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Article

The Evolutionary Process of Root Morphemes into Relic Morphemes in the Kazakh Language

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ABSTRACT

The article is devoted to the study of the diachronic development of full-fledged root morphemes into relic root morphemes (RRMs) within the word-formation system of the Turkic languages, using the Kazakh language as a representative example. A relict root morpheme (RRM) is a residual morphemic unit identifiable through synchronic word-formation analysis, which functions as a linguistic sign. The semantics of an RRM in a compound word is determined by the presence of a full-root morpheme as one of its components, whereas in a derived word, the meaning is maintained through the use of productive affixes.

A key theoretical framework for analyzing the process includes the concepts of synchrony and diachrony as introduced by F. de Saussure and further developed by N.D. Andreev, who emphasized the systematic nature of diachrony as a sequence of interconnected synchronies. These theoretical principles serve as the foundation for analyzing root morphemes containing RRMs in the Kazakh language. The analysis draws on historical data from Turkic linguistics, including both scholarly and lexicographic sources, to uncover deep word-formation processes from a diachronic perspective.

Language evolution in word formation is understood as a natural transformation of individual words, word groups, or syntactic constructions resulting from communicative and cognitive human activity. Such transformations lead to quantitative and structural changes through phonological and morphological processes, resulting

in shifts across the linear hierarchy of linguistic units, including root morphemes, derived and compound words, word combinations, and sentences.

These linear transformations may also occur in reverse, via lexical attrition and the breakdown of complex structures, ultimately producing RRMs. This reverse evolution from syntactic constructions to compound words, compound words with RRMs, root morphemes, root morphemes with RRMs, and finally to simple root words.

The novelty of the research lies in its first comprehensive analysis of RRMs in the Kazakh language, tracing their development through the diachronic depths of the Proto-Turkic and Old Turkic periods. The study aims to confirm the hypothesis that despite internal structural changes, complex and derived words containing RRMs continue to preserve and perform the nominative function that as core linguistic signs.

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Қазақ тіліндегі түбір морфемалардың реликтке айналу процесі

Аннотация. Мақалада түркі тілдеріндегі, соның ішінде қазақ тіліндегі сөзжасам жүйесінде толық мағыналы түбір морфемалардың реликті түбір морфемаға (РТМ) айналу процесі қарастырылады. Реликті түбір морфема (РТМ) – бұл синхронды сөзжасамдық талдау кезінде қалдық түрінде айқындалатын және тілдік таңба ретінде танылатын түбір морфема. Құрама сөздердегі РТМ семантикасы оның құрамында толық мағыналы түбір морфеманың болуы арқылы анықталады. Туынды сөздерде бұл мағына өнімді аффикстер арқылы сақталып отырады және мағыналық тұтастық қамтамасыз етіледі.

Аталған процесті талдаудың маңызды теориялық негізі – Ф. де Соссюр ұсынған синхрония мен диахрония ұғымдары, олар Н.Д. Андреевтің диахрониядағы жүйелілік туралы тұжырымдарымен кеңейтіліп, диахрония бірнеше синхрониядан тұратын жүйе ретінде

қарастырылады. Осы теориялық алғышарттар қазақ тіліндегі РТМ бар түбір морфемаларды зерттеуге негіз болып, тарихи түркітану деректері – ғылыми еңбектер мен лексикографиялық көздер арқылы диахрониялық жазықтықта сөзжасамдық терең үдерістерді анықтауға мүмкіндік береді, сондай-ақ жүйелік эволюцияны сипаттауға жол ашады.

Ұсынылып отырған мақалада ежелгі түркі және ортақ түркі дәуірлеріне жататын РТМ бар сөздер тізімі берілген.

Тілдік сөзжасам жүйесіндегі эволюция – адамның коммуникативтік және когнитивтік қызметінің нәтижесінде бір сөздің, сөздер тобының, синтаксистік құрылымдардың ішінде пайда болатын табиғи өзгерістер. Бұл өзгерістер фонемалық-морфологиялық үдерістер түрінде сандық сипат алып, тілдік бірліктердің (түбір морфема, туынды сөз, күрделі сөз тіркесі, сөйлем) желілік иерархиясында сапалық ауысуларға алып келеді. Сонымен қатар тілдік құрылымның желілік жүйесінде кері бағытта – сөздің деструкциясы арқылы, яғни күрделі сөзден, сөйлем құрылымынан бастап қарапайым РТМ-ға дейін ыдырауы мүмкін: синтаксистік құрылым → күрделі сөз → РТМ бар күрделі сөз → түбір морфема → РТМ бар түбір морфема → қарапайым түбір сөз.

Мақалада ежелгі түркі және ортақ түркі дәуірлерінен бастау алатын РТМ бар сөздердің тізімі ұсынылған және салыстырмалы материалдармен толықтырылған, сонымен қатар, құрылымдық талдаулар да жүргізілген.

Зерттеудің жаңалығы – қазақ тіліндегі РТМ-ға кешенді талдау алғаш рет жасалып, оның дамуы ортақ түркілік және ежелгі түркілік кезеңдерге дейінгі диахрониялық тереңдікте қарастырылады. Зерттеу барысында туынды және күрделі РТМ бар сөздер құрылымдық өзгерістерге ұшырағанына қарамастан, тілдік таңба ретіндегі басты, яғни номинативтік қызметін сақтайтыны туралы гипотеза дәлелденеді.

