WORD FORMATION MODELS AND SEMANTIC FEATURES OF DERIVED WORDS IN ORHON INSCRIPTIONS (DERIVATIONS OF NOUNS AND ADJECTIVES).

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Abstract. In modern Turkological studies, the scientific interest in word formation arises not only from the need to study the ways of forming new words and enriching the vocabulary stock. The interest also comes from the fact that the word-formation process is often closely connected with grammatical structures and linguistic phenomena, which leads to new word formation. This work is devoted to studying the problems connected with word formation set in the language of Orhon Old Turkic inscriptions that recorded the language. These inscriptions are valuable written data about all aspects of studies of Turkology such as linguistics, history, culture etc. Furthermore, this paper considers suffixation and compounding as the main productive ways of word formation of language of Orhon inscriptions and gives semantic interpretation of noun and adjective derivatives. The author offers word-formation, morphemic and etymological analysis of structure of words, grouped according to word formation models. At the same time, data is given about modern Turkic languages, revealing unique features of word formation in the language of Orhon inscriptions. This data describes the phonological and semantic changes in word forming morphemes.

Key words: Orhon Inscriptions, word formation models, semantic analysis, suffixation, compounding, word formation meaning

1. Introduction

Recently, the language of one of the oldest Turkic written records, dating back to the 7th–9th centuries, the Orhon Old Turkic, has been studied from different aspects. These inscriptions, found along the Orhon river in Mongolia, contain important historical, linguistic and cultural data of the Old Turkic period. In addition, the language of Old Turkic inscriptions, as the earliest valuable written

data for language reconstruction and establishment of genetic relations of modern Turkic languages, is still a frequent subject in Turkological studies, as well as in Altaic studies. Firstly, Turkic languages are believed to come from the Altaic family of languages, based on some similarities in phonology, grammar and lexicology. F. Strahlenberg offered a hypothesis of genetic relation of Uralic-Altaic languages, which is known as the Uralic-Altaic hypothesis in modern linguistics. Secondly, the earliest period, which covers the period until the 3rd century BC, in the history of Turkic languages, is accepted as the Altaic period by scholars. So far, no written records of this period have been found, and scholars give the description of the languages of that period based on comparative-historical analyses of old and modern languages. The language of Old Turkic inscriptions constitutes the earliest written data, important in language reconstruction.

After N. M. Yadrintsev, came across unknown inscriptions on the stones during his travel in Mongolia on the instructions of the East and West Siberia Geographical Society, he introduced them to the whole world of science. Since that time, Orhon inscriptions have been attracting the attention of researchers from different parts of the world. As runic writings on the stones found along the Orhon River in Mongolia were not deciphered for a long time, different hypotheses were made about them. Some scientists supported the hypothesis that the inscriptions were linked to Greek culture, and others held that they were related to old Mongolian, old Finnish, Scythian and Slavonic writings. None, however were able to decipher the manuscripts. Finally, V. Thomsen, a Danish scholar and professor of Copenhagen University, deciphered the scripts on 25 May 1893. He presented a paper about it at the conference of the Royal Academy of Science of Denmark, on 15 December of the same year. His findings put an end to the hypothesing about the origin of runic writings. In his paper, Thomsen concluded that the inscriptions were written in the protolanguage of Turkic languages. He claimed that the text is read from right to left and the first words he had read were 'täŋri' and 'türk'. Soon the Russian scientist V. Radloff read the whole text with the help of Thomsen's method, after which he translated the entire text into German.

Afterwards, scientists began to study the language and grammar of the inscriptions and a considerable number of research works were conducted on morphology, phonetics and lexicology. Consequently, the word formation of inscriptions was not an exception as far as the term morphology is generally used as a cover term for inflection (declension, conjugation, gradation) and word formation (derivation and compounding) (Schmitter, 2008).

Word formation as a separate section of linguistics in the second half of the 20th century and in the 21st century continues to remain topical. Recently, the interest of researchers in word formation of Turkic languages has increased the knowledge of common and different word-formation phenomena. This is very important for studying the historical development of modern Turkic languages.

2. Theory and methodology of research

In Turkic language studies, there are fundamental works on morphological structure of the Old Turkic language and ways and means of word formation. The word formation of Orhon Old Turkic inscriptions is still one of the least developed areas of the Turkological studies. Most of the descriptions on the word formation and derivations of Orhon inscriptions are usually short and very traditional works on general grammar of Old Turkic and modern Turkic languages, simply listing formants or, rarely, papers on particular problems. However, research works on Old Turkic word formation and grammar by Marcel Erdal (Erdal, 1991), A.N. Kononov (Kononov,1980) and A.S. Amonzholov's *Old Turkic Verb Formation Structure* all capture Orkhon inscriptions as one of the language materials of Old Turkic. Also, G. Aidarov's *The Language of Orhon Inscriptions,* in which he gives the general description of word formation and derivatives as a section of the grammar of Orhon inscriptions are very important from the theoretical and methodological point of view (Amanzholov, 2009; Aidarov, 1971).

Morphemic and word-formation analysis includes determining the structural and word formation features which are noted at the level of allocating morphemes and establishing the relations between the derivative components. In other words, it is necessary to arrange the derivations in accordance with structure and to estimate the word-formation potential of its components.

To comment on features of the morphemic and word-formation means of the word, we put forward the following goals:
- to define the word formation models;
- to comment on semantic interpretation of derivations and word forming formants;
- to provide a description of the current state of derivatives in modern Turkic languages, accurately differentiating between synchronic and dia-chronic approaches and the structure of the word.

Semantic aspects of word formation of Orhon inscriptions are less investigated, and the feature of semantic structure of the derivative word and the role of this nominative unit in the language system have not been explained. The semantic analysis of the derivative word allows understanding specifics of the word-forming morpheme as a special unit of the language system and, therefore, its differences from other linguistic units, thus establishing its status as a special unit. Only by analyzing the semantic nature and functions of word forming formants and the mechanism of semantic change in word formation can a comparison of semantic structures of derivative words with word formation patterns be revealed.

The purpose of the research is to identify and interpret the features of derivative words in Orhon inscriptions. To achieve this goal the following tasks are set:
1) identification of word formation patterns;
2) systematization of derivatives according to the word formation models;
3) identification of the full structure of word forming formants, with determination of their semantic features.

