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Spatial Concepts within Syntactic Structures: The Topology-Imagery Hypothesis / Пространственные концепции в синтаксических структурах: Гипотеза топологии-образности

Цзя Цзюньвэнь

аспирант, кафедра теории и практики иностранных языков, Российский университет дружбы народов

117198, Россия, Московская область, г. Москва, ул. Миклухо-Маклая, 6

✉ verajourney01@163.com

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Аннотация: Цель данного исследования заключается в создании и применении инновационной типологии синтаксических структур, основанных на ключевых когнитивных процессах. Исследование предусматривает детальную классификацию и анализ разнообразных типов предложений, включая использование визуально-образных и пространственных категорий. Такой подход обеспечит глубокое сравнение и поможет выявить уникальные характеристики синтаксических конструкций в анализируемых языках. Исследование направлено на всестороннее изучение топологических аспектов структуры предложений, анализируя расположение и взаимное распределение языковых элементов. Особое внимание уделено анализу предложений в трех разнообразных языковых системах (русском, китайском и английском), что способствует

мультиаспектному анализу и выявлению межязыковых параллелей и отличий. Таким образом, данное исследование не только способствует продвижению в области синтаксической теории, но и обогащает понимание когнитивных процессов, стоящих за языковым взаимодействием. В данном исследовании принят многогранный подход, сочетающий теоретический анализ и сравнительное исследование. Такая интеграция методологий позволяет тонко сравнить структуры предложений и их семантические роли в русском, китайском и английском языках, выделяя лингвистические и культурные различия между этими языками. Новизна данного исследования заключается в применении когнитивного подхода к анализу структур предложений и разработке классификации, основанной на трех когнитивных моделях: (i) одиночный главный контейнер, (ii) двойные главные контейнеры без определенной траектории, и (iii) множественные главные контейнеры с выраженными траекториями. Важнейшим принципом этой классификации является интеграция топологических и образных элементов, что подчеркивает разнообразие синтаксических структур на фоне единой когнитивной базы, модифицируемой культурными и языковыми особенностями. Исследование выявляет, что предложения в русском, английском и китайском языках демонстрируют как схожие, так и уникальные синтаксические черты, отражающие культурно-когнитивные различия, в том числе концепцию объединения противоположностей в китайской культуре, идею разделения на составляющие в русской культуре, и позицию английской культуры, находящейся где-то между этими полярностями. Такие выводы значительно обогащают понимание взаимодействия между языковыми структурами и культурными моделями мышления, расширяя границы лингвистического дискурса за счет анализа сложной связи между языком, когнитивными процессами и культурой.

Ключевые слова:

синтаксическая структура, образность, топология, культура, китайский язык, русский язык, английский язык, когнитивная грамматика, контейнер, траектория

1. Introduction

The relevance of the research: the study of traditional grammar rules has long been a cornerstone in the field of linguistics. These rules, with their intricate layers and nuances, serve as the foundation for understanding how language functions across various contexts. However, the complexity inherent in traditional grammar systems poses significant challenges, especially when it comes to deciphering their universal functional content and markers in syntactic structure.

The exploration of functional components and markers in syntax within the realms of universal grammar is profoundly influenced by traditional grammar categories. These paradigms provide a framework for understanding grammar at a more universal level. A critical aspect of traditional grammar is its universal syntactic functional components, encompassing elements like object relationships, path of motion, time, place, personal relations and among others [7]. This universality highlights the cognitive nature of grammar principles [3][4][5][8][10][11][12][13][14][15][16] [19], suggesting that they are not merely arbitrary constructs but are deeply rooted in human cognition and perception of the world. Cognitive grammar contributes significantly to understanding object relations, particularly in the domain of subject-object constructions. It posits that grammatical structures are