Кілт сөздер: реликті түбір морфема, синхрониялық жазықтық, диахрониялық терең-дік, сөз деструкциясы, тілдік таңба, мағына импульсі, сөзжасамдық талдау, сөзжасам моделі, сөзжасамның элементар бірліктері, эволюция.

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Процесс эволюции корневых морфем в реликтовую в казахском языке

Аннотация. В статье рассматривается процесс развития полнозначных корневых морфем до реликтовых в словообразовании тюркских языков на примере казахского языка. Реликтовая корневая морфема (РКМ) – это остаточно выделимая при синхронном

словообразовательном анализе корневая морфема, которая представляет собой языковой знак.

Она обладает признаками глубинной значимости и функционирует как носитель семантической информации в системе языка.

Семантика РКМ в сложном слове обусловлена присутствием полнозначной корневой морфемы в качестве одного из компонентов. В производном слове значение сохраняется благодаря продуктивным аффиксам. Важнейшей теоретической установкой для анализа названного процесса являются понятия синхронии и диахронии по Ф. де Соссюру, расширенные Н.Д. Андреевым выводами о системности в диахронии как состоящей из нескольких синхроний. Названные положения стали основой исследования корневых морфем с РКМ казахского языка с использованием данных исторической тюркологии в виде научных и лексикографических источников для выявления глубинных процессов словообразования в диахронической плоскости. Подобный подход позволяет проследить не только структурные, но и семантические преобразования, происходящие в языке.

В предлагаемой статье представлен список слов с РКМ древнетюркского, до пратюркского происхождения. Эволюция в словообразовании языков – это естественные изменения внутри одного слова, группы слов, синтаксических конструкций вследствие коммуникативной, когнитивной деятельности человека, влекущих количественные изменения в виде фономорфологических процессов и ведущих к изменениям в линейной иерархии языковых единиц: корневые морфемы, производные и сложные слова, словосочетания, предложения. Динамические изменения в линейной структуре могут происходить и в обратную сторону через деструкцию слова с образованием реликтовой корневой морфемы (РКМ): синтаксические конструкции, сложные слова, сложные слова с РКМ, корневые морфемы, корневые морфемы с РКМ, простые корневые слова. В предлагаемой статье представлен список слов с РКМ древнетюркского, пратюркского происхождения. Новизна исследования состоит в том, что впервые проводится комплексный анализ РКМ казахского языка в развитии до диахронической глубины пратюркского и древнетюркского периодов, в процессе которого выполняется цель подтверждения гипотезы, что сложные и производные слова с РКМ, несмотря на изменения, произошедшие во внутренней структуре слова, сохраняют и выполняют главную функцию языкового знака – номинативную. Таким образом, исследование расширяет границы понимания функционирования РКМ в историко-лингвистическом контексте.

Ключевые слова: реликтовая корневая морфема, синхроническая плоскость, диахроническая глубина, деструкция слова, языковой знак, импульс значения, словообразовательный анализ, модель словообразования, элементарные единицы словообразования, эволюция.

Introduction

The word formation system of any modern language, regardless of the language family or group it belongs to, is historically layered. It can hypothetically be represented as a spiral, where each turn – each layer – is something entirely new, yet at the same time a continuation of older systemic connections. The concept of "systemic impact due to linguistic economy" was introduced by H. Paul (Paul, 1920). The strongest influence is seen on root morphemes because they play an active role in forming new words and frequently change as they continue to carry the core meanings of words. Some words gradually change and become

archaic, moving to the outer edges of the language system. Others stay active and help form new words. Others remain productive and contribute to the formation of new words. There are also words that survive in modern word formation only as parts of prefixes, suffixes, or compounds. These remain in use mainly through patterns of communication and discourse.

Word formation, as an independent subsystem of language, has a field structure (Buketova, 2018: 28), where the core or nucleus contains root morphemes, surrounded by all the word formation units arranged in a complex hierarchy of interactions and mutual transitions.

If these structures are seen as horizontal, then vertically they reflect Time, divided into micro-spaces: the synchronic plane and diachronic depth in word formation (Buketova, 2018: 27, 33), (Buketova, Aratayeva, Turkenova, Amrenova, 2023) allowing to trace the morphing of a full root morpheme into a relic one. *A relic root morpheme* (RRM) is a root that can still be identified through synchronic word-formation analysis, even though its meaning is no longer fully transparent. Its semantics are often preserved through fixed expressions or idioms and maintained by the meaning of the affixes it appears with. The historical development of this root can be traced through its various meanings in different periods, which supports its classification as a relic. In the Kazakh language, these processes occur and are of great interest from both synchronic and diachronic word-formation perspectives.

Materials and research methods

N. Oralbaeva argues that the issues concerning the root of a word and the root morpheme in the modern Kazakh word-formation system are still insufficiently studied, as linguists use the terms "root" and "tübır" interchangeably with "root morpheme" and "tübır morfema" (Oralbayeva, 1989: 14). In Turkic languages, the root of a word being an indecomposable base, has its own specific inflectional forms with zero markers, and it is precisely this factor that determines or clarifies the word-formation construction in its grammatical relationship to other words (Kazhibekov, 1986: 14).

