STUDY OF THE FUNCTIONAL

AND SEMANTIC FIELD OF ASPECTUALITY OF MOVEMENT VERBS AND TEMPORARY LOCALIZATION IN MULTISYLLABIC LANGUAGES

ESTUDIO DEL CAMPO FUNCIONAL Y SEMÁNTICO DE ASPECTUALIDAD DE VERBOS DE MOVIMIENTO Y LOCALIZACIÓN TEMPORAL EN LENGUAS MULTISILÁBICAS

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ABSTRACT

One of the topical issues in modern linguistics is the study of the mechanisms of functioning of multisyllabic languages. The connection of functional-semantic categories becomes the basis, scholars try to find a common or different semantic component in multisyllabic languages. Such processes can best be traced on the contrast of temporal meaning relations, types, based on the phenomenon of temporal localization/non-localization. In this paper, we use the functional-semantic category of temporal localization/non-localization on the example of the Kyrgyz language as a representative of the Turkic languages. The means of denoting the category of localization include temporal forms of the narrative verb, referential/non-referential subject, temporal and local markers. The interpretation of the variants of the temporal localization/non-localization categories of these means is uneven. We disclose the types of verb tenses, the way the action is performed, constructional determinants, etc. The relevance of the work lies in the fact that in the Kyrgyz language the species category is absent. Therefore, it is expedient to consider this topic more deeply, starting from the history of the study of the generic category in general linguistics. Kyrgyz, like the rest of the Turkic languages, is characterized by an analytic mode of formation. The lack of scientific-theoretical literature on the means of the organization of the functional-semantic category of temporal localization/non-localization in Kyrgyz linguistics proves the prospects of this study.

Keywords: Analytical speech, Mode of action, Multisystem languages, Slavic languages, Turkic languages.

RESUMEN

Uno de los temas de mayor actualidad en la lingüística moderna es el estudio de los mecanismos de funcionamiento de las lenguas multisilábicas. La conexión entre categorías funcional-semánticas se convierte en la base, y los investigadores buscan encontrar un componente semántico común o diferente en las lenguas multisilábicas. Estos procesos se pueden rastrear mejor mediante el contraste de las relaciones y tipos de significado temporal, basados en el fenómeno de la localización/no localización temporal. En este artículo, utilizamos la categoría funcional-semántica de localización/no localización temporal tomando como ejemplo el kirguís, como representante de las lenguas túrquicas. Los medios para denotar la categoría de localización incluyen las formas temporales del verbo narrativo, el sujeto referencial/no referencial, y los marcadores temporales y locales. La interpretación de las variantes de las categorías de localización/no localización temporal de estos medios es desigual. Se describen los tipos de tiempos verbales, la forma en que se realiza la acción, los determinantes constructivos, etc. La relevancia de este trabajo radica en la ausencia de la categoría de especie en el idioma kirguís. Por lo tanto, conviene profundizar en este tema, partiendo de la historia del estudio de la categoría genérica en la lingüística general. El kirguís, al igual que el resto de las lenguas túrquicas, se caracteriza por un modo de formación analítico. La falta de literatura científico-teórica sobre los medios

de organización de la categoría funcional-semántica de localización/no localización temporal en la lingüística kirguís demuestra las perspectivas de este estudio.

Palabras clave: Discurso analítico, Modo de acción, Lenguas multisistémicas, Lenguas eslavas, Lenguas túrquicas.

INTRODUCTION

Aspectuality, as a grammatical category, describes how verbs express the internal temporal structure of events, distinguishing between aspects such as the perfective (a completed event, such as "I ran") and the imperfective (an event in progress, such as "I was running"). Unlike the tense category, which places an action at a specific moment, aspectuality focuses on how that action unfolds over time. Verbs of movement (such as "go," "run") and temporal location (such as "last," "happen") are particularly relevant in this analysis due to their frequent interaction with temporal and spatial markers. This interaction is particularly rich in agglutinative languages, characterized by the formation of words through the linear addition of morphemes with defined grammatical meanings. Aspectuality operates at multiple linguistic levels—grammatical, lexical, and semantic—and can be expressed through morphological, syntactic, and lexical resources. Its contemporary study spans diverse fields, including cognitive linguistics and corpus analysis, contributing significantly to our understanding of linguistic mechanisms and the evolutionary principles of language (Babali, 2022a; Nikolaeva, 2020).