The main aim of this research work is to identify the specific features of derivations in Orhon inscriptions in their semantic aspect. To achieve this aim, first we need to describe the formation system using a common model. Thus, the starting point for description and comparison is the language of Orhon inscriptions, comprising semantic units (categories) and rules of their connections. The description and comparison of the linguistic data based on the language of Orhon inscriptions will allow us to obtain an inventory of word formation models, to identify their productivity and specificity in modern Turkic languages. In this sense, it is a descriptive, comparative, etymological as well as a diachronic study.

The theoretical and methodological basis of this research includes works of modern linguists on word formation and morphology such as E. S. Kubryakova, N. K. Dmitriyev, A. N. Kononov, E. V. Sevortyan, N. A. Baskakov, G. Aidarov, M. Erdal and others. For interpretation of etymology of derivatives and their formants, we consulted etymological dictionaries and the dictionary of Old Turkic language.

3. Discussion and results

This work offers an opportunity to interpret semantic analysis of derivatives in Old Turkic and assess the productivity and activity of word-formation patterns. In word-formation of Old Turkic language, scholars identify the following types of derivations: compounding, suffixation, substantivization and calquing. In our research paper, we examine compounding and suffixation as productive means of word formation in the language of Orhon inscriptions. In addition, we give semantic interpretation of derived words through their word formation models.

3.1. Word formation models of compounds

Compounding is very a productive means of word formation in the language of Orhon inscriptions. *N+N→N compounding*: These types of compounds exist in three forms, N+N with *antonymous formatives*; N+N with *synonymous formatives* and *adjunctions*.

N+N →N compounding with antonymous words *jer + sub:* In the *Dictionary of the Old Turkic Language*, the meaning of the compound word is given as 'land' or 'continent'. The word formation meaning is directly derived from the meaning of the components *jer* denoting 'land' and *sub* meaning 'water', with the general idea of capturing the meaning of the whole land. In the phrase taken from Kul Tegin: "*Ečümiz apamz tutmış jer sub idisiz bolmazun*" (KT b ₁₉) "May the land of our ancestors never be left without an owner" (OTD, 1969). In the text the word formation meaning is associated with metaphoric interpretation and has the meaning of 'birthplace'. The dictionaries of modern Kazakh and Kirgiz languages give the interpretation of the compound word as *žer-su* (Kazakh)*, žer-suu* (Kirgiz) 'area' or 'land', which shows the narrowing of the meaning. The derivational meaning 'country' or 'land' of '*seršïv*' (ser-'land', šïv-'water') in modern Chuvash

is close to the old Turkic meaning 'continent' or 'land'. In the compound word *jer-sub* n modern Turkic languages, the first component *žer* exists with the sound change in the beginning of the word *ž~y~s,* and in the second, the consonant at the end of the word *sub* dropping of consonant at the end of the word is dropped. This is because the sound *'b'* is one of the unstable sounds (Sagyndykuly, 2004). Other compound words with antonymous components are: *őg-qaŋ* 'mother-father', *ečü-apa* *''*

> *eb- barq eš - qadaš kegi-žarïq, isi-küči, žer-sajï* т.б.

2. сын есім+сын есім сөздерінің қосарлануы арқылы жасалған күрделі сын есімдер: *žabuz- žablaq, žoq- čïγaz.*

Анықтауышты күрделі зат есімдер өз ішінде: а) анықтауышы зат есімнен – *sü bašï* 'әскер басы'*, kiši oγlu* 'адам баласы' т.б.; ә) анықтауышы сын есімнен *qara bodun* 'бұқара халық', *kiçig atlïγ* 'кіші шенді әскер' т.б. ; б) анықтауышы сан есімнен тұратын – *tort buluŋ* 'төрт тарап', *on oq* 'он оқ

N+N →N compoundings with *synonymous components*: The main root word in the compound *'eb- barï'* is the word *'eb',* which has the meaning of 'house' or 'home'. The second element *'barï'* means 'propeties' and derives from *'bar-'* meaning *'*to have or own' . As in the phrase taken from Kul Tegin: *Ebin barïmïn qals ïz quup kelürti* KT. II₁; BK. I.₃₂. Translation: 'They occupied and took all their properties including palace and wealth' (Sartkozha, 2012). This compound word means 'propeties' and 'wealth'.

In Bilge Kagan's inscription: *Sïŋar süsi ebi-barqïŷ žulalï bardy* BK. I.₃₂. Translation: 'The other part of the enemy's army came to destroy *the serai (palace) and sanctuary'* (Sartkozha, 2012). In the compound word *'eb-barq'* the word *'barq'* denotes *'building'* or *'a place of worship'.* However, some scholars translate the word *barq* differently. Thomsen, who deciphered the runic writing, translates it as (edice) 'a building'. This translation was later supported by the Russian scientist S. E. Malov, but A. N. Kononov considers it 'a house' (Tomsen: 114, Malov:43, Kononov:130). Other scholars as S. G. Klyashtorny propose that its meaning is 'a sanctuary or a building for worship' (Klyashtorny: 238–255). Sartkozha supposes it to have two meanings: a) 'a tomb or a grave memorial', b) 'a fence' (Karzhaubai: 130–131). Anyway, we suppose that these two words 'eb' and 'barq' have a general close meaning *'building',* the first *'a building for living'* and the second *'a building for worship'* or '*a building on a grave'.* The word formation meaning is based on the meaning of the word forming components and has the seme of *collectivity* capturing the all types of buildings.

Other examples of compounds of synonymous words are *'ešim-qadašïm'* meaning 'friends'. The components have close meanings *'eš'*- 'friend' and *'qadaš'*- 'fellow man'. All these above-mentioned compounds have the meaning of 'collectiveness', which regroup these words under the same semantic field. Other *N+N* models with the meaning of 'collectiveness' include '*begleri-bodunu'* – 'lords and people'*, qïz-qudïz – '*maidens*'* and *küŋ-qul* – 'slave woman – slave man'. The next compound words of *N+N* model are *atï-küsi* 'fame'*, iši-küči* 'deeds and efforts' are abstract nouns with the semantic change of intensification

as 'all his fame', 'all his efforts and deeds'. The compound word *'kiši oγlu'* meaning 'mankind' *sü bašï* 'әскер басы'.