It is known that in Turkic languages the nominative case is identical to the base form of the noun. The nominative case serves as the primary form for case inflections; "thus, in nouns, the base itself simultaneously represents the word" (Baskakov, 1969). In 1952, G. Ramstedt established that the original historically primary root was either mono- or di-syllabic (Ramstedt, 1957: 141).

J. Clauson asserts that the simplest forms of the Turkic language during the period of word formation, emerging from several organized sounds, were all monosyllabic—the first words to be created or established. The rest of the vocabulary was developed by extending this primary vocabulary of monosyllabic words (Clauson, 1962: 137).

Although Turkic roots are predominantly monosyllabic, not every monosyllable represents an etymological root. Accordingly, there is a need to apply synchronous and diachronic approaches. According to N.A. Baskakov, a root expresses the general idea of the lexical meaning of a word (Baskakov, 1978: 96). T. Bertagaev believes that a root encompasses the most general, central, pivotal, or core meaning of the entire homogeneous complex of derivatives (Bertagayev, 1969: 17). In the process of language evolution, there is a profound rupture between the root and the derived word, meaning that "since roots exist only as elements of words, cognate words may lose their ancient semantic or formal mutual connection" (Pizani, 1956: 111).

The material for the study of relic root morphemes in the Kazakh language was selected based on available etymological dictionaries of Turkic languages and the lexical data found

in written monuments. To identify RRMs in the Kazakh language, we relied on the absence of specialized morphemic dictionaries and instead used A.T. Kaidarov's monograph as the primary linguistic reference. The procedure began with a list of monosyllabic root morphemes (MRMs), from which we selected only those marked as "obscured" yet still active in modern word formation – either through suffixation or compounding.

Two major word formation types guided the classification: compound words and affixal derivatives (Paul, 1957). For compound words, examples such as *adalbaqan* (Traditional Kazakh branch rack), *birqazan* (pelikan), *balyqköz* (Climacoptera lanata) and *kökqutan* (grey heron) illustrate cases where one component loses independent meaning and assumes an attributive role. In such cases, secondary motivation is reinforced through modifiers:

qaratorğai – qara qaratorğai: comes from *qara* ("black") + *torğai* ("sparrow"), but has become a fixed word for the starling. To emphasize its black color, speakers may say *qara qaratorğai* ("black starling"), repeating qara for clarity — a case of secondary motivation);

kökqütan – kök kökqütan (comes from *kök* ("blue") + *qütan* ("heron"), though it refers to a grey bird. To highlight its actual color, speakers may say *kök kökqütan* ("blue grey heron"), repeating *kök* as secondary motivation for emphasis).

For affixal derivatives, we examined nouns formed using productive suffixes like –yq/–ık, –aq/–ek, and –q/–k, following models outlined by Balakayev (1989). Examples include *asyq* ("knucklebone"), *şalşyq* ("puddle"), and *jaryq* ("light"). Many such words exhibit morpho-semantic blending, where the seam between root and affix becomes obscure, structurally shifting the word toward the center of the word formation field.

According to Academician A.T. Kaidarov, constructing a comprehensive dynamic picture of the Turkic languages is possible through in-depth examination of the evolutionary processes affecting the root vocabulary of each individual modern Turkic language (Kaidarov, 1986, 4).

To compile a corpus of Kazakh lexemes containing relic root morphemes, the entire set of monosyllabic root morphemes was analyzed. Priority was given to "obscured" elements — those which may have varied in complexity over different historical periods. A segment considered a root in one linguistic era might have been a compound base in a preceding period, and vice versa.

A complex root base reflects long-term evolutionary development from simple to complex forms (Yunusaliev, 1959: 62).

A.T. Kaidarov emphasizes that the terms "dead roots" and "dead bases" are conditional, as they do not imply the complete disappearance or irreversible loss of these elements from the language. Many such roots continue to coexist alongside active (or living) roots and remain engaged in word -formation processes. " Most turkologists acknowledge the existence of "dead" root elements, though their approaches vary: some define as "dead" those elements no longer used independently, while others refer to those that cannot be morphologically isolated from derived bases (Kaidarov, 1986: 30).

The author concludes that the use of terms such as "dead," "opaque," or "obscured" roots comes out from insufficient study of the issue. According to the prominent Turkologist E.V. Sevortyan, morphologically obscured bases are not isolated units; they either form part of series based on ancient, mostly unproductive derivational models, or belong to lexical-semantic groups that originate from specific productive bases (Sevortyan, 1974: 70). He also notes that etymological analysis of a lexical base is more effective when grounded in morphemic, especially derivational analysis. Besides the entire model structure and the historical functioning of the affixes in the Turkic languages should be taken into account (Sevortyan, 1974: 43).

Unfortunately, a comprehensive frequency-based inventory of the modern Kazakh language does not currently exist. Lexicographic resources remain limited, especially with regard to relic root morphemes. Therefore, this study represents a pioneering attempt to systematize and analyze RRMs based on available historical and morphemic data.

