dheg- ("to burn") (İvanov, 2008) is phonetically and semantically closer to the root *yak-* in Turkic languages. This root is shown as *dhegwh-* "to burn" in C. Pokorny's etymological dictionary on Indo-European languages (Pokorny, 2007). Cf. There are parallels as old Indo-Iranian *bhok-* "to burn" (Gerçenberg, 1972), Protoslavic \*žeg- "to burn", Baltic \*deg- "to burn" (Anikin, 1998).

A. Mammadov compares Sumerian *zal-* "to shine", *zalaq* "be lighted" with Turkic parallel *yal-* "to flame" (Mammadov, 40). In "The Etymological Dictionary of the Altaic languages" the word \**ziola* was reconstructed as "to shine". This root is considered to be homogeneous with Proto-Tungus \**sulū-n* "to shine", Proto-Korean \**sar-* "to burn", Proto-Turkic \**jal(č)-* "to shine", Proto-Japanese \**sas-* "shine" (Starostin, Mudrak, Dybo, 2003). Note that the *d~y~z* substitution is very specific for Turkic languages. As is seen, in initial position this root gave *s~y~z* reflexes in the Altaic languages.

Pay attention to the following analogical examples: In Uralic languages: Komi Permian yüqör "light, beam, brilliance", yuqıd "lightning, brilliance, lihgt", Komi Yazvin dial. yuqyal- "to shine", old Permian \*yoq- // \*yuq- "light, glitter, brilliancy" (Litkin, Gulyayev, 1970), Old Japanese yak-u "to burn", Manchurian yaxa- "heat of coal", Khalkha yandanq-"chimney" (Siromyatnikov, 2002), old Indo - European auq "to shine" (Calvert, 2000), Hittite Aqnis "god of fire", Old Indian aqnis "fire", Mari əng "to burn, to catch fire", Hungarian eg "to burn" (İllich - Svitych, 1984), Semito-Hamitic yuqa- "to burn, to flame" (Orel, Stolbova,1995), \*'ayu "fire" (Orel, Stolbova,1995).

As is seen, in most of these roots, the reduction of **y** consonant is observed in initial position (anlaut). Cf. Lithuanian *agnus* "energetic", Lettish *agns* "hot", Old Indian *agnih*, Old Russian *ozhb*. If reconstruct the **y** anlaut in these roots, we find out the homogeneity of Turkic root **yak-**// **yaq-** "to burn, to flame up" with Indo-European root **ag** // **aq** "fire".

The allomorph \*yal-: This allomorph is the root of such words as yıldız // ulduz "star", yıldırım // ilghtning", yalov // alov // alov "fire", yaldırak "lightning" that are widely used in modern Turkic languages. In modern Azerbaijani ilığ "warm" the front y has reduced. We face with the word in the form yılığ in old written monuments. This word has a meaning "to get warmer, to warm oneself, to warm up".

Note that there is a word *qal-* "fire" in Mongolian. But in Azerbaijani language *qala-* means "to make a fire; to light / to kindle a fire". Then the verb *qala-* historically arose from the root *qal-* // yal-. The latter originated from old word-nest \*ya-. It cannot be accidental that **Qai** meant "the god of fire" in old Egyptian writings (Budge Wallis, 1920). Note that the g~q~y substitution is a universal sound interchange in world languages. This phonological process is also observed in Indo - European languages: e.g. old Indo-European \*gen "generation; kin, family", Sanskrit *jan-ah* "generation".

The words *qâdu-* "to brighten, to light up, to burn" (The Assyrian Dictionary, 1982), *qallu* "light, flame" (The Assyrian Dictionary, 1982), *qâlu* "to burn" (The Assyrian Dictionary, 1982) existed in Assyrian at one time. The analogical parallels of the Turkic morpheme \**yal-* are observed in the following languages: Proto - Tungus \*(*x*)*ila* "to burn, to heat, to warm up", Manchurian *yila-* "to warm, to burn", Hotan *yalā-*, Buryat *yala-* "to heat, to warm, to burn" (Starostin, Mudrak, Dibo, 2003). It seems that the initial consonant *y* was reconstructed in the Manchurian, Buryat, Hotan languages.

The Chuvash verb *cul*- "to burn" with y / c reflex is a phonovariant of the verb \*yal-. As a comparison note that the word hal "fire, bonfire, light, spark, lightning" in Xinjiang Oyrat's language is a phonovariant of the morpheme yal which is an allomorph of the root \*ya. There can be noted such parallels as Korean tal- "to be hot, to warm up, to take fire", Old Indo-European tal "to shine: to sparkle, to burn" (Makovskiy, 1989).

Proto-Tungus \*qul- "fire, hearth", Proto-Mongolian \*qal "fire" archetypes are reconstructed in "The Etymological Dictionary of Altaic Languages" (Starostin, Mudrak, Dibo, 2003). The analogical parallels prove that the above-mentioned

root has undergone a morphological and semantic differentiation with  $h\sim q\sim k\sim t\sim d\sim y$  consonant substitution in initial position. The existence of the root \*al- "to burn" in Indo-European languages is not casual at all. According to V. Ivanov Hittite mythological \*kal meant "meteor". Similar to this root is Indo-European \*kel- "twinkling (burning) star" (Ivanov, 2008). The  $k\sim y$  sound transition is universal for world languages, e.g. the word <code>yalaqar</code> "shining", <code>yalayxa</code> "shine" in Buryat (belongs to Mongolian languages) correspond to Turkic Soyot (Tuvan) <code>kılağar</code> "bright", <code>kılay</code> "to shine" (Rassadin, 2012).