N+N →N compounding is very productive in formation of place names and titles in the language of Orhon inscriptions. For example, the names of places like *Kadïrhan jïš* and *Temir kapïγ,* are derived from two noun stems. '*Temir +kapïγ'* is formed of two root nouns '*temir*' meaning 'a metal' and '*kapïγ'* meaning 'a gate', and the word formation meaning probably implies 'a safe place'. The second word '*kapïγ*' is dVN derivative, derived from a verb stem *qap-'* 'to close' and dVN suffix '*-ïγ'* denoting ' a gate'. The first component of the compound word '*temir*' is still a widely used component of proper names in modern Turkic languages, for example, the Kazakh word, *Temirtau* 'iron mountain' (city in Central Kazakhstan) and *Temirkhan* 'iron king' (person's name) etc.

Concerning the historical location of the place of '*Temir kapïγ'*, Turkologists have different points of view. V. Bartold states that '*Temir kapïγ'* is a mountainous passage of Talky, which leads from Mongolia to Ile (Shaimerdinova, 2009). However, some scientists state that it a western boundary of Turkic Khanate and mountainous passage of Buzgala on the way from Balïkh to Samarkand (Milliyoransky, 1899). As we stated above, '*Temir +kapïγ'* is formed of words '*temir'* meaning 'a metal' and '*kapïγ'* meaning 'a gate', consequently, the word '*temir+kapïγ'* implies 'strong' and 'safe'. In connection with this, '*Temir kapïγ'* means 'boundary' or 'hedge', therefore, to reach '*Temir kapïγ'* meant to achieve one's goal or to win (Shaimerdinova, 2009). '*Temir kapïγ'* is a place name reflecting the characteristics of a geographical object. In history, it is known as 'Iron Gate', one of the important geographical points in the ancient Turkic period.

In the Second Turkic Khanate, the Kagans and key persons of the khanate were given titles in respect to their contribution to their country and people. All titles are compound words such as '*toŋa tegin'*, consisting of *toŋa* meaning 'lion' and '*tegin'* meaning 'prince' with the figurative meaning 'brave prince like a lion'. Another title with the same word formation component, '*tegin'* is '*kül +tegin'* a word formation model, which is Adj.+N, discussed below.

Adj. + N compounding: The formatives of these compounds are descriptive adjectives + nouns. The word formation model is productive in Orhon inscriptions as well as in modern Turkic languages. '*Kül +tegin'* is a title and nickname of a prince and army commander of the Second Khanate. The compound word consists of '*kül'* ('famous') and *'tegin'* ('prince'). Other examples of *Adj. + N compounding* is the compound word '*beŋgu taš'* (KT. $_{11}$) (a stone with writings on it) derived from *'beŋgu'* meaning 'immortal or everlasting' and *'taş'* meaning 'a stone'. The word formation meaning is *'monument'* implying a metaphoric meaning 'immortal message for the next descendants'. The word '*taş'* is used as a component of personal names, place names and metaphoric words and often exists in Turkic epics. In ancient times '*taş'* (stone) was thought to be a symbol of wisdom and had a meaning of 'strong as a stone'(Sravnitel'no-istoricheskaya gramatica tjurkskih yazykov, 2006).

Adj.+N compounding is also widely used model in word formation of place names in Orhon texts: *Kadïrhan ,Qara+Kum*, Yaşïl+ *Ügüz* etc. '*Kadïrhan jïš'* denotes 'the land of Kadyrhan' ('*qadïr'* means 'strong, firm'). Then the name of the khan of Karakhanids Dynasty *'Qadïrqan'* implies 'very strong Khan'. Makhmud Kashgari also noted the link between Turkic *'qadïr'* meaning 'strong' and Arabian *'qadyr'* meaning 'powerful'. However, it may denote a totemic meaning of 'a strong bird' (Sevortyan, 1997). *Kadïr+han* belongs to the toponyms including social and class titles.

According to some scientists researching the inscriptions to gain insight into the language and worldview of Old Turkic peoples, the names of places in the text represent physical space. The concept of space in the old Turkic worldview is related to the meaning of a huge territory (land), which they defended from enemies. The impressive number of place names indicates that on the one hand all events described in the texts really existed, if we take into consideration the existence of the names of some of those toponyms (for instance: *'Irtïş', 'Tibet'*). On the other hand, Turks knew the territory they inhabited very well. Therefore, *'Kadïrhan jïš'* probably today means the Hinggan Range (Shaimerdinova, 2009).

Other examples of *Adj.+N* model are the place names with colour code. For example, Qara+Kum derived of '*qara'* meaning 'dark' and '*kum'* meaning 'sand'. The word *qara* 'black or dark' in *Qara+Kum* is a frequently used component in the word formation of compound words in Old Turkic and Modern Turkic languages. The semantic field of '*qara'* 'black' captures a great many metaphoric meanings, e.g. 'ill-fated', 'ill-starred', 'miserable' in Chuvash; 'bad', 'scary', 'terrible', 'nasty', 'ugly', 'bleak', 'tragic', 'dismal' in Turkish and Kumyk; 'usual', 'simple'; 'tragic'; 'mass', 'crowd' in Kazakh; 'great', 'powerful', 'severe' used for rulers' proper names of Karakhanid. For example, *Qara khan* means 'a great founder of Karakhanid dynasty'; in Kazakh, Karakalpak, Noghay and Uyghur languages, it also has a meaning 'cattle'. The metaphoric meanings 'cattle' and 'mass' or 'crowd' of the word *'qara'* exists in Orhon texts. For example, the compound word *'qara bodun'* means 'the whole people (or population)'.

Summing up all given semantic interpretations, we come to the conclusion that **'***Qara kum'* has two meanings: 'a huge dry land or earth', which denotes a type sand; and 'the dark northern part of the horizon' (which might also be interpreted as the northern horde of Qarakhans). According to Gabain, the meaning 'black nothern' of the word '*qara'* in *Qara kum* is related to its territorial situation in the northern part of Khorasan. Supporting Gabain's point of view, we suppose that '*Qara kum'* denotes 'nothern sandy desert'. Some scholars suppose that '*Qara kum'* is the name of a sandy desert situated on the northern frontier of China and on the northern slope of Insane, close to Huanghe River. The components of compound word are widely used in the word formation of modern Turkic languages: *Qara Kum, Qarabaj* etc.

'Yaşïl+ *Ügüz'* is translated as 'a green river' formed of '*yaşïl'* ('green') and *'ügüz'* ('river'). The first component, *'yaşïl'*, implies the color 'green' in Old Turkic as well as in all modern Turkic languages and 'bright green' in Old Uighur.