In agglutinative languages, aspectuality is typically expressed through affixes added to the verb root. For example, Turkish exemplifies this phenomenon, where terms such as "ev" can be combined with various suffixes that reflect temporal and aspectual relationships. In addition, in Turkish suffixes depend on vowel harmony, which can influence how aspect is marked in movement-related verbs, such as "gitmek" (to go). In Japanese, verbs may combine with particles like "-te iru" to indicate continuity or progressiveness, affecting the interpretation of movement verbs like "aruku" (to walk). Moreover, in Slavic languages, there is a contrast between perfective and imperfective aspects. In English, aspect is expressed through analytical constructions (progressive, perfect), whereas in Chinese, it is conveyed using aspectual particles. Some verbs inherently possess aspectual characteristics, such as "to begin" and "to finish," which naturally indicate the initial and final phases of an action.

"An Introduction to the Study of Verbal Aspect and Related Problems" by Comrie (1976) explores how languages of different cultures express the temporal characteristics of actions. He focuses on the differences between perfective and imperfective aspects, analyzing how they are reflected in the structure of words and sentences. He examines how different languages describe events, processes, and states, as well as their completion. This work has made a significant contribution to the theoretical foundation for further studies on grammatical aspect and its influence on the perception of time. On the other hand, the conceptualization of time through spatial motion also represents one of the most productive cognitive metaphorical mappings across languages. Two predominant metaphorical frameworks govern this relationship: the Moving Ego metaphor (where the self-moves through time) and the Moving Time metaphor (where time moves relative to the ego). These metaphors have provided rich testing grounds for investigating the psychological reality of space-time metaphors, though until recently, little research had specifically targeted the linguistic patterns employed in these mappings. In English, the Moving Time expressions appear more prevalent than Moving Ego expressions, while Spanish shows more balanced usage between the two frameworks. This distinction illustrates how languages can conceptualize temporal relationships differently despite sharing the fundamental cognitive metaphor of time as movement. The metaphorical mapping of space to time thus operates under language-specific constraints that affect both frequency and expression patterns.

The above suggests that these languages hold significant potential for comparative studies, particularly in how they handle event duration and completeness. This may be due to the niche nature of the topic, which requires greater scholarly attention—especially in comparison to fusional or isolating languages, which have received more focus in recent literature. Thus, the aim of this work is to provide a theoretical justification for the chosen topic by referencing scientific research on the problem of functional-semantic aspectuality of temporal localization/non-localization in general, and within Slavic linguistics in particular, which represents one of the main organizing means of the semantic category of action. Additionally, this study seeks to review the current state of linguistic research and the contemporary views and concepts within the field. The objectives include an analysis of the category of temporal localization/non-localization; an examination of the temporal aspectualization of situationality and its correlation with other temporal meanings; a description of the linguistic means that organize the temporal localization/non-localization within the functional-semantic aspectualization of the action category in Turkic languages; and the identification of their defining attributes.

MATERIALS AND METHODS

By the method of statistical analysis, the linguistic lexical and grammatical means organizing the functional-semantic category of temporal localization/non-localization in the Turkic languages were investigated. Examples of Kyrgyz verbal sentences served as the research material. By means of the bucket method sentences with the temporal localization/ non localization functional-semantic category were analyzed. In the Kyrgyz language, time is the main organizer of localization/non localization meanings, and for localization/non localization meanings, the participation of the referent and the unknown-referent subject is important.

Concreteness or generality of a noun plays a certain role in the realization of temporal localization/non localization meanings in utterances; in other words, it can be considered as a subject of expression. The action in sentences with a definite subject is specific, that is, it takes place at a certain time, which gives grounds to qualify it as localized in time. The analysis of speech referents also helped to analyze the Kyrgyz temporal localization. Temporal localization is conditioned by the presence of temporal markers: kechee, al uchurda, azyr, b g n, erteden beri - yesterday, at that time, now, today and tomorrow. Together with the temporal and spatial markers specifying the referent, as well as the unknown-referent subject, these elements characterize all expressions as localized in time and specify the situation in perception:

a) **Prolonged localized action:** The meaning of duration in Kyrgyz interacts with temporal semantics. The combination of temporal verb forms with adverbs indicating a certain duration depends on the species meaning, the semantics of verb lexemes, and the forms themselves. The lengthening of action is achieved with the help of functional-semantic reinforcements.

b) **Temporal universality or non-temporal non-localized action:** Such meanings represent a special form of the verb concept, that is, an extended form of the present tense. In such situations, the future tense forms of verbs are not localized in time but have a special action.