Research background

It took considerable time for word formation to emerge as an independent linguistic discipline. Even a brief review of the works of linguists, including turkologists, reveals three main tendencies in defining the role of word formation within the broader framework of other linguistic sciences. The first opinion among scholars is to include word formation in the grammatical section of "Morphology". Therefore, the was an opinion that word formation takes an intermediate position between grammar and lexicology or is included in lexicology. Since the mid-1960s, a number of prominent scholars such as E.S. Kubryakova, V. Flyshter, M.B. Balakayev, K.M. Yesenov, E.N. Zhanpeisov, and N.A. Oralbayeva recognised word formation as an independent discipline.

Word-formation types and models are the units of higher-level word formation, while morphemes are the units of a lower level. Among those mentioned above, root morphemes and derivational morphemes hold a special status. The synchronic approach to word formation limits its object of analysis to words formed within the framework of active word-formation patterns (Arutyunova, 1961), (Kubryakova, 1965), (Stepanova, 1968). Under this approach, relic phenomena in word formation were not considered as a regular fact of dynamic changes in the language but were treated as exceptions. Word formation area came to a later understanding of the connection and unity of diachrony and synchrony in the process of word formation (Klimov, 1967), (Kubryakova, 1966), (Kubryakova, 1974).

N.D. Andreyev, when considering the concept of synchrony, concludes that any synchronic description is purely a relative, and by no means a universal truth. He believes that the history of any linguistic subsystem element, or any relationship between elements, represents a diachronic line, while the history of any series or type constitutes a bundle of diachronic lines. The author emphasizes that a diachronic bundle is not simply the sum of individual diachronic lines – just as a linguistic type or series is more than a mechanical collection of elements. In both cases, what emerges is something new: a structural relationship or organizing principle. N.D. Andreyev defines a diachronic bundle as a dynamic set of diachronic lines shaped by their interrelations. He sees the main difference between synchrony and diachrony in that the former is characterized by two coordinate axes – the paradigmatic and the syntagmatic – while the latter is marked by multidimensionality (Andreyev, 1960: 50-52). According to F. de Saussure, there was a view that denied the existence of a word formation system in diachrony, but N.D. Andreyev, as mentioned above, believes that there is a system in diachrony, though it is far more complex than in synchrony, with a hierarchy which is dynamic and therefore much difficult to grasp. N.D. Andreyev sees the systematics of diachronic changes in the comparison of subsequent synchronies, which is consonant with our position on diachronic depth, which historically consists of several synchronies or synchronic planes. At the same time, for the purpose of retrospective analysis, we use the concept of diachronic depth (Buketova, 1991: 77).

The evolution or in other words, dynamic processes in word formation is a natural phenomenon resulting from communication, human cognitive activity, and technological revolutions. When words emerge, they become either firmly established in the core part

of the word formation field, or become archaic, die out, and persist only due to productive affixes. According to N.D. Andreyev in all these phenomena there is multidimensionality, which is permeated by a third dimension – time:

"Dynamics, by its nature, is dualistic: it exists on the synchronic axis but is directed towards the diachronic axis. In resolving the dialectical contradiction of dynamics, the statics of the language is transferred into its kinematics. Thus, via the third aspect of language, the "gap" between the other two is eliminated: synchrony (=statics) is connected to diachrony (=kinematics) via tautochrony (=dynamics)" (Andreyev, 1960: 55).

Turkologist N.G. Shaimerdinova, who studied the structure of Turkic words and the semiotic nature of root morphemes, concludes: "The study of Old Turkic word structure is productive for understanding the role of historical linguistic phenomena, defining the morpheme as a semiotic unit, and applying modern morphemic data to reveal the characteristic features of Old Turkic word components" (Shaimerdinova, 2022: 97). A retrospective view provides additional material for studying the morphing of the root morpheme into the relic one.

Historical classification of nouns and verbs is based on determining the diachronic depth (Buketova, Aratayeva, Turkenova, Amrenova, 2023: 100).

Analysis

Dynamics of relic root morphemes in the Kazakh language from a diachronic perspective.

The evolution of full root morphemes into relic forms involves the expansion of linguistic units that undergo phonological and morphological changes through interaction with other morphemes. Compiling a table of diachronic depth serves as the first step toward developing a historical dictionary of root-based derivatives, including those containing relic morphemes.

Relic root morphemes can be unique, univalent, or multivalent. Horizontally, on the synchronic axis, unique RRM can be distinguished only within a single derivative or compound. Compounding in the Kazakh language is one of the productive methods of word formation. Details about the types of compound words and their analysis are described in the works of prominent linguists (Zhubanov, 1966: 91-93), (Akhanov, 1972: 49-97). A compound word consists of two or more independent words that form a unified lexico-semantic and grammatical unit with single stress. In the Kazakh language, the emergence of compound words was facilitated by the lexicalization of two formerly full words, one of which performed an attributive function.