It may have figurative meaning of 'fresh' or 'watery', in connection with the meaning of the root word. It was derived from *'yaş-'* meaning (1) *'young'* or *'fresh'* and (2) *'green'* with the suffix *–(ş)ïl* weakening the feature of the object (Bang, 1915). But we suppose that the suffix here – *ïl* is different from *–(ş)ïl* weakening the feature of the object. We consider that it implies the meaning 'owing the feature'. The second component *'ügüz'* with the meaning 'river' exist in modern Turkic languages with phonetic changes. Hypotheses of scholars on the semantic interpretation of the place name are different. However, most of the scholars suppose that the meaning of the place name is related to a colour meaning. In accordance with Bang's hypothesis on the suffix *–(ş)ïl*, weakening the feature of the object, *'yaşïl'* denotes *'light green'*, which may have semantic change 'light green'→ 'dark yellow' → 'yellow'. In this sense, it implies 'yellow river', which is close to the meaning of Huanghe River with the same meaning *'huang'* ('yellow') and *'he'* ('river') and is supposed to be a calqued word. According to L.N. Gumilyev, 'Yaşïl Ügüz' is nowadays Huanghe River, which is situated in China, and he notes that the river has a yellow color (Gumilyev, 2002). In modern Turkic languages *'sarï'* meaning *'yellow'* is mostly used as a component of compound place names, but not *'yaşïl'* meaning 'green'. Furthermore, *'sarï'* in toponymic structure of modern Turkic languages implies not only color but also the meaning 'huge', 'wide' as in *'Saryarkha'* (in modern Kazakh) 'a huge steppe of Arkha'.

N+Adj. compounding is formed of nouns + relative adjectives. For example, the compound word *'kün+ tüz'* (day time) consists of two root words wıth the meaning *'kün'* –'day' and the adjective *'tüz'* meaning 'equal' or 'straight right'. This compound word still exists in modern Turkic languages with a sound interchange of *t~d*; the semantic interpretation of the derivation is 'high sun' or 'the condition of the sun being directly overhead (analogous to noon), which eliminates shadows on the surface'. The semantic change in the word formation meaning is based on narrowing of the meaning and analogy.

Adj. + Adj. compounding in Orhon inscriptions are formed of adjective + descriptive adjectives and descriptive adjective + relative adjective. Some compound adjectives possess an intensification of meaning in the word formation process. *Žab+uz žab+laq* 'poor, weak' in phrase: *'Ičre ašsïz, tïšra tonsïz žabuz žablaq bodunda üze oturdïm'* KT.I.26. Translation: "I came to govern people, extremely weak inside without food, outside without clothes" (Sartkozha, 2012). Both of the word forming components are derived from the same root *'žab-'* with several meanings and different adjective forming suffixes *'–uz', '-laq'*. One of the semantic meanings of the first component *'žab+uz'*, given in *The Old Turkic Dictionary* is 'bad', 'angry' and 'weak'. Orkun's book and M. Kashgari's dictionary give the same interpretation. Besides this, *'žabuz'* denotes 'mean spirited' (Yenissei Insc.), 'mean', 'strict' (Tatar, Bashkir, Turkmen and Turkish dialects), 'cruel', 'terrible', 'strict' (Turkish dialects, Yakut), 'proud', 'strong' (Zen., P III: 292), 'strong', 'powerful' (Turkish dialect), 'weak', 'thin' (Old Turkic Dictionary, Turkish dialect). According to the *Etymological Dictionary of Turkic*

Languages, the earliest meanings of the word '*žabuz*' are 'angry', 'bad' and 'poor', the other meanings are semantic derivations of the word '*žabuz*', applied as a result of extension of meaning in the latest period of language history (EDTL 'i'-'ž', 1989:48).

F. Korsh pointed out the relation between '*jabuz*' in Turkish and '*jablaq*' in Orhon inscriptions. He also noted he relation between the Altaic '*jabal*' and the general Turkic word '*jaman*' or '*žaman*' (since there is j~ž sound interchange at the beginning of the word in Turkic languages). According to Korsh, the root word is '*žab-*' *(//jam-)* , and B. Bang isolates the *-z* as a deverbial suffix, which derives from abstract nouns (Brockelman, OGM: 120). G. Clauson gives the root as a verb '*jav-*' in '*javuz*', homonymous with the root word '*jav-*' in *javlak → javla→ k* (Clauson: 881-882). M. Rasanen relates the geteregenous root words '*jab*' *~jav > jov* (Turkish) and *jap > japïr* (in Turkmen) denoting 'to lower', 'to move down', *žapïz (in Kirgiz)* with the meaning *'mean spirited or mean'* (EDTL: 48). So, '*javiz*' (*žabuz*), as it was pointed out above, is a qualitative adjective derived from verb root '*jav-*', which does not occur in the language of inscriptions. Other compound adjectives with this formative in Old Turkic inscriptions are 'javγan javuz' meaning 'bad' or 'mean spirited', *'erig javγan'* 'unpleasant' or 'bad' (OTD: 219). '*Javγan*' meaning 'rude' and '*javri-*' meaning 'to decline' or 'to go down-hill' (about condition), 'to thin down' (because of illness and poverty), 'to be miserable' (Kashgari) and 'to be unhappy' (in Turkish dialect). The suffix –z is an adverbial adjective suffix corresponding to 'a verb-adjective' as in '*sem+iz*' ('fat') from the verb '*semir-*' 'to fatten' and *'qut+uz'* ('mad') from the verb '*qutur-*' 'to go mad'. The existence of compound parallels with root *jab~jav* places the etymology of the root word '*jab-*' back to the Altaic Period.

The second formative of the compound adjective '*jab+laq*' (*~žab+laq*) implies the same meaning, 'bad', supposedly an archaic meaning of the word (EDTL: 47). As a fresult of extension of the meaning, the semantic field of the word '*žab+laq*' includes: 'great' in Old Uighur; 'strange' and 'amazing' in Turkish dialect; and 'hard' and 'strong' and 'extremely' in Horezm Turkic (EDTL: 48). The scholars V. Bartold and S. Malov consider the last ones to be secondary meanings or derived meanings.
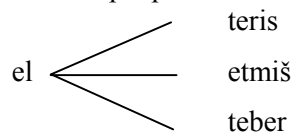
All scholars consider the *žab+laq* derived from *jab-, jav-* somewhat differently. B. Bang sees it as deverbial noun formed of the verb *'jabla'* (Bang: 35–36). A. Goben states the genetic relation of words 'javγan' , '*žab+uz*' and '*žab+laγ*' derived from verb *jab-~ žab-*. G. Clauson points out the semantic relation of '*žab+uz*' and' *žab+laγ*' (EDTL: 222).