inherently linked to the cognitive understanding of object relationships, providing a framework for analyzing how these relationships are linguistically encoded. Central to cognitive grammar is the notion of motion trajectories, extensively explored by Langacker [14][15][16] and Talmy [19]. Talmy's seminal work [18][19] on verb- or satellite-framed encoding of motion events has been pivotal in understanding motion and path (trajectory) in cognitive grammar. This framework has been expanded by researchers such as Zlatev, et al. [22][23][24], Blomberg [1][2]. Their research offers a refined classification of motion events and their linguistic expression, shedding light on the semantic roles of lexical items in sentence patterns and the construction of syntactic structures around key mapping nodes of actual events. Talmy's "path of motion" [19] and Lakoff's "action as motion" [13] in the event structure metaphor provide crucial theoretical foundations for analyzing general grammar from a cognitive perspective. This approach allows for the semiotic mapping of real-world objects onto the mental world, preserving their semantic functions and relations in a linguistic format. It emphasizes the coherence of reality information and relationships in grammar construction, simultaneously acknowledging the unique characteristics of languages as cross-language markers.

In the realm of traditional grammar, the use of markers [16]—such as prepositions, adpositions, conjunctions, affixes, articles and among others—varies significantly across languages. These markers are integral to the construction and conveyance of meaning in linguistic structures. Their usage and function in different languages provide a rich field for exploring the diversity of grammatical systems and the cognitive processes underlying language comprehension and production. The variability in the use of markers across languages highlights the complexity of understanding traditional grammar in a universal structure. While some languages may rely heavily on certain types of markers, others may use them sparingly or employ different strategies for linking elements within a sentence. This diversity presents both a challenge and an opportunity for linguists to explore how different linguistic systems handle similar grammatical functions and how these methods reflect cognitive processes.

This paper addresses a specific aspect of syntax: objects and the topology of objects (the path of motion and the surrounding of motion in grammatical structures). Understanding how these elements interact within a syntactic framework is crucial for a deeper comprehension of language mechanics.

Research Hypothesis: The study's fundamental hypothesis is centered on the cognitive processes underpinning linguistic representation. It draws from Lakoff's notion of spatial relations as an inherent biological capacity and integrates the concept of "mirror neurons". These neurons are essential in reflecting the real spatial world within the mental realm, enabling the construction of 'mental imagery'. This imagery forms the basis of how the topology of our mental world influences the relationships among lexical items and linguistic symbols. The hypothesis posits that the universal syntactic structure depends on the topology-imagery function of metaphorical mapping and the categorization of the physical world at the cognitive level, thereby seeking to bridge the gap between cognitive processes and linguistic structure.

Research Tasks: The tasks include (1) translating cognitive processes into linguistic forms, particularly focusing on cognitive diagrams that establish a connection among mental, real, and linguistic worlds and (2) categorizing syntactic structures into three types: single main container, double main containers without nonobvious trajectory, and multiple main containers with trajectories, aligning these with cognitive processes involved in language

comprehension and production.

Research Methodology: This study adopts a multifaceted approach, integrating both theoretical investigation and comparative research. This methodological integration allows for a nuanced comparison of sentence structures and their semantic roles in Russian, Chinese, and English, highlighting the linguistic and cultural variances among these languages.

Theoretical Framework: The theoretical framework is based on cognitive grammar theories, particularly those related to syntax, cognitive grammar Langacker [14][15][16], Croft [3][4][5], and Talmy's theories [18][19] on motion and path. The framework integrates Lakoff's invariance hypothesis and conceptual metaphor theory [10][11][12][13], emphasizing metaphorical concepts like "event as action" and "action as motion", which are influential in syntactic structure and linguistic analysis.

Practical Significance: The study's findings have implications for how linguists should incorporate diverse cognitive and cultural perspectives in syntax analysis, emphasizing the need for a comprehensive understanding of syntactic phenomena, which can be applied in humanities departments of universities for specialized courses and seminars on theoretical, practical, and comparative analysis.