It seems that, due to the stress, the phrase turns into a compound word and acquires a new lexical and grammatical form. For instance, *adalbaqan* (Traditional Kazakh branch rack), *bırqazan* (pelican), kökqūtan (grey heron), *balyqköz* (Climacoptera lanata) are examples of the emergence of new compound words in the Kazakh language. The demotivation of components is occurring, and explanatory words are added to "strengthen" the meaning of the word through the process of secondary motivation. This often happens in zoonymy, possibly because these are very old compounds: *qaratorğai – qaraqaratorğai* (starling – *black starling)*, *külın qaratorğai* (grey starling), *bozğylt qaratorğai* (pale starling), *kökqūtan – sūr kökqūtan* (heron – *grey heron)*, *kök kökqūtan* (*bluish heron*). In compound words, the hypernym-hyponym relations become obscured, and, to differentiate hyponyms, tautology would seem to be used: kök kökqūtan (bluish heron). The aforementioned nouns have maintained the structure of compound words, relative independence, and the motivation of their components. This is not the case with the following words: *kökjötel* (chin cough), *begzat* (nobleman), *jegjat* (relative by marriage), *jalmauyz* (ogress), *qainata* (father-in-law), *qainene* (mother-in-law), *where the*

first component has become obscure and demotivated, whereas in the words: *kögal* (lawn), *qūlager* (Legendary Kazakh racehorse), *jarğanat* (bat), beluardan (waist-deep), *belbeu* (belt), *esuas* (fool), the second component has become obscure and demotivated. Accordingly, in Kazakh word formation, the shift from phrasal compounds to block-type compounds – where components become more tightly integrated – leads to qualitative and structural changes. These changes are accompanied by phonological and morphological alterations, where one of the components turns into a relic root morpheme. This process could lead to the destruction of the compound word, and then words such as bılezık (bracelet), közıldırık (spectacles), adyraspan (Harmala), and şynaşaq (Little finger) emerge as evidence of the "overgrowth" of the word-formation boundary. For example, words like bütın (entire), biyl (this year), qarlyğaş (swallow), and yşqyr (waistband) have turned into simple words, completing the center of the word-formation field structure with root morphemes.

The word-formation act is a mental operation, as a result of which material expressions appear in the form of nominative units. Each step of derivation is a formula that can find its place in the formal-logical structure of the word-formation field. The central zone of the field structure covers specific root morphemes as full-fledged simple words.

During the transition from the central core to the periphery, units gradually lose some of the features characteristic of the central zone. Word-formation units in the field structure or in a multidimensional space come into contact with each other and interact. The transition from the center to the periphery means drawing together with another form or the interaction of two forms, up to changes in the linear hierarchy. Root morphemes are mobile units of word formation that enter into word-formation relationships with affixes and with each other. This can lead to the merging of an affix with a root morpheme, and the word, having turned into an indivisible root morpheme, returns to the core part. In some cases, despite the pressure of the system or due to dynamic processes in living speech, the affix remains or becomes productive for synchronous word formation, while the root morpheme loses its motivational connections. This results in the process of transforming a derived word into a "derived word with a root relic morpheme" and shifting it in the field structure towards "simple words". For instance, the Kazakh word *aiyr* (pitchfork) with the suffix -yr forms a noun meaning "tool of trade" and is closer to simple words than to derived ones. As the suffix -yr is unproductive, the word *aiyr* is close to becoming a simple core word.

The evolution of the language over time and space is more clearly depicted through chronological analysis, which allows for tracking the morphing of full root morphemes within the word-formation field into relic forms.

Relic root morphemes of pre-Proto-Turkic origin

The relic root morpheme ai in the words *ait* (say) and *aiqai* (scream) originates from pre-Proto-Turkic (p-P-Turkic) *aj-* which means "to speak, explain, interpret, name, point out, guide, allow, command, prescribe". This shows that the transformation into a relic root morpheme occurred due to a sharp narrowing of meanings, to the extent that in the Kazakh language, only the meaning *"to speak"* remains. Among the many derivatives of *ai-* we can specify the following:

1) with a nominal affix -t meaning action -*ajyt* (aj- + -yt) - «sermon», *aydet* (ayi + et) – "sing songs", and, probably, precede the Kazakh word "det" – "habit". The Turkic *ai* is compared with Mongolian *aja, ajas* meaning "sound", "sounds", "pronunciation", "accent", "rhythm", "melody", "tone" (Lessing, 1960: 22-24), with late Avestan ad – "to speak", "to say", as well as Latin *ai(i)* – "speak!" or "claim!". Based on this, it can be concluded that the

relic root morpheme -*ai* in *ait, aiqai* goes back to pre-Proto-Turkic language (Sevortyan, 1974: 100). Probably one of the most ancient meanings likely survives to this day.

The RRM -*añ* goes back to the pre-Proto-Turkic root *añ* - with meanings such as "consciousness", "perceptiveness", "wit", "comprehension", etc. The most widespread derivative of a:ñ is the verb a:ñla, Turkmen añla, to Tatar añla -, Balkar, Kazakh, Karakalpak añla, and Kyrgyz añda with the meanings "to understand", "to know" (Sevortyan, 1974: 153). The root an is known not only in Turkic languages but also in Mongolic languages. Compare, *angzira* ("ang - ẓira-), *aŋzira* ("aŋ-ẓi-ra) meaning "to know", "to understand" (Lessing, 1960: 46-47). Thus, the RRM -*añ* can be attributed to the pre-Proto-Turkic period.