The material used to illustrate the function of the fiction text consists of the works of an outstanding writer of Kyrgyz literature - a three-volume collection of works by Ch. Aitmatov (2008). The author's genre and stylistic diversity made possible an objective analysis of the studied linguistic phenomenon. The sentences indicating localization were chosen as the units of observation.

The subject of the research and the task set for it determined the use of various methods of linguistic analysis. In the study of the semantic category of temporal localization/non-localization of motion in time, these methods interact with the structure of the sentence in the grammatical-typological direction, which is considered in connection with the study of morphological categories of the verb. In addition, methods of contextual and component analysis expressing temporal meaning, as well as methods such as scientific description, structural analysis, and grouping are included to describe the functional-semantic load.

RESULTS AND DISCUSSION

The study of aspectuality in Slavic linguistics today has reached a fairly high level. There is a lot of scientific literature on the aspectology of Slavic languages, as well as on aspectological directions and schools. But the study of this difficulty from the perspective of Turkic languages is still open. Therefore, in this study, we turn to the works of world linguists. We also rely on theoretical justifications in the works of the scholar Bondarko (1991). The author considers a functional-semantic category, the content of which is the nature of action, and the expression - morphological, word-formation, and lexical means with the participation of individual syntactic elements of the sentence. Iskakova et al. (2021) support the scholar's opinion, appealing to the fact that aspectuality as a functional-semantic (FSA) category is primarily expressed through the verb forms indicating how the action takes place in time.

In turn, Alimpieva (2018) defines the aspectual meaning as a characteristic of movement and its distribution in time. In this perspective, we note that originally this definition was given to the species category; today it is used not only for the species category but also for general aspectual meanings. The scientific heritage of Bondarko (1991) reveals the signs reflecting the feature of the field of aspectuality, namely the semantic dominance of aspectuality and its relation to its internal boundary (Table 1).

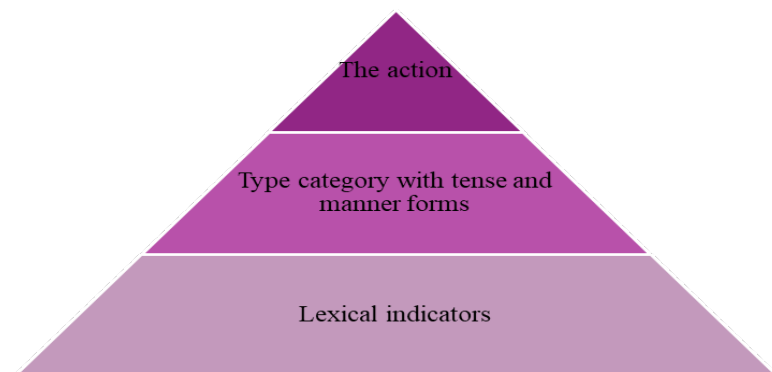Table 1. Summary of Scientific Thought on the Signs of the FSA.

Types	Signs of the FSA
A type expressing a system combining a number of grammatical (morphological) forms with homogeneous content	grammatical (morphological) category of the species.
Formation types and their groups, characterized by incomplete grammaticalization	limited coverage of verbal vocabulary and grammatical forms of verbs, insufficient regularity.
Specific elements of forms with species-temporal meaning	or with a temporal meaning, complicated by additional aspectual elements;
Combination with "phase" verbs	which signify the beginning, continuation, and end of an action, and other analytic species constructions, sometimes closely adjoining analytic forms.
Syntactic means with additional generic functions	constructions of the type "the more... - the stronger" ...
Mode of action (Aktionsarten)	opposing predicate/non-predicate (terminative) verbs and verb meanings.
Lexical type pointers:	long, momentary, gradual, slow, frequent, sudden.
Various Combinative Means in Aspect	including those concerning the area of "hidden grammar".

Source: own elaboration.