We support all of the above-mentioned hypotheses and suppose that the derivatives '*žabuz*' and '*žablaγ*' are derived from one root word, '*jab-*'. All words with the '*jab-*' formative are connected with one general 'negative' seme. The word formation meaning of the compound adjective '*žab+uz - žab+laγ*' is 'extremely poor or weak', which shows the intensification of the meaning of both formatives, 'poor or weak'. As far as, in the context of Orhon inscriptions, the author states that "he came to govern very poor or weak people without food to

eat, without clothes to wear". In modern Kazakh, the word '*žaman*' belonging to the same semantic field of words with '*jab-*' formative, denotes 'extremely' or 'much' as in '*žaman ademi*' meaning 'extremely beautiful'. This fact also supports our view. '*kiçig atḽïγ*' 'junior in rank'consisting of

V+N compounding: The compound word, '*aŋïr tašïγ*', is an example of V+N compounding. In the phrase: '*Aŋïr tašïγ, barïq žaratdïm*' BK. IV.₁₄. Translation: "I built *stone statue* and temple" (Sartkozha, 2012) the compound word has the meaning 'stone statue'. *Aŋïr tašïγ* is close to '*beŋgu taş*' in meaning and with the same formative '*taş*'. The compound word '*aŋïr taš*' denotes 'sculpture' or 'stone statue'. This compound word derived from the verb '*aŋïr*' (the root '*aŋ-*' meaning 'to be astonished' or 'wonder' and *-ïr,* the suffix of the present, future tense, substantivized (OTD: 667) and the noun '*taš*'. According to academic opinion, the stone sculptures were special installations erected in honor of prominent figures who had passed away (Karin, 2013). This was a tradition of Old Turks. William of Rubruck, a famous medieval traveler, wrote in his sketches: "…Kypchaks, bestowing honors to famous people who have passed away, put up a stone sculpture, imitating a man, who holds a bowl and faces east, on the top of a burial hill" (Pletneva,1974).

N+V → N word formation models of compounds are productive in formation of titles and names of people:

The word formation meaning of the above compounds are '*elteris*' – 'uniting the country'*, eletmiš* – 'founder or establisher of the country'*, 'elteber'*– 'promoter of the country'. They are used as titles and nicknames of kagans and key figures of old Turkic society, marking their contribution to the country. K. Sartkozha states that the titles '*elteris*' and '*eletmiš*' were given to honorable key figures of Turkic aristocracy. The founder of the Turkic Khanate, *Kutluγ,* was given the title of '*elteris*' and *Tur-Ajïn* was honored with the title of '*eletmiš*' because he united the Turkic people (Sartkhozha, 2012). And '*elteber*' was a title given as a military rank.

3.2 Word formation models of suffixal derivations.

Suffixation is a widely used word formation in Old Turkic as well as in modern Turkic languages as agglutinative languages. The second main element in suffixal derivations is – word-forming suffixes. Suffixes have definite functions in word formation. Suffixes add a specific meaning and add a new word category. As K. Lim states in his research work on derivations of verbs in the Old Turkic language, suffixes in Turkic languages carry very important semantic functions (An Kim Lim, 2011).

A meaning extention of suffixes had begun in the period of the Old Turkic language. In order to identify the etymology and historical development of the suffixes, it is necessary to capture the phonological, lexical-semantic, morphono-logical and morphological features. The study of suffixal morphemes in the language of Orhon inscriptions is important in reconstructing archetypes and the etymological base of suffixes and historical development of word formation process of modern Turkic languages. According to the structure of suffixal derrivatives we identify the following word ford formation models of suffixal derrivations:

a) X_n. + *lIg, (lUq, lIk, lIγ)* →*Adj.* Relative adjective formation with noun + relative adj. forming suffixes –*lï(γ); -lig*: *Bodun+lïγ* with the meaning 'national' which is directly related to the meaning of the root word '*bodun*' 'nation'. The suffix –*lïγ* implies the relativity to noun stem. *Čöl*+lig denotes 'from desert or steppe'. In the phrase '*Žoqčï sïγïtčï öŋre küün tuγsïqta bökli čöllig el tabγač...*' KT I. 4. Translation: "Those who grieve, moan from the deserted steppe of Bokli..." (Sartkozha, 2012), the derivative '*bökli čöllig*' implies (people or tribal organization) from the desert or inhabiting the desert'. The word formation meaning is derived from the meaning of the noun root '*čöl*', denoting 'desert, steppe', which exists in all Turkic languages and is used in different derivations as the root word. The dNA suffix forms adjectives with the meaning of possession, which is designated by the root word of derivation. In the above mentioned derivatives as well as other derivations such as '*ton+-lïγ*' meaning 'having clothes' (KT. 29), '*kül+ lig*' meaning 'famous, well known' (KT. 4), the -*lïγ* suffix forms the meaning of possession designated by root words. Another example of relatative adjective '*el+lig*' means 'owning a country' (Kononov, 1980). '*Ellig bodun ertim*' KT. 9. Translation: "We were people owning a country". But we suppose that it implies the meaning 'with a country'. The root word '*el*' meaning 'people, country' is widely used root word in formation of derivatives in both Old Turkic inscriptions and modern Turkic languages.

The adnominal adj. suffix –*lïq* allomorphs –*lïγ; –lïq; –luγ; –lüg;* They unite suffix and vowel and consonant changes in harmony with the root word vowel. The most probably used derivations of '*baš*' are formed with dNN suffix –*lïq* in almost all Turkic languages (with different phonetic modifications) and old Turkic inscriptions: for example, '*baš+ lïq*' ('the head' or 'leader'. The suffix –*lï(γ)* in some modern Turkic languages exist in –*lïγ; –lïq; –lï* forms. From the historical phonology of Turkic languages, we know the last consonants as *γ, g, q, k* are dropped in some modern Turkic languages. This –*lï(γ)* suffixation is still in modern Turkic languages the productive means of relative adjective formation: *daš+ tïγ* ('stony')*, daγ+ lïγ* ('mountainous') in Tuva; *ton+ nïγ* ('dressed in fur coat') in Khakass and *ton+dï* 'rigged out with clothes or wealthy' with metonymic change in semantic in Kazakh (Tomanov, 1981).