From the comparison of aral – "island", *argu* – "large river", arǧy – "river branch", and aryg (Yakut ary:) E.V. Sevortyan identifies the root **ar* (*a:r?), about the origin of which there are various opinions. For instance, H. Vámbéry compared *ag, or* – "between", "amidst", "common", "society" and attributed them in Uyghur ara – "between", *ortak, ortaki* – "middle", Gagauz *aris* – "shaft", *aral* – "sea", "lake", "island" (herein, "a small body enclosed between larger bodies" (Vambery, 1878: 17). G. Ramstedt compared *aral* with a: ra – ara "interval", "between", believing that the former derives from the latter (Ramstedt, 1935: 14). J. Pokorny suggests that the relation of **ar* (*a: r) to Indo-European **ar-, *auer-*, also associated with the concept of *water* – is unclear (Pokorny, 1959: 80-81).

One can come over to A.T. Kaidarov's hypothesis about the origin of aiyr from *ar,* if this is explained by the fact that the "a" sound in the root "ar" was long, and with the addition of the suffix -(a) r, according to the principle of linguistic economy, diphthongization and the merging of two "r" occurred (Kaidarov, 1986).

RRM - jıg in the words *"jıgıt, jigıtşılık"* (young man, chivalry) is thought to be traceable to the root **(i) igi* – "to be nourished, to be raised", whereas iigit is a derived word with the suffix -t. Previously, *iigit* was used not only in reference to humans but also to animals. In modern Mongolian, there is *jigede*, meaning "youth, the time of youth" (Ramstedt, 1935: 218). Buck considered *yigit* to be a derived word with the suffix -*git,* which is also found in *alpayut* and *bayayut,* and derived from the verb *yi, yä-* "to eat" (Buck, 1971: 46). He observed the same stem in *yig* and *yäg* – "best, superior". Other opinions exist as well, for instance, G. Ramstedt compared the Turkic *jigit* with Mongolian *jigede,* reconstructed from Kalmyk *jedə* – "youth, the time of youth" (Ramstedt, 1935: 218). The diachronic depth dates back to the pre-Proto-Turkic period.

Relic root morphemes of Old Turkic origin

The RRM -*ai* in the words "aidala, aitaqyr" traces back to Old Turkic a: i/a: with the meaning "moon", "month". Historically, alongside a: u – meaning "to rise (about the moon)", expressions like *ay aydigi* and *ay ayazi* were used to denote "a very bright moonlit night" (Clauson, 1972: 265). In Turkmen dialect, there is also a derivative from *ai: aya-* meaning "to walk, wander in the moonlight" (Sevortyan, 1974: 99). H. *Vámbéry* compared *aj juzluk* to "fair-faced" (Vambery, 1878: 5). The diachronic depth goes back to the Old Turkic period. The reason for transforming into RRM likely lies in its unstressed position, similar to German compound nouns like Brombeere, where the first component is under secondary rather than primary stress. Hence, for example, the component ai- can be replaced with the word *mi,* and to say "mi dala" (desertic steppe).

The RRM -*ai* in the derivative *ailan* (aila - n or ai-lan) (to spin) goes back to the reflexive form of the verb *aila- -ailan.* In the Kazakh language, the permutated form ainal- has been preserved, which is also found in Old Uzbek texts, i.e., in literary Turkic (Nadzhip, 1989: 89, 102), and dates back to the Old Turkic period (Sevortyan, 1974: 105, 109).

RRM - döñ traces back to the verbal root toğ- (-toñ). There are related words such as Old Uzbek *toganek* – "a wooden ring attached to the end of a rope and used as a loop, *togalak* – "round", Uyghur *töñgelek,* Bashkir *dungelek,* etc. (Sevortyan, 1974: 281). Linguists debate whether the root "döñ" is of Turkic origin. Similar words in different languages are mentioned. In the Kazakh language, there is the form "donğalak", where the root morpheme "döñ" is formed under the influence of the open "a" – "something round". The diachronic depth of the RRM - döñ, - döñ dates back to the Old Turkic period.

RRM - jum traces back to the verb stem **ium-* "to entrust". Equivalents are found in Karakalpak, Uzbek, Lobnor, Turkmen, and Turkish – *iumuş* (work), Tatar, Bashkir – *iumyş* (Sevortyan, 1974: 251). The derived verbs: Turkish *iumşa,* Bashkir *iutuşa,* Nogai *iumsa,* Kyrgyz *jumşa,* Kazakh *jumsa* – meaning "to use, to utilize" are considered by E.V. Sevortyan to be semantically interesting (Sevortyan, 1974: 252); *i̇ùme* (~ -o) - Kazakh word *jūmu* (to tie, to fasten, strap, belt), Tung. **(x)ьm-;* Mong. **(h)umaji-;* Jpn. (Starostin, Dybo, Mudrak, 2003: 617)

The diachronic depth is the Old Turkic period.

RRM – qai in the words "qaiqai, qaitar, qaiqy" traces back to Old Turkic *qai* – "to turn, to return, to appeal to". There are related words in Chuvash *qai* – "back, rear; west", and in Old Uyghur *qaj* – "to turn back" (Kaidarov, 1986: 235). The diachronic depth is the Old Turkic period.

RRM – *qai* in the words "*qaiyq, qaimaq*" traces back to Old Turkic *qajaq* – "cream", *qajyuq* – "boat, canoe" (OTD, 1969: 407). The diachronic depth is the Old Turkic period.

RRM -*qaq* traces back to Old Turkic *qaq* – "dry, dried" (OTD, 1969: 421). In Uzbek, *qoq* also has a figurative meaning:

1) naked, bare: *qoq er* – "bare ground".