The paper is structured to methodically explore and address the research problem. The first part provides background information and a literature review that delves into cognitive grammar theories related to syntax, grammar construction and Talmy's theories on motion and path. The second and third parts introduce the basic hypothesis and typology of syntactic structure proposed in this study. The final part summarizes the differences in syntactic markers influenced by cultural factors in syntactic structure.

2. Results and Discussion

2.1 Basic Hypothesis

This study's fundamental hypothesis centers on the cognitive processes underpinning linguistic representation. Drawing from Lakoff's notion of spatial relations as an inherent biological capacity [12], this hypothesis integrates the concept of "mirror neurons" [9][12][20], which are crucial in reflecting the real spatial world within the mental realm. These neurons enable the construction of "mental imagery", forming the foundation of how the topology of our mental world – a mirror of the real world – influences the relationships among lexical items and linguistic symbols.

At the core of this hypothesis is the interaction of several cognitive functions: categorization, metaphorical mapping, topology, and semiotics. Categorization, as a primary cognitive activity [8][17], along with conceptual mapping, reflects the functionality of mirror neurons. Linguistic symbols then facilitate the transformation of thought into shared, communicable, and analyzable information, contributing to the evolving human encyclopedia of knowledge [6]. According to Lakoff's Invariance Hypothesis [11], the image-schema structures of motion and event in the mind strongly represent real-world mapping in mental imagery. The topology constructs abstract relationships after semiotically processing objects of the real world, signifying a higher level of cognitive development.

The hypothesis posits that the universal syntactic structure depends on the topology-imagery function of metaphorical mapping and the categorization of the physical world at

the cognitive level. This entails conceptualizing real-world information through imagery, transitioning from complex multidimensional topology to simplified spatial relationships. This simplification enables the representation of the real world in a semiotic format, replete with functional content and distinct syntactic markers. Ultimately, this hypothesis seeks to bridge the divide between cognitive processes and linguistic structure. It proposes a comprehensive framework that captures the biological, cognitive, and linguistic dimensions of human language understanding and production, suggesting that the roots of universal syntax lie in cognitive functions related to imagery, categorization, and metaphorical mapping.

2.2 General typology of syntactic structure

The translation of cognitive processes into linguistic forms is epitomized by cognitive diagrams, establishing a pivotal connection among the mental, real, and linguistic worlds. This intersection of imagery of categorized events and linguistic symbols is instrumental in understanding the mechanisms of syntactic structure.

In Lakoff's invariance hypothesis [11] and conceptual metaphor theory [10][12][13], the metaphorical concepts of "event as action" and "action as motion" are crucial, influencing syntactic structure in linguistic analysis: mapping from event in the real world to paths of motion. Furthermore, Building on Talmy's theory [18][19] and expanded by others [24], the integration of syntax with metaphorical cognition is key in constructing a multidimensional analytical framework for comprehensive grammar patterns. Hence, typology of the topology information of syntax is of paramount importance within syntactic structures.

Building upon the foundations of cognitive metaphor theory [13], the typology emphasizes the concept of "**container**" as a key cognitive image representing an abstract notion. As illustrated in Figure 1 and rooted in earlier theoretical advancements, this typology demonstrates broad applicability. **Trajectory**, abbreviated as "T" and akin to a "path of motion," cognitive image "**line**", plays a pivotal role in our model. It serves as a connective element linking diverse containers (depicted as lines). This includes the **objects** of motion(denoted as the participant container, abbreviated as "O") and the "context of motion" (encompassing the **surroundings** of objects as a container, abbreviated as "S").

The investigation into the path of motion necessitates a detailed classification of paths associated with objects and the trajectories of these paths in the real world. This paper proposes a fundamental typology of syntactic structures (as illustrated in Table 2), categorizing them into three distinct types: **(i) single main container, (ii) double main containers without nonobvious trajectory, and (iii) multiple main containers with trajectories**. This classification not only enriches our understanding of syntactic structures but also aligns with the cognitive processes involved in language comprehension and production.