The historical development of the suffix in *Historical Grammar of Kazakh Language* (Tomanov, 1981) gives the extension of meaning of –*lïγ; –lïq; –lï* derivational adjectives in some modern Turkic languages (in comparison with the

Old Turkic language): the suffixes determine the meaning of belonging to a nation or place. For example, in Kharashai belonging to a nation*: 'qïtai-lï'* meaning 'Chinese'*, 'Karashai-lï'* meaning 'Kharashai'; in Turkish and Turkmen belonging to a place: '*Istanbul-lï'* meaning 'from Istanbul'*, 'Morï-lï'* meaning 'from Morï'. In modern Kazakh word formation, the suffix *–lï /li* is used in compound adjectives in descript. adj. + relative adj. and noun+ relative adj. structures as a formant. For instance, *qïz minez+di* meaning 'shy, kind (direct. 'maidenlike character')', '*žumïr bas+ tï'* (pende) meaning 'servant of God'*; žas bala+ lï* meaning 'with a little child', *tereŋ oi+lï* meaning 'profound thinker' etc. (Oralbayeva, Kurmanaliyev, 2009).

b) *Xn+sIz →Adj.:* M. Erdal states that adjectives of privative oppositions with suffixes *–sïz/-siz* are widespread and they are added to both the noun base and adjective base, implying the meaning of lack and negation (E. Marcel, 1991). The *–sïz/-siz* suffix exists in four forms and is productive in Old Turkic Inscriptions as well as in modern Turkic languages except Altai, Chor, Khakass, Yakut and Tuva Turkic languages. A.N. Kononov considers the genetic relation of the suffix *–sïz/-siz* with *–sïr/sir*, compared to the Chuvash and Mongolian suffix *–sar/-sär* (Kononov, 1980), but he does not give any examples from these languages. We give some examples in Chuvash: *bahat+sar* 'timeless'and *hisep+ser* 'countless'. The following provides some examples of adjectives with this word formation model taken from the Orhon texts.

Buŋ+sïz derives from the root noun of abstract content '*buŋ'* – 'grief' or 'sadness' and negative making suffix – *sïz,* equivalent to the English suffix –less, which forms word formation meaning in contrast to *-lïγ* derivations (Kononov,1980; Türkçenin ekleri, 2006). The same process of formation of derivative meaning is observed in derivatives such as *sub+ sïz* meaning 'without water or ', *san+ sïz* meaning 'countless' and *oq+suz* meaning 'without an arrow or bullet'. (Drevnetujrkski slovar, 1969). In the language of monuments the privative adjective '*buŋ+sïz'* is used in two meanings 'griefless' and 'countless'. We consider that the second meaning, 'countless', is a transferred meaning. Anyway, the adjective forming *-sïz/-siz* suffixes derive adjectives analogically with opposed meaning to *–lïγ; –lïq; –lï* derivational adjectives.

c) *X ₙ + čI (šI) → N:* In the language of Orhon texts, derivations with *-čï;-či;(šï;- ši)* noun forming suffixes denote ability, habit and profession of a person. In the text of inscriptions: '*...Maγrač tamγačï, Oγuz Bilge tamγačï kelti'* (KTs. 53.). Translation: "Magrach master, Oguz master came" (Sartkozha, 2012) the derivation of *tamγačï* means 'a person who keeps a seal or a seal keeper' > the root '*tamγa'* meaning 'a seal' and the noun-forming suffix *–či* with the functional meaning 'profession of a person'.

Scholars give different views on the etymology of *-čï;-či* noun forming suffix. According to G. I. Ramsted, the etymology of *-čï;-či* suffixes goes back to the Altaic period and comes from the Chinese and Korean word '*čija'* meaning '*a man'* (Ramsted, 1957). E. V. Sevortyan links these suffixes with adjective forming suffixes *–lï; -li; -dï;-di;- tï;-ti,* both implying the characteristics of a person and

a thing (Sevortyan, 1966). The other Turkologists connect their etymology with adjective forming suffixes, *-šïl; - šil* (Kononov, 1972). B. A. Serebrennikov relates the etymology of these suffixes to – *čï; - či; - čij* diminutive suffixes and states that they kept the meaning 'ability of a person' (Serebrennikov, 1963).

In modern Turkic languages, Old Turkic noun forming suffixes, *-čï;-či*, added to both the verb and noun stem, kept their general grammatical meaning but exist with some phonetic variants and extensions of meaning. In modern Turkic languages, these suffixes imply:

- the habit of a person: in Shor, *uruš+ča* 'scandalous or argumentative';
- the belonging of a person to a definite society: in Uzbek, *respublika+či* 'republican', *monarhiya+či* 'monarchist'; in Kazakh, *stahanov+šï* 'Stahanovite'.
- the identification of a birthplace and the place of inhabitance of a person: in Karachay-Balkar, Tuva, *Nalčik+ či* 'the citizen of Nalchik town' and *Kïzïl+ či* 'the citizen of Kyzyl city', in Kazakh, it is given by the suffix – *lïq: Astana+ lïq* 'citizen of Astana';
- the profession of a person: in Modern Turkic languages, *-čï;-či* suffixes denoting profession of a person exist with some phonetic invariants: *el+ čï(ši)* 'ambassador', *ören+ ži* 'student'. However, in Yakut, this meaning is given by *–sït, -sut,- čït, - čut, žït,- žut: balïq+ sït* 'fisherman', *suol+ žut* 'road worker' (Tomanov, 1981).

d) $X_n + lIg, (lUq, lIk, lIγ) →N$: Derivations with *-lïγ/-lig,-luq/-lük* suffixes, which are substantivized in the context. Some scholars consider the *-lïγ/-lig,-luq/-lük* suffixes as both noun and adjective formants. However, we think that *-lïγ/-lig,-luq/-lük* are relative adjective forming suffixes, some derivative words with these suffixes are substantivized. For example, in the phrase '*Baš*lïγïγ *žükündürmiš, tizligig sökürmüš'* KT.I.2. ("We conquered the leaders and forced strong people to their knees"), the relative adjectives, *'baš*lïγ' (with head or headed) and *'tizlig'* (with knees) are substantivized (Drevnetjurksky slovar', 1969). However, we suppose, that the word formation meaning based on metonymic change and mean *'baš*lïγ' meaning 'leader' or 'boss', *'tizlig'* meaning 'strong or powerful'. This hypothesis is based on the derived word '*tize+li'* with transferred meaning 'strong' or 'powerful' and phraseological word formation with this word forma-tion component '*tize büktiru'* (word by word translation is 'to force smb to the knees') meaning 'to conquer' and the etymology of which may go back to the Old Turkic period.