2) skin and bones (referring to a person).

3) miser, tightwad (OTD, 1969: 628).

The diachronic depth is the Old Turkic period.

RRM - *kök* in the words *"kökırek, köksau, kökei"* seemingly traces back to Old Turkic köküz – "chest", *köküz ker* – "to be proud", literally, "to puff out the chest" (OTD, 1969: 313). The diachronic depth is the Old Turkic period.

RRM - tör originates from Old Turkic *törkün* – "kin, tribe, house of blood relatives". The word *törči* means "to originate, to upspring". In Uighur, there is a standalone word tore – "to originate" (Kaidarov, 1986). The diachronic depth indicates the Old Turkic period.

RRM - ui originates from Old Turkic *ö* – "to think, to reflect" (OTD, 1969: 375), and from Old Turkic *ög,* – "mind, thought". This likely gives rise to words like "oila, oqy" (think! Read / Study!). The diachronic depth indicates the Old Turkic period.

Results

According to F. de Saussure, the linguistic sign is arbitrary, meaning it is unmotivated, and has no natural connection with the signified. The auditory signifier operates solely within the dimension of time: a) it represents a span, and b) this span is measurable in a single dimension. Thus, Saussure emphasizes the linear nature of the linguistic sign. "Language is radically powerless to defend itself against the forces which from one moment to the next are shifting the relationship between the signified and the signifier. This is one of the consequences of the arbitrary nature of the sign" (Saussure, 1977: 108).

E. Benveniste complements the last conclusion by clarifying exactly what kind of relationship is in question: "Indeed, the property of being changeable while remaining unchanged is not

the relationship between the signified and the signifier, but the relationship between the sign and the object, in other words, the motivation of the designation by the object, which is subject to various historical factors". Saussure's conclusion remains valid, but not for the sign, but for the meaning (signification) (Benveniste, 1974: 94).

The issue of asymmetry is also related to the problem of RRM. This connection is especially evident in complex nouns with RRM. In the Kazakh language, a dynamic shift from a complex word initially represented as a phrase, such as *tas baqa* – "turtle", which turns into a lexical and grammatical unity and begins to be written together as "tasbaqa". In some compound words, the internal structure is broken, resulting in words like "qainene" – "mother-in-law", "qainata" – "father-in-law". These terms no longer derive from the earlier syntactic constructions "qaiyn ene" – "the mother of the other's spouse" and "qaiyn ata" – "the father of the other's spouse". The process of the dynamics of Kazakh compound words is similar to such processes in other languages, indicating its universality. Changes in the first or second component can lead to the deconstruction of the compound word. This deconstructed form is then perceived as a simple root word, where the first or second component still serves as an onomasiological basis, such as "kögel" (lawn/grass) or "qolǧap" (mitten). V.G. Gak refers to this change in semantic relationships as asymmetry in the syntagmatic plane. It is manifested in the fact that the compound formation relates not to several referents (in our case, two), but to a single referent. He notes that the elements of such formations transform, in the terminology of Sh. Bally, into pseudo-signifiers (Gak, 1976: 85).

It is important to emphasize that the morphing of one of the components of the compound into an RRM means a shift toward the demotivation of the compound precisely as a compound. This shift leads to a symmetrical relationship of a synchronically non-separable word to its signified. However, this is merely a "shift" in that direction, and the final state to which it is directed is often not fully realized in many cases, as seen in *qainene* (mother-in-law), *qainata* (father-in-law).

Compound and complex words with RRM, despite the changes that have occurred in their internal form, retain and fulfill the main function of the linguistic sign-namely, the nominative function. V.G. Gak notes that the semantic relationships, viewed as relationships of nomination, are characterized by internal contradictions. On one hand, they are static: a word or morpheme designates a specific object, class of objects, or type of relationship. On the other hand, they are dynamic: linguistic forms can easily change their referential correspondence and sometimes completely lose their connection to any referent (Gak, 1976: 73).

The problem of the variability of linguistic signs, and consequently language itself, is a necessary characteristic of any language. According to E. Coseriu, changes in language have a causal nature, but they depend on a formal reason or a reason as a rational necessity, rather than on any external necessity. In this sense, we are not dealing with a problem that needs to be solved, but with a problem that is implicitly solved through the very existence of language. Language changes because its formation is never fully complete; it is constantly being created through the process of speech activity. In other words, it changes because it is spoken; language exists only as a tool and expression of the speaker's relationship (Coseriu, 1974: 82). Perhaps this is why sound complexes appear in every language, which alter forms in the process of language realization, while still maintaining modal relationships. A specific case of these changes is the appearance of relic root morphemes, the formal isolation of which is only possible from a synchronic perspective in the analysis of linguistic facts.