Ivanytska & Ivanytska (2018) investigated the components of the field of aspectuality and the components of the field of aspectuality in Slavic and Germanic languages. According to them, the core of the field is a category of grammatical type. The incomplete form is the form that does not reach its limit in the passage or repetition of the action realized on the timeline (Maier & Abdel Rahman, 2019). It is expressed in the form of the finished type and represents the action as a finished fact, limited in two ways: on the one hand, the beginning of the action, on the other hand, reaching one or the other end (Dye et al., 2019).

It should be noted that the category of a kind is considered basic in the grammatical system of most verbs in Slavic languages, so it has a profound influence on the verb system itself. The view is related to the signification of verb forms. Dickey (2018) opines on the importance of the species category, because the main reason for the wide and intensive development of aspectological problems is the central position of the species category in the grammatical system of the Slavic verb, in its deep connection with the verbal lexicon and word formation. In Slavic languages, no verb lexeme or verb form is used without the category (Klimek-Jankowska, 2022). It interacts with the categories of time, person, kind, goes beyond purely morphological functioning, influencing the syntactic structure of word combinations, sentences, and entire texts. Its connection with verbal semantics is so deep that in many cases the relevance is lexical, that is, the meaning depends on the form of the species and vice versa. But in the Kazakh language, the scheme of the functional-semantic field of aspectuality is formed in the form of a pyramid: at the top of the pyramid (Figure 1):

Fig 1: Scheme of the Functional-Semantic Field of aspectuality in the Kazakh Language.

Source: own elaboration.

In Kazakh, at the top of the pyramid are action, category types with time and kind, and at the bottom are lexical indicators, whereas in Slavic languages the very grammatical core forms the top of the pyramid (Yelibayeva et al., 2019). This category is absent in Kazakh. The function of the core is performed by the mode of action, the transition from the core to the periphery is occupied by the forms of time and mode. At the periphery are lexical and contextual characteristics. As noted above, the research on the above problem in the Kyrgyz language is little-studied, actually because of the absence of the species category itself. Typical categories of the Kazakh language are also observed in the Kyrgyz language. However, there are works devoted to the grammatical category of species, namely the expression of the species meanings of verbs (Kaiymova et al., 2020).

Analysis

In addition to being unrelated to aspectuality, prolonged action and localization is one of the most common concepts in language, since any action, no matter how long or short, contains some amount of "operative" time (Zarri, 2019). The very concept of time is represented in human consciousness through action-process-duration. Duration in general linguistics relating to the sphere of aspectuality (related to the category of time, interacts and overlaps with all established semantic categories) is therefore considered a category (Dalrymple et al., 2019). It is known that both duration and localization are semantic categories closely related to time (Ruzieva, 2022). According to the general features, the duration of action is divided into two groups - temporal localization and temporal non localization, which, in turn, serve as a background for certain values of duration. And in Turkic languages an action is represented as if it is usual or "not to time", with the help of special markers to express a recurrent or habitually long action (long ago, hours, several hours, twenty-four hours, day and night, all day, all day) - this is the duration indicator (Table 2).

Table 2. Localized/non-localized duration of action in Kyrgyz.

Example	Comment
Ал түнү көлдү жээктей басып көпкө жүрдүм. (Aitmatov, 2008, p. 235). Данияр дагы көпкө чейин обон салып, ырдап келди (Aitmatov, 2008, p. 64).	a prolonged localized movement in time is embedded in a unidirectional flow of time, and part of this time is concrete and disposable. And nonlocalized long-range action in time is defined as follows: characterized by a distraction from this relationship. The adjectives indicate a long duration and a combination of temporal non localization.
Зарипа вокзалга кирип кеткенине жыйырма мүнөт же андан ашуун убакыт өттү (Aitmatov, 2008, p. 265). Ал түнү көлдү жээктей басып көпкө жүрдүм. Данияр дагы көпкө чейин обон салып ырдап келди (Aitmatov, 2008, p. 196).	In Kyrgyz, the duration of action can be limited by adjectives and can be divided into the following groups: a) indicating the exact time: "one hour", "five minutes"; b) predicting: "long", "soon".
Етимди көз жашыма сууланган жеңиме катып, дагы көпкө чейин ыйладым. Андасанда гана бир ооз сөз айтып коюп, анан бир топко чейин безеленет (Aitmatov, 2008, p. 301).	Manifestation of uncertainty: "a few minutes," "a certain amount of time," "enough time".
Сулайман улам ордунан козголуп, сөз сурап бирдеме айтсамбы деп, улам кайра жер чукуп кыйлага олтура берди (Aitmatov, 2008, p. 169).	In the sense of prolongation "yet", "not yet", "for now"

Source: own elaboration.