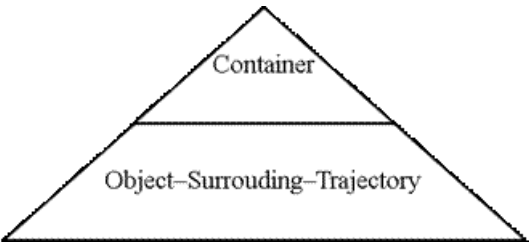


Fig.1: Layers of syntactic structures

Table 1: Object-Surrounding-Trajectory of Event structure in Syntactics

| | Parts of the Sentence | Morphology |
|-------------|-----------------------|-------------------------------|
| Object | Subject | Noun |
| | Object | Numeral |
| | Complement | Pronoun |
| Surrounding | Adverbial | Adjective |
| | Modifier | Prepositional Phrase |
| | | Adverb |
| Trajectory | Predicate | Verb |
| | | Adverb of Predicate (Russian) |
| | | Short Adjective (Russian) |

Table 2: Typology of syntactic structures

| | | |
|-----|--|--|
| i | object in surrounding | object in a container |
| ii | object is compared to another object | object in a container is compared to another object in another container |
| iii | object moves from one surrounding to another | object moves from one container to another |

1) Type 1: Single Main Container: Object in a container (Fig. 2)

The inaugural category encapsulates syntactic structures that exhibit a trajectory lacking a discernible endpoint. These configurations are distinguished by their concentration on a solitary semantic field, devoid of substantial physical movement. Predominantly, this type manifests in sentences that accentuate a stationary state, condition, or action, wherein overt displacement is not a central element. This approach characterizes syntactic constructions where the emphasis is more on a static scenario rather than dynamic transitions or movements.

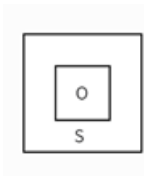


Fig. 2: Topology-Imagery of Type 1 (Object in Surrounding – object in a container)

Example 1:

- 1a: English: *He is at home.*
- 1b: Russian: *Он дома.* (He at home)
- 1c: Chinese: *他在家。* (He at home)

Table 3: Syntactic structure of example 1

| | T | O | S |
|----|------|----|--------------------|
| EN | is | he | home* (marker: at) |
| RU | есть | он | дома |
| CH | 在 | 他 | 家 |

| | | | |
|----|------|----|-------------------|
| RU | NULL | ОН | дома |
| ZN | NULL | 他 | 家* (marker: 在-at) |

Example 2:

- 2a: English: He is studying at home.
- 2b: Russian: Он учится дома. (He is studying at home)
- 2c: Chinese: 他在家学习。(He at home is studying)

Table 4: Syntactic structure of example 2

| | | | |
|----|-------------|--------|------------------------------|
| | T | O | S |
| EN | is studying | he | home* (marker: at) |
| RU | учится | ОН | дома |
| ZN | 学习 | 他 (he) | 家 (home) * (marker: 在-at) |

2) Type 2: Double Main Containers without Nonobvious Trajectory: a object in a container is compared to another object in another container (Fig. 3)

Contrasting with the first type, the second category frequently traverses two semantically distant domains. This is most evident in classical metaphorical propositions. The key feature of this type is the absence of an apparent physical trajectory. Although these structures involve a conceptual leap between two domains, they do not imply a clear physical path of motion, instead focusing on the metaphorical or abstract relationships between these domains.

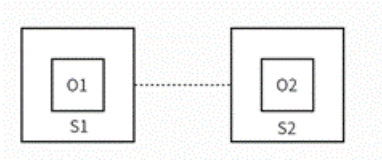


Fig. 3: Topology-Imagery of Type 3 (object is compared to another object – container is compared to another container)

Example 3:

- 3a: English: Time is money.
- 3b: Russian: Время – это деньги. (Time – money.)
- 3c: 时间就是金钱。(Time is money.)