The concept "Most languages have RRM" is supported by the fact that in any language, there is a redistribution of morphemic material within words while maintaining their derived

nature. Redistribution is understood as "the shifting of boundaries between individual morphemes or parts of a morphologically segmented word, the movement of morphological nodes or segments of the word" (Baudouin de Courtenay, 1963). If we consider "multiple motivation", that is, a range of meanings in diachronic depth and the meaning in a derived word with RRM from a synchronic perspective, we can suggest that in both cases there exists a continuum of morphing from a full root morpheme to a relic one. This is expressed in the gradual change of form while sometimes retaining the primary meaning in its entirety. The diachronic depth allows us to trace not only the changes in the forms of currently relic root morphemes but also to clarify which part of their meaning has been preserved in the modern language. The universality of morphing full root morphemes into relics enables us to identify regular trends in word formation, even from seemingly peripheral phenomena. What are the interesting findings for the theory of word formation? First of all, there is a noticeable movement within elementary and non-elementary linguistic units, reflecting a structural field movement. Words with RRM are located on transitional lines from the core to the periphery, while derivatives with RRM are positioned between root morphemes, i.e., between the center and the derived words. The contact with the center is characterized by the transformation of the root morpheme into a simple word like *äper* (bring it here). This occurs during the word formation process in combination with affixes or another root morpheme, due to loss of motivation and under the influence of phono-morphological changes. On the other hand, the deconstruction of the derived word is not complete; the root morpheme morphs into a relic but is still connected to the synchronic system of word formation through its productive and non-productive prefixes and suffixes.

Interaction with non-productive models and affixes occurs functionally, which is expressed in significant phonological and morphological changes at the junctions with prefixes, and especially with suffixes, that lose their word-forming function. These changes facilitate the morphing of full root morphemes into RRM as producing elements. Such suffixes include Kazakh -т "ait" and Turkmen -na/-ne "egnamak, oinamak, govnemek" (Khydyrov, 1967: 275), (Mankeyeva, 1991: 91).

Morphing root morphemes into relics involves both qualitative and quantitative changes. For instance, from the Old Turkic root morpheme jet – "to lead", the Kazakh language retains "it" – "dog". There is a hypothetical suggestion that in a number of languages, RRM acquires forms similar to a universal proto-root. For instance, in Kazakh, we see forms like Vowel-Vowel (VV) – *ay,* Vowel (V) – *y,* Consonant-Consonant (CC) – *at,* Consonant-Vowel-Consonant (CVC) – *bal,* Consonant-Vowel-Vowel (CVV) – *qai,* and Vowel-Consonant (VC) – *ur.* In the Kazakh language, vowels prevail in the composition of RRM, with the most common form being CVC. It is not advisable to draw any hasty conclusions about why forms close to the proto-forms of Turkic roots are preserved. It is only possible to suggest that language, as a living organism, also seeks to conserve what is on the brink of extinction, with the aim of potentially reintegrating it under favorable conditions as part of a new word within the category of active simple words.

The study of the diachronic depth of relic root morphemes does not return language to its history; rather, such analysis transforms history into a sequentially unfolding movement through synchronic edges of representation and words. The only indelible constant that ensures the continuous preservation of the root throughout its history is the unity of meaning: a field of representation that can remain infinitely. Therefore, "nothing may limit inductive conclusions, and everything can serve as their foundation, from universal similarities to the subtlest resemblances: "the meaning of words is the most reliable light to which one can turn

for guidance" (Foucault, 1994: 144). When considering relic root morphemes in diachrony, we note that languages are characterized by diversity. Words, thanks to the universality of humanity, have the potential to denote various meanings that can unfold into different forms over time. Root morphemes can have word-forming contacts with various units within the hierarchy of word formation, that is, that words have their position not only in time but also in space. Consequently, the symbolic field of language can be represented along both the x-axis and the y-axis: vertically, we observe the movement of the root, while horizontally, we see the words in which this root has been preserved as a relic root morpheme.

Thus, the emergence of relic root morphemes is a typical phenomenon for any living language that develops irrespective of whether it belongs to structurally agglutinative or inflectional types. Relic root morphemes exist on transitional edges between the core and the periphery, at the intersection of horizontal and vertical projections. They are characterized by spatial relationships within the field structuring of word formation. The relic root morpheme persists because language itself evolves, making it universal. Most of the relics have originated from very old roots with a diachronic depth tracing back to the Indo-European period and the Old Turkic, as well as pre-Proto-Turkic periods.

Conclusion

The evolution of root morphemes into relics occurs alongside language development. This is enabled by the openness of the linguistic system. It is typical for a language system to experience complete isolation of certain parts of the lexicon, which become archaisms. On the one hand, recording these archaisms is necessary for comparing "languages of different generations" (Baudouin de Courtenay, 1963). On the other hand, the formation of new words is evident. Words with relic root morphemes lie between these two tendencies. The loss of internal motivation brings them closer to archaic vocabulary, while their transformation into simple or explanatory words adds to the lexicon.

The study of relic root morphemes in the Kazakh language allows us to conclude that the morphing of full root morphemes into relics is a systematic and regular process accompanied by phonological and morphological reintegration. These include phonetic changes (e.g., assimilation, final sound adjustments), principles of linguistic economy, and structural processes such as the deconstruction of derived words. Additionally, semantic changes, including folk etymology and the attribution of additional motivation to demotivated root morphemes, are also observed.

Thus, the process of transforming a word into a lexical "relic" despite the peripheral nature of this phenomenon within the structural field of word formation in the Kazakh language, positions the root morpheme as a linguistic universal. This root morpheme's multiplicity of meanings can only be defined when examined vertically, through diachronic depth. As a linguistic universal, the relic root morpheme reflects the intersection of vertical and horizontal dimensions, where language elements converge across time and space.

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