The root word *'baš'* has the meaning of 'head' in all Old Turkic inscriptions and modern Turkic languages, and the *EDTL* gives the Proto-Turkic form of the word as *'baš'* (EDTL, 1989). Besides this word *'baš'* denotes several meanings such as 'beginning' or 'origin', 'the head (leader)', 'main', 'the first', 'senior (or high-ranking)'. The meanings form the determiner of the semantic kernel of the word *'baš'*, where most of the derivatives of the word *'baš'* originate.

Another relative adjective with *–lIg < el+lIg,* 'owning a country', in the phrase taken from the text of Kultegin: '*Ellig bodun ertim'* (KT 9), translated as "We

were people owing (or having) a country." However, we suppose that it implies the meaning 'with a country'. The root word *el* 'people, country' is a widely used root word in the formation of derivatives in both Old Turkic inscriptions and modern Turkic languages. The dN suffix *-lïγ* (with some different phonetic variations) form relative adjectives and nouns. The derivations with this suffix and its semantic field are given the above stated semantic analysis of the derivation *baš*+lïγ.

The word forming structure of some noun derivations is complicated. The root words *qïš-, jaj-* are nouns, *-la* is a verb forming suffix and *–γ* is a noun formant. In these derivations the suffix *– γ* implies the meaning 'a place':

- *qïš-* 'winter'< *qïš*+*la* 'to spend the winter' <*-γ* 'a place for inhabiting in winter'
- *jaj-* 'summer'< *jajla* 'to spend the summer' <*-γ* 'a place for inhabiting in summer'

In modern Turkic languages, this derived noun exists with phonetic changes: Kaz. *qïs*+*tau, žai*+*lau* (in some modern Turkic languages the last consonant *–γ* is replaced by *–u*: For example, the Old Turkic *taγ* 'mountain', in Kazakh exists in the form *'tau'*); in Uzb. *qïš*+*laγ* exist in the form of *qiš*+*loq* and with semantic change 'a village'.

e) X_v + *čĬ* →N: agent nouns or V doer. In the language of Orhon inscriptions productive noun forming *-čï;-či* suffixes come with the verb stems, denoting a habit, an ability of a person: *'aiγu₊ čï'* 'advisor', s*ïγ*it+ *čï* 'greeter or one who grieves'. The etymology and phonological description is given above. However, the noun forming *-čï;-či* suffixes of Orhon inscriptions have kept their semantic feature in modern Turkic languages.

f) X_v + *Ig (Uq)* →N word formation models in the texts form abstract nouns such as *bil*+*ig* 'knowledge' → '*bil-*' 'to know' and *bujr*+*uq* 'order' →root word *bujr-* 'to order, to command' imply the meaning 'the act of process'.

A. N. Kononov gives six meanings of *-ig; -ïγ;-ik; - ïq -üg;-uq* suffixes: 1. the act of process *bil-ig* 'knowledge' from *bil-*'to know'; 2. the result of an activity *öl-üg* 'dead'; 3. an objective point *qap-ïγ* 'gate'; 4. subject of activity; 5. place of activity; 6.instrument of activity (Kononov, 1980). In the language of Old Turkic inscriptions, the *-γ /-g,-q/-k, -uq/-ü k, -ïγ /ik/-ig* have a noun formation function and are still productive in word formation of modern Turkic languages.

g) X_v + *Uš (Is)* →N: The derivations s*üŋ₊* *üš* 'war' *and 'teg*+*is'* 'attack' are derived from verb stems 's*üŋ-*' meaning 'to fight' and '*teg-*' meaning 'to attack' and noun forming suffixes *-is; üš* . The function of noun forming suffixes, *-is/- ïs;-ïš/-iš; -uš /-üš,* in the language of inscriptions is to form abstract nouns implying 'the process of activity'. In modern Turkic languages, these suffixes exist with phonetic variants: in Kazakh ('so*γ* + *ïs'*), in Uzbek ('*ur*+ *uš'*), in Turkish ('*sav*+*aš'*) with the meaning 'war'. The etymology of *-is/- ïs;- ïš/-iš; -uš /-üš* suffixes is very close in meaning and function to Mongolian suffixes: '*boš*+*ug'* ('order') and '*žejs*+*ig'* ('comparison') (Tuimebayev, Yeskeeva, 2013).

h) X_v + *-ïl* and X_n + *-ïl* → *Adj.:* There are some suffixes, etymology and word forming function, which evoke discussions among Turkologists who have different views. The adjective forming suffix – *il* is only used in word formation of color names such as kïzïl 'red' and yaşïl 'green'. The adjective *'kïzïl'* is derived of the verb stem *'kïz-'* 'to be or to become red hot'. *'Yaşil'* comes from the noun stem 'fresh' or 'moist' and the word formation meaning is associated with the color of fresh plants. As we pointed out in section 3.1, Bang refers to both derivations of the same semantic field with *'ak +šïl'* meaning 'whitish' in Kazakh*,* giving the archetype of their structure as kïz+*(s)ïl* and yaş +*(s)ïl* weakening the feature of the color. The suffix –*šïl* has the meaning of 'the object does not possess the feature of the color completely' (Bang, 1915). But M. Erdal claims that the existence of *-(s)ïl* in the structure of *'kïzïl'* and *'yaşïl'* are no more than a hypothesis (Erdal,1991). We support Erdal's statement about *'kïzïl'*, *'yaşïl'*. They stand for the names of color features 'red', 'green'. So word formation meaning is associated with the phenomenon of reality. The meaning of the suffix – *ïl* is 'the object possess the feature'.
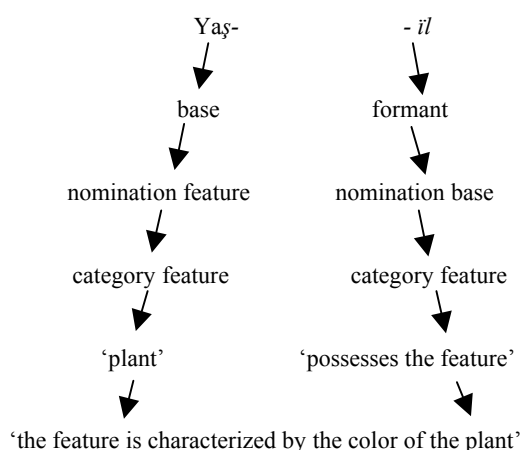

Figure 1. The semantic structure of word formation pattern.

i) X_v + *–γIl*→ *Adj.:* Lexemes formed with the suffix –*γXl* denoting animals are formed from names of the parts of their body, where a particular body part is white or has a white spot. For example, the word baş+ *γïl* in Orhon inscriptions has the meaning 'an animal with white head'. The word forming component *baş-* 'head' indicates the part of body where there is white: –*γXl* 'a white spot or white color'. There are some more lexemes with this suffix, in other Old Turkic inscriptions: *yal* + *γïl* 'a horse with white mane (yal)'; *tar+ γïl* 'an animal with narrow (tar) white and black stripes on its back' (Erdal, 1991).