Table 5: Syntactic structure of example 3

| | | | | | |
|----|--------|-----------|------|------------|------|
| | T | O1 | S1 | O2 | S2 |
| EN | is | time | NULL | money | NULL |
| RU | – | время | NULL | деньги | NULL |
| ZN | 是 (is) | 时间 (time) | NULL | 金钱 (money) | NULL |

3) Type 3: Multiple Main Containers with Trajectories: object moves from one container to another (Fig. 4)

The third category is the most common and involves obvious cross-domain displacement with a physical trajectory. These structures are integral in sentences that depict movement or transition from one domain to another, clearly marked by physical paths of motion. They effectively capture the dynamic aspect of syntactic structures, reflecting the movement and interaction between different semantic fields.

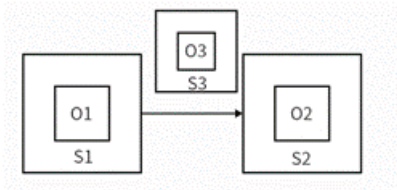


Fig. 4: Topology-Imagery of Type 3 (object moves from one surrounding to another – object moves from one container to another)

Example 4:

- 3a: English: He gave her an apple.
- 3b-1: Russian: Он дал ей яблоку. (He gave her apple.)
- 3b-2Russian: Он ей дал яблоку. (*He her gave apple.)
- 3c: Chinese: 他给了她一个苹果。(He gave her an apple.)

Table 6: Syntactic structure of example 4

| | T | O1 | S1 | O2 | S2 | O3 | S3 |
|----|--------------------------|-------------------|-----------------|--------------------------------------|-----------------|---------------------------|-----------------|
| EN | <div>gave</div> | <div>he</div> | <div>NULL</div> | <div>her</div> | <div>NULL</div> | <div>apple</div> | <div>NULL</div> |
| RU | <div>дал</div> | <div>он</div> | <div>NULL</div> | <div>ей* (maker: case)</div> | <div>NULL</div> | <div>яблоку</div> | <div>NULL</div> |
| ZN | <div>给了 (gave)</div> | <div>他 (he)</div> | <div>NULL</div> | <div>她 (her)</div> | <div>NULL</div> | <div>苹果 (apple)</div> | <div>NULL</div> |

This classification provides a comprehensive framework for analyzing syntactic structures in relation to the path of motion. By categorizing syntactic structures into these three types, we can better understand the interplay between language and cognition, particularly in how spatial relationships and movements are conceptualized and linguistically encoded. This approach not only deepens our comprehension of syntax but also offers insights into the cognitive mechanisms underlying language use.

Furthermore, it is vital to acknowledge that syntactic variations are a common occurrence across languages. These differences are mainly due to variations in container combinations by container markers—crucial elements delineating how languages encode characteristics of trajectories. These variations underscore the unique attributes of each language and the vast diversity and richness in the properties of trajectories. Such diversity showcases the complex interplay of cognitive, cultural, and historical factors in shaping linguistic structures. In representing cross-linguistic distinctions, the terms “container” and “container linker (trajectory)” articulate language topology, forming an event structure. “Marker” refers to language-specific descriptive categories, manifesting as partial overt morphology. This typology patterns adeptly accommodate variations in sentence markers used to convey similar information across diverse languages. Grounded in the metaphorical concepts of “event as action, action as motion” [\[13\]](#), it posits that all information about real-world

events can be metaphorically rendered within the imagery-schema of "motion". In this framework, "motion" functions as a container linker, connecting the object information containers of the real world, thus synthesizing a comprehensive imagery-schema for event information – a pattern fundamental to general grammar structure. Notably, syntactic differences between languages like Chinese, English, and Russian are highlighted by variations in spatial and temporal prepositions, which function as "markers" in this framework. The same expressive content possesses the same Topology-Imagery in the same type of syntactic structure, yet with different container combination.