The difference between Slavic and Turkic languages is expressed in terms of the interaction between long-term and temporal localization/non-localization. The explicitness of this interaction is formal and concerns indicators that belong to the sphere of temporal non-localization. Non-localization of action in time is a fixed member of the functional-semantic opposition (e.g., a long time, a whole day, etc., with a defined duration). The use of long modifiers in Kyrgyz constructions expressing localized meaning depends on the typical temporal form of predicates, which, in turn, is determined by their belonging to a particular aspect group.

In Slavic languages, duration is determined by the situation: a certain limit, a finite term, a definite interval of time, or a given action (Derdzakyan & Albertovna, 2021). In the grammar of the Kazakh and Kyrgyz literary languages, when expressing the duration of an action, it is understood that the action does not end during the period of speech, and the

limit of its completion is not specified (Mkrtychian et al., 2019). It may be clear from the context that the action is taking place in the current period or that it is ongoing. The combination of auxiliary verbs such as lie, stand, sit, go, and give conveys this meaning to the main verb in the present tense. Although these marker words generally indicate a long duration of action, the process of duration differs depending on the specific auxiliary verbs used (Kudaibergenov, 2019). These are verbs that express the duration of an action by forming complex verbs in combination with functional verbs. Compound verbs of this type denote actions that do not end at the moment of speech, and whose final limit is unspecified. They indicate that the action occurs generally in the current period and will continue later. This meaning is conveyed to the main verb through the cross-use of auxiliary verbs such as stand, sit, walk, and give (Kudaibergenov, 2019). Due to the semantic properties of auxiliary verbs within the system, the sense of duration is not uniform. Furthermore, the same auxiliary verb may carry different meanings depending on the form of the main component of the substituent verb.

Based on material from the modern Kyrgyz language, it is possible to demonstrate the potential for duration in connection with the localization of motion (Table 3).

Table 3. The phenomenon of long duration in the Kyrgyz language.

Duration of action	Example
A long-term action (method of execution) that does not have a specific time limit for the localization of the action:	*Автобазада шофер болуп иштеп турамын (Aitmatov, 2008, p. 282).*
A long-term action (method of execution) that does not have a specific time limit for the localization of the action:	*Анан ал дагы катты бир азга мелтирен тикеп, сандыктагы кат салуучу тулубуна салып коёт. (Aitmatov, 2008, p. 247). Ал дагы бир аз эки жагын карап турду да, троллейбус токтоочу жайга ылдам басты (Aitmatov, 2008, p. 308).*
The precisely specified duration time represents a certain interval:	*Үч саатча бир жерде басып жүрө берипмин (Aitmatov, 2008, p. 274).*
The indefinite long course of action trait does not indicate the exact limit of the localization of the action to be performed:	*Ушунча заман зулумга чыдаганбыз. Ушунча убакыт өткөнүн байкабаптырбыз (Aitmatov, 2008, p. 316).*
Non-durability - a limited time period:	*Байболоттун иши бүткөндөн кийин пристав мурутун чыйратып түксүйүп, бир аз ары бери басып турду. Көзүн ирмебей бир азга бутун тикеп ойлонгонсуп турду (Aitmatov, 2008, p. 253).*
Limited prolonged action means that it is limited in the initial state. The long passage is still relevant and continues from the beginning of the story to the present:	*Танабай көптөн бери байкап келатат (Aitmatov, 2008, p. 188).*
Prolonged action refers to an action that continues for a relatively long time, continues until a certain time, and ends after a specified period of time:	*Кечке чейин көчөдөн көчөгө, пристанда сандалып басып жүрдүм. Абакир экөөбүз түн ортосуна чейин жер айдадык. Керээли кечке ушинтип иштедик (Aitmatov, 2008, p. 151).*
Performing elongated smooth movements:	*Сахна көрүнүшү акырын өзгөрдү, Алай тоолору көтөрүлдү. Коломтодо чок күйүп болуп, акырын гана карарып күңүрт тартып барат (Aitmatov, 2008, p. 168).*

Source: own elaboration.