According to the above samples, the suffix –*γXl* has an association with 'white'. On the other hand, these derivations seem to have something in common with *'kïzïl'* and *'yaşïl'*. In this sense, the suffix –*γXl* might be a lexeme, aγ+*ïl*,

which possess its *γXl* form as a result of linguistic economy: a*γïl*→ *γïl.* So a*γ+ïl* might denote 'in possession of the color white'.

The following illustration sums up semantic changes in word formation meaning of compounds and suffixal derivations.
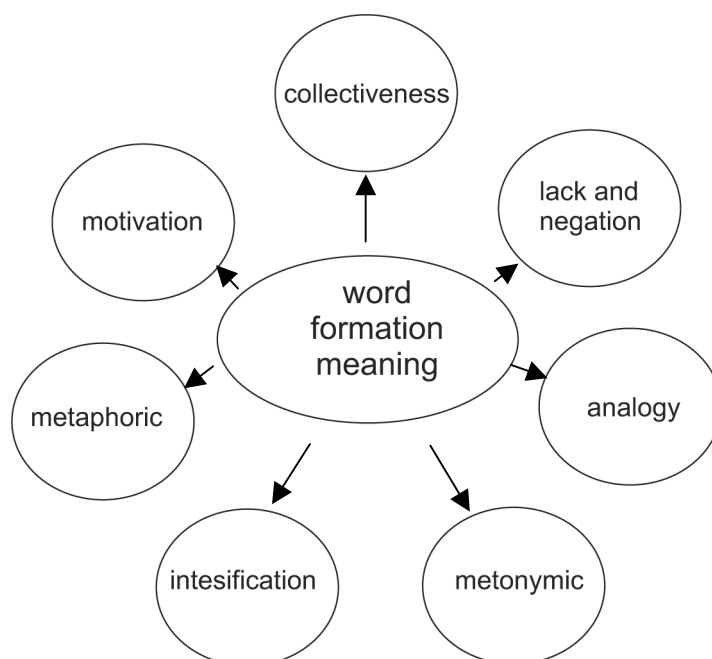

Figure 2. Semantic change in word formation meaning of derivations.

As we see in Figure 2, the word formation meaning of derivations implies the meaning of intensification, extension of meaning, metonymic change, metaphor, etc.

Conclusion

Summing up the above stated linguistic data and word formation analyses, we come to conclusion that in the language of Orhon Old Turkic inscriptions compounding and suffixation were the productive means of word formation, just as in Modern Turkic languages. We have identified the following word formation models of compounds: NN, AN, NA, AA, VN and NV. Some N+N compounding comes with antonymous and synonymous components. The formatives of the Adj. + N models are descriptive adjective and noun. Both compounding models are productive in word formation of place names. Adj.+ Adj. compounding is derived of adj. + descriptive adj. and descriptive adj. + relative adj. while N+Adj. models

consist of noun+ relative adjective components. V+N and N+V compounding are less productive among other compounds. In the onomasialogical aspect word formation models of compound words are very productive in place names, titles and names of people, which continues in modern Turkic languages.

According to the structure of suffixal derivatives, we identify the following word formation models of suffixal derivations:

$$X_n + lXg, (lXq, lXk, lX\gamma) \rightarrow Adj$$
$$Xn + sXz \rightarrow Adj.$$
$$X_n + \check{c}X (\check{s}X) \rightarrow N$$
$$X_{n+} lXg, (lXq, lXk, lX\gamma) \rightarrow N$$
$$X_v + \check{c}\breve{I} \rightarrow N$$
$$X_v + Ig (Uq) \rightarrow N$$
$$X_v + U\check{s} (Is) \rightarrow N:$$
$$X_v + \text{-}il \text{ and } X_n + \text{-}il \rightarrow Adj.:$$
$$X_v + \text{-}\gamma Il \rightarrow Adj.:$$

Suffixes in word formation of Old Turkic inscriptions carry special function and semantic feature. In our research work, we defined the following semantic categories of derived nouns with V + –*ig/-ïγ;-üg/-uγ; -ik/ ïq; –üg/uγ* productive word formation models:

V → 'nomination of process or action, abstract noun'(*bilig* 'knowledge' > *bil-* 'to know');

V → 'result of activity' (*ölig* 'dead or corpse'> *öl-* 'to die');

V → 'result of activity, an artefact'(*süŋüg* 'a spear' > *süŋü-* 'to stick or to thrust into');

V → 'the object of activity' (*qapïγ* 'a gate' > *qap-* 'to close');

V → V- doer or agent noun' (*körüg* 'spier' > *kör-* 'to see or to watch');

V → 'the place of activity' *(kečig* 'passage' Ton. 35 > *keč-* 'to pass'; *turïq* 'encampment (nomads)' KCh. 21; MCh. 30; KTs. 9. > *tur-* 'to stop or to settle').

In the texts the derived words with –*lĬγ/-lIg* adjective forming suffixes are substantivized. In accordance with the proof given above, we consider the semantic changes in word formation meaning of the derivatives as an intensification and extension of meaning, metonymic change and other word formation of derivatives in the language of inscriptions.

As a result of this study, we can say that the derivatives in the language of Orhon inscriptions are formed in accordance with the word formation rules and have a nominative function. In other words, the derivatives were formed as there was a need for a secondary naming of new objects and phenomena.

Abbreviations

KTb   –   Kultegin, a big text
KTs   –   Kultegin, a small text
BK   –   Bilge Kagan inscription

OTD – *Old Turkic Dictionary*
EDTL – *Etymological Dictionary of Turkic Languages*
N – noun
Adj. – adjective
V – verb

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