The word yalın // yalkın "fire" exists in Siberian Tatar dialects. In Old Turkic languages we find the word yalvaç // yalavaç // yalabaç "prophet". The turkologist fon Gaben explains the word's meaning as "sent by light", and old Turkic yaltır- as "to shine" (Gaben, 2007). Old Turkic yalçın "bright" and modern Turkic dialectal yalçı "a stone shining as glass" can also be considered the derivatives of the allomorph \*yal-.

In old Turkic languages yılıt- meant "to burn", yılığ - "hot" (The Ancient Turkic Dictionary, 1969), yal- "to catch fire" (The Ancient Turkic Dictionary, 1969), yalın - "fire": ot yalını "tongue of flame" (Kashgari, 2006), yula "lamp", yulqak "brightness, luminosity", yulqa "lamp" (The Ancient Turkic Dictionary, 1969), Cf. Yellow Uyghur yalna- "to shine", Crimean Tatar yalın "flame", Gagauz yalaz "heat of flame", Turkish dial. yalaz "flame" yalanqı "flame", yalkı "ray, beam", yalım "fire, heat", yalın "bright", yalanbın "to burst into flame;", yalbır yalbır "to glitter", yılmanık "bright" (The Dialectological Dictionary of the Turkish Language, 1979), Turkish, Chuvash yal "brilliance, glitter", Khakas dial. yal- "to flame", Buryat and Mongolian yala-sala "sparkling, twinkling, glaring", Khakas dialectal with y~ç substitution: çal "lightning, fire", with y~s substitution: Yakut. sal- "to catch flame"; Koybal., Tuvan yal "flame" (Sevortyan, Levitskaya, 1986), Old Uzbek yula "lamp" (Fazilov, 1966), yalın "flame" (Fazilov, 1966), modern Uyghur yula "lamp".

As an Uyghur loan word *dzula* (< *jula*)- "lamp, torch" is used in Mongolian and considered a Buddhist religious word. Comparing the word with *vilax* "hearth, fire, lamp" used in Dagestan languages, H.S. Jidalayev believes it to be a Turkism (Jidalayev, 1990). The initial position with z is characteristic for Mongolian languages: e.g. Buryat *zula* "candle" (Rassadin, 2012). In Azerbaijani dialects the word *alov* "flame" has the variants *yalov* // *yalav*. Naturally, these variants are older. Analogical derivatives prove that these Turkic roots derived from the word-nest \*ya-. Taking all these data into account, we may consider that a number of etymologically derivative words with meaning "to burn, to shine, to warm up, to be heated, fire, hearth" in Turkic languages originate from the nest \*ya-.

The etymological analyses of this root morpheme cannot only be restricted to the materials of Turkic languages, as it is of Nostratic origin. Cf. the root \*dau- //  $d\bar{u}$  - "to burn", \*dei- "to shine" existed in old Indo-European languages (Makovskiy, 1996). As is known, d-y substitution is more specific and universal in world languages. The facts show that the y, d reduction is observed in the morphonological development of this root.

E.Z. Kajibayov showed that the morpheme \*yal- "to burn, to catch fire, to be on fire" was a syncretic root (Kajibayov, 1986). The word yula "lamp" is used in an old Uyghur manuscript "Mahabbatname" (Sherbak, 1959). M. Kashgari registered in his famous dictionary the words yal- "to flame up, to burn", yaldrı- "to shine, to glitter" (Kashgari, 2006), yaltur- "to be on fire" (Kashgari, 2006).

The allomorph \*yaş-: One of the derivatives of the root morpheme \*ya- is the allomorph \*yaş- //\*yṣ- //\*iṣ- "glitter, to shine". Old Uzbek yaşın "lightning" (Fazilov, 1966) was registered in Turkic-language sources in the meaning yaçnak "brilliancy", yaşın // yaşın "lightning", yaşık "light", yaşık "sun", yaşnamak "to thunder". Hence it follows that the consonant y dropped in the words ışıq // işıq "light" and ışın "ray, beam" used in modern Turkic languages.

To our mind, G. Clauson (Clauson, 1972) is quite right in comparing the words <code>yaşın</code> "light", <code>yaşu-</code> "to be lighted", used in the pre-13-th century Turkic languages, with <code>işin</code> "ray, beam". In old Turks <code>Yaşın</code> was the name of the god of lightning. The parallelism of Azerbaijani <code>işilda-</code>, <code>işiq</code>, <code>işar-</code>, <code>işart</code>, Turkish <code>işin</code> "ray, beam", <code>iştin</code> "chandelier", <code>işilak</code> "glitter", <code>işimak</code> "to shine", other Turkic <code>işiq</code> // <code>işik</code> "light" prove that they are of the same morpheme \*iş.