The duration of action, as an aspectual category in Kyrgyz, unites both the length and the manner in which the movement is performed (Babali, 2022b). When exploring the relationship between the meaning of duration and temporal localization, we arrive at the conclusion that it imparts to the sentence a sense of localization in time. To distinguish such meanings, there are specific phases indicating the beginning and the end of the movement. If the moment of the beginning or the end of the action is included, we characterize such sentences as temporally localized, since these moments

are directly connected to the temporal axis marking the start or end of the action.

CONCLUSIONS

The question of the functional-semantic aspectuality of localization/non-localization of motion in time is new and remains open for Turkic languages. In this paper, the problem of aspectuality in verbal sentences is considered using the example of the Kyrgyz language. The category of temporal localization/non-localization is one of the most important components reflecting linguistic functional semantics and expressing time. In linguistics, temporal localization, concreteness (certainty), and non-concreteness (indeterminacy) of movement along the time axis are seen as oppositional categories (Kobalava, 2020). Alongside others, this category is one of the components that express the content of an utterance (Kouteva et al., 2019).

Localization/non-localization of situations in time is not only a functional category but also a semantic one, as it carries a regular semantic load in the Kyrgyz language. The main role in its formation is played by the position of tense verb forms within their paradigmatic and syntagmatic meanings. The functional-semantic field corresponds to a monocentric field. The primary way of representing categorical and sub categorical localization/non-localization meanings is morphological. The central means of representation are the temporal forms of numerical aspectuality and their interaction. The feature of temporal localization/non-localization is characteristic of verbal sentences in the Kyrgyz language and is linked to the duration, phase, and temporal boundaries of situations.

The meaning of temporal localization in sentences involves spatial referentiality, which is expressed by markers. In such cases, the meaning of temporal non-localization is equally influenced by the referent subject. Considering the relationship between duration and the meaning of temporal localization, we conclude that the expression conveys the meaning of localization in time. By distinguishing phase values, such as the beginning and the end of the movement—including the time of initiation and termination—such expressions can be characterized as localized in time, since these moments are associated with the temporal axis.

The modern Kyrgyz language lacks a system of specific grammatical means for indicating the semantic category of temporal localization/non-localization of action. These meanings are instead realized through a combination of contextual elements. The type and temporal forms of the verb play an important role, along with temporal and local adjectives, referential and indefinite nouns in the infinitive

position. This tendency is especially evident in past tense forms. A review of the literature has shown that the concept of temporal localization/non-localization is a phenomenon that involves means from various linguistic levels.

REFERENCES

Aitmatov, C. (2008). *Collected Works: Volume 1. Stories, stories* (A. Akmataliev, Ed.). Biyiiktik. http://mail.okuma.kg/books.php?id=905

Alimpieva, E. V. (2018). Verb type and methods of verbal action in Russian and German. *News of the National Academy of Sciences of Belarus. Humanitarian Sciences Series*, *63*(1). https://doi.org/10.29235/2524-2369-2018-63-1-69-84

Babali, A. G. (2022a). Functional and semantic field of aspectuality in different-systemic languages. *Amazonia Investiga*, *11*(53), 166–175. https://doi.org/10.34069/AI/2022.53.05.16

Babali, A. G. (2022b). Functional and semantic field of aspectuality in different-systemic languages. *Amazonia Investiga*, *11*(53). https://doi.org/10.34069/AI/2022.53.05.16

Bondarko, A. V. (1991). *Functional Grammar: A Field Approach*. John Benjamins. https://doi.org/10.1075/llsee.35

Comrie, B. (1976). *Aspect: An introduction to the study of verbal aspect and related problems*. Cambridge University Press. https://www.cambridge.org/9780521290456

Dalrymple, M., Lowe, J. J., & Mycock, L. (2019). *Oxford Reference Guide to Lexical Functional Grammar*. Oxford University Press. https://global.oup.com/academic/product/the-oxford-reference-guide-to-lexical-functional-grammar-9780198733300?cc=mx&lang=en

Derdzakyan, H. A., & Albertovna, D. H. (2021). Functional Category of Aspectuality in the Russian and English Languages. *RUDN Journal of Language Studies, Semiotics and Semantics*, *12*(1). https://doi.org/10.22363/2313-2299-2021-12-1-41-60