The reflection of philosophical perspectives in language is evident in the structural and cultural nuances of different languages. Chinese, with its emphasis on surroundings (where the individual is perceived as a container of possessions) and the dominant of the person, reveals a linguistic culture deeply influenced by its philosophical heritage. This perspective emphasizes the interconnectedness of the individual within a broader context. In contrast, Russian language, shaped by its own unique philosophical and cultural influences, places a significant emphasis on the logical relationships between the possessor and the possessions by markers "y". This focus illustrates a linguistic tradition that values the analysis and delineation of relationships within its structure.

2.3 Cultural Factors

Syntactic structure, deeply entrenched within the linguistic environment, is profoundly shaped by the cultural factors of national groups. It represents a historical and enduring cultural content that encapsulates the differences between cultures, though not as pronounced as the differences in lexical meaning. The latter is subject to a wide diversity influenced by collective and individual cultural cognition. This influence encompasses various factors such as social differentiation—age, gender, and other societal backgrounds. Moreover, an individual's sensory perception of the world is a crucial component of their mental representation.

Cultural factors in syntactic structure (as depicted in Figure 5, Table 11) comply with the interactive framework of culture and language, chiefly mediated through conceptual transmission. The superficial layer comprises tangible artifacts and creations, including linguistic expressions. The intermediate layer pertains to conceptual elements within the cognitive domain, while the deep layer corresponds to the underlying cultural backdrop, shaping the environment for linguistic expressions. The language environment is composed of both relatively stable components like geography and religion, as well as dynamic factors such as the economy and politics. The differentiation in cross-language syntactic structures is primarily attributed to cultural stable factors [\[21\]](#), which are particularly noticeable in container combinations by container markers.

While deeply ingrained in Confucian and Taoist philosophies, China's language and culture, especially within modern Mandarin, prominently showcase the philosophy of harmonizing opposites into a cohesive whole. This philosophical foundation uniquely differentiates Chinese language and cultural expressions from those of Japan and Korea. Despite these countries' cultural indebtedness to China, their linguistic structures have been more significantly shaped by the syntactic influences of Western languages, such as English, where the principle of unifying opposites is less pronounced. Chinese linguistic patterns often forgo explicit logical connectors, mirroring a cultural and linguistic predilection for holistic unity over discrete logical relationships.

Contrastingly, Russian intellectual tradition, profoundly shaped by Western philosophical

thought and Eastern Orthodoxy, emphasizes the analytical division of wholes into constituent parts. This philosophical stance is manifested in the frequent articulation of uncertainty and subtlety, epitomizing the Russian cultural spirit. The Russian language boasts an array of categorical markers that facilitate the precise articulation of relationships between entities, integral to constructing sentences that reflect a culture valuing logical structure and interrelation. This linguistic preference illuminates a deeply ingrained cultural inclination towards methodical analysis and organization of thought, setting Russian cultural and linguistic conventions distinctly apart from the holistic integration seen in Chinese discourse. Furthermore, English situates itself between these polarities, highlighting categorization and logical relationships, yet it sometimes blurs these distinctions. Overall, markers indicating logical relationships are more conspicuous in English compared to Chinese.

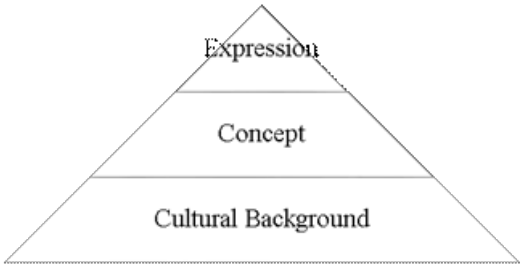


Fig. 5: Relations between cultural factors and expressions

Table 11: Description of the relations

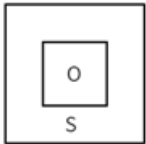
| Level | Subtype | Lexicon/phrase | | Sentence |
|---------------------|------------------|---|----------|------------------------|
| Expression | Unties | lexical item/phrase | | sentence |
| | Structure | Lexical | Semantic | Syntactic Structure |
| Concept | Topology-Imagery | Spatial images | | Container Combinations |
| Cultural Background | Factors | Politics, Philosophy, Religion, Geography | | |

Existential sentences represent a quintessential category of sentences that underscore cultural distinctions. Alongside these, sentences that convey emotions and other types also demonstrate a pronounced cultural specificity. This analysis will focus on existential sentences as a paradigm to explore the structural variances and the cultural nuances they illuminate.

For instance:

- 8a: There are many trees **in** the park.
- 8b-1: В парке много деревьев (*In the park there are many trees.)
- 8b-2: Много деревьев **в** парке. (There are many trees in the park.)
- 8c: #公园#有很多树 (*#Park# many trees.)

Table 12: Topology-imagery pattern of three languages



| | Trajectory | O | S |
|----|------------|----------------|-----------------------------|
| EN | are | many trees | there park* (marker: in) |
| RU | NULL | много деревьев | парк* (marker: в – in) |
| ZN | 有 | 很多树 | 公园 |

In this instance, the Chinese sentence employs a structure that eschews the locative preposition, a characteristic feature of the language. This omission aligns with the syntactic propensity in Chinese to rely on context—illustrated by the use of the term for "park"—to suggest spatial relationships without the need for explicit grammatical indicators. This approach stands in stark contrast to English and Russian, where prepositions ("in" in English and "в" in Russian) are indispensable for articulating the spatial relation clearly. This reflects the holistic philosophical notion of integrating dualities into a unified whole, a cultural trait previously mentioned in the context of Chinese culture.

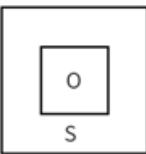
For instance:

9a: We are going to rest **during** the summer vacation.

9b: Мы собираемся отдыхать **на** летних каникулах. (We are going to rest during the summer holidays.)

9c: #暑假#我们打算休息。(*#The summer vacation# we are go to Beijing.)

Table 13: Topology-imagery pattern of three languages



| | Trajectory | O | S |
|----|------------------------|----------------|--|
| EN | are going to rest | many trees | summer vacation * (marker: during) |
| RU | собираемся отдыхать | много деревьев | летних каникулах* (marker: на – on) |
| ZN | 有 | 很多树 | 公园 |

In this case, the Chinese sentence conveys the timeframe and the action without the use of a preposition to indicate the temporal context, which is instead infused in the noun phrase “暑假” (summer vacation). This linguistic economy is reflective of a broader trend in Chinese syntax that allows temporal contexts to be understood without explicit grammatical markers, contrasting with English and Russian, where prepositions (“during” in English and

“на” in Russian) are used to specify the temporal relationship.

In examples, the Chinese expression omits the marker indicating the setting container, a common occurrence in Chinese syntax. Syntactic variations are influenced by religious and philosophical factors, evident in the selection of container combinations and markers. In terms of syntactic construction, spatial markers in Chinese are utilized less frequently in comparison to English and Russian, and contextual markers in Chinese may be omitted even in similar expressions.

3. Conclusion

This investigation into syntactic structures has culminated in two key findings, directly addressing our research objectives. **Firstly**, we have established a definitive connection between cognitive processes and linguistic forms. This connection is particularly evident in the transformation of cognitive diagrams into syntactic structures, revealing a harmonious interplay between mental, real, and linguistic worlds. Our analysis underscores the central role of objects and their topologies, not only as elements of syntactic functionality but also as reflections of real-world events and cognitive patterns, particularly influenced by the workings of mirror neurons.

Secondly, our research has led to the innovative categorization of syntactic structures into three distinct types: single main container, double main containers without a nonobvious trajectory, and multiple main containers with trajectories. This categorization aligns syntactic forms with the cognitive processes involved in language comprehension and production, shedding light on the intrinsic connection between conceptual categorization and its syntactic representation. Furthermore, our findings indicate that container combinations, vital for container combination in languages, vary considerably, reflecting not just linguistic nuances but also broader cognitive and cultural factors.

Finally, the analysis reveals