The root \*iş is derived from yaş- // yiş- "to shine" by reduction of the consonant y, so the root \*iş- // \*yişetymologically is the allomorph of the root morpheme \*ya-. We assume the Azerbaijani verb isin- "to get warmer, to warm
up" to be, as a result of s~ş substitution, a derivativ of the allomorph \*iş-. It is not by chance that V.M. Illich-Svitych states
Nostratic asa "flame, fire", Indo-European hes "hearth" to be of same origin with Uyghur usuy "heat", Mongolian asa- "to
burn" (Illich-Svitych, 1984).

Note that the Semitic \*yas "fire" (Orel, Stolbova, 1995) is homogeneous with these roots. The root \*iş also derived, by reduction of the consonant y, from the root yiş, which was an allomorph of the morpheme \*Ya-. The Old Turkic yaşın "lightning" (Kashgari, 2006), yaşla- "to thunder" (Kashgari, 2006) also indicate that the root morpheme is \*yaş // \*yiş-. The substitution of velar vowels with apical ones is typical for Turkic languages. We find işne -" to brighten" (Clauson, 1972) in the 14th century old Turkic sources, and yisi- "to shine" in Khwarezmian turkic language (Gulensoy, 2000).

T. Gulensoy also indicates that the root of Turkish yaşın "lightning" is \*ya- "to shine, to glitter", and argues for relation of işıq // ışık with this root. In Anatolian subdialects of Turkish language the word yaşın // ışın means "lightning"

(Gulensoy, 2000). Analogical facts prove that the word yaşın // ışın is an allomorph of the root \*ya-, too. Let's remember that old Indo-Iranian verb uš- meant "to burn" (Qerçenberg, 1972). Apparently there was a reduction of y.

The allomorph \*yar-: Z. Muhamedova states that Turkmen yariin "tomorrow" has been formed by adding the suffix in to yaar "light". In 11-14th century Turkmen language the word yark meant "Moon light" (Muhamedova, 1973). B. Yunusaliyev argues that Uyghur root yarı- "to brighten, braking of day" is derived from the root morpheme ya- // ja-(Yunusaliyev, 1959). Cf.: Sumerian uru "light" (Halloran, 1999), ar // ara- "to brighten, bright" (Halloran, 1999), šer-// šır-"to bright" (Halloran, 1999). In 11-14-th century Turkic sources registered yaruk as "torch", yarukluk as "light". So modern Turkish yarın "tomorrow" derived from the mentioned word-nest. We find yarut- "to lighten, to illuminate" (Fazilov, 1966), yaru- "to light up" (Fazilov, 1966), in Old Uzbek. In our days the word yarık means "light" in West Siberian Tatars' Language. Cf.: Albanian zjar "fire", old Turkic yaru- "to lighten", yaruk "brilliance", yart- "to light up, to illuminate", yartağ "bright", Uyghur dialectal yuruk // yaruk // yoruk "light", modern Kazakh and Karachay-Balkar jarık "light", Crimean Tatar (language) yarık "light".

Ancient Egyptian writings garr "to be light" (Budge Wallis, 1920), Iranian \*gar- "to burn, to lighten", ancient Aryan *\*qhar "*to be on fire" (Rastorguyeva, Edelman, 2007), Old Indian *haras "*heat" with *y // h* reflex, ancient Slavic *gerь* "heat", Semitic \*qir "to be hot", Akkadian \*qiru (Orel, Stolbova, 1995), Old Indo-European arg "to shine" with y reduction (Calvert Watkins, 2000), \*gher- "to shine" (Makovskiy, 1989), Balto-Slavic \*gar-, \*gar'o "to kindle, to set on fire" (Anikin, 1998), Russian гореть, Lithuanian garbti "to burn", Sanscrit harina "Sun", harita "golden, goldish, glowing" (Kochergina, 1978).

These roots are homogeneous with the root-nest \*yar from which originated the word yarın "tomorrow" in the Turkic languages. Sumerian kara // kar // guru means "to shine, be bright" (Halloran, 1999). In Azerbaijani written sources the word gor means "fire, hearth".

Our research shows that a number of etymologically derived words with meaning "to burn, to shine, fire, hearth, warm up" in Turkic and non-Turkic languages have been originated from the root morpheme \*ya-. Various allomorphs from this root were a main source for the formation of new word roots in different language families.

#### 3. Conclusion

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It is possible to reconstruct, based on the word nest method, an initial phonetic form of tens of homogeneous words in Turkic and non-Turkic languages. Our analyses prove that the root morpheme for verbs yal- // yar- // yul- // yal- // yan- // yak -// yaş- // ıṣ- // is- "light, shining, to burn, to shine, to warm up" is \*ya- (a root in CV structure). New words, derivatives, in Turkic and non-Turkic languages, have been generated from Nostratic root \*ya- "brilliance, to shine, to warm up, to burn". It should be taken into consideration that, in reconstruction, the lexical parallels in non-cognate languages are of great importance, if we take advantage of typological comparisons in the the etymological analises.

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