Dickey, S. M. (2018). Thoughts on the 'Typology of Slavic aspect.' *Russian Linguistics*, *42*, 69–103. https://doi.org/10.1007/s11185-017-9189-x

Dye, C., Kedar, Y., & Lust, B. (2019). From lexical to functional categories: new foundations for the study of language development. *First Language*, *39*(1), 9–32. https://doi.org/10.1177/0142723718809175

Iskakova, G., Kosta, P., Berdibay, S., Kabykenovich, S. A., & Raushan, K. (2021). Ways to express the author's modality in Kazakh, Kyrgyz and English fiction works. *Homeros*, *4*(2). https://doi.org/10.33390/homeros.4.2.05

Ivanytska, N., & Ivanytska, N. (2018). Ukrainian and English verbs: Bilateral contrastive cross-linguistic perspective. *Advanced Education*, 213–218. https://doi.org/10.20535/2410-8286.132751

Kaiymova, P. M., Mapaeva, N. A., Kamardinova, U. N., Yzabekova, D. A., & Zulpukarov, K. Z. (2020). Semantic and Structural Peculiarities of Proverbs and Sayings in the Form of a Compound Sentence with a Meaning of Comparisons. In E. G. Popkova & B. S. Sergi (Eds.), *Scientific and Technical Revolution: Yesterday, Today and Tomorrow* (pp. 969–975). Springer International Publishing. https://doi.org/10.1007/978-3-030-47945-9_104

Klimek-Jankowska, D. (2022). Variation in Aspect Usage in General-Factual Contexts: New Quantitative Data from Polish, Czech, and Russian. *Languages*, *7*(2). https://doi.org/10.3390/languages7020146

Kobalava, I. (2020). Dynamicity and Stativity in a Linguistic Reflection of Space: Megrelian Preverbs and Their Context. *KADMOS*, *12*. https://doi.org/10.32859/kadmos/12/151-203

Kouteva, T., Heine, B., Hong, B., Long, H., Narrog, H., & Rhee, S. (2019). *World Lexicon of Grammaticalization* (2nd ed.). Cambridge University Press. https://doi.org/10.1017/9781316479704

Kudaibergenov, M. (2019). *Grammaticalization and the head: A case of Kyrgyz 'баш'(head)*.

Maier, M., & Abdel Rahman, R. (2019). No matter how: Top-down effects of verbal and semantic category knowledge on early visual perception. *Cognitive, Affective, & Behavioral Neuroscience*, *19*(4), 859–876. https://doi.org/10.3758/s13415-018-00679-8

Mkrtychian, N., Blagovechtchenski, E., Kurmakaeva, D., Gnedykh, D., Kostromina, S., & Shtyrov, Y. (2019). Concrete vs. Abstract Semantics: From Mental Representations to Functional Brain Mapping. *Frontiers in Human Neuroscience*, *13*. https://doi.org/10.3389/fnhum.2019.00267

Nikolaeva, Y. V. (2020). Aspectuality across languages: Event construal in speech and gesture. *Voprosy Yazykoznaniya*, *4*, 132–140. https://doi.org/10.31857/0373-658X.2020.4.132-140

Ruzieva, Z. M. (2022). Correlation of Verb Categories with Aspectuality and Temporality Categories in Russian Language. *International Journal of Multicultural and Multireligious Understanding*, *9*(8). https://doi.org/10.18415/ijmmu.v9i8.4014

Yelibayeva, G., Mukanova, A., Sharipbay, A., Zulkhazhav, A., Yergesh, B., & Bekmanova, G. (2019). Metalanguage and Knowledgebase for Kazakh Morphology. In S. Misra, O. Gervasi, B. Murgante, E. Stankova, V. Korkhov, C. Torre, A. M. A. C. Rocha, D. Taniar, B. O. Apduhan, & E. Tarantino (Eds.), *Computational Science and Its Applications – ICCSA 2019* (pp. 693–706). Springer International Publishing. https://doi.org/10.1007/978-3-030-24289-3_51

Zarri, G. P. (2019). Functional and semantic roles in a high-level knowledge representation language. *Artificial Intelligence Review*, *51*(4), 537–575. https://doi.org/10.1007/s10462-017-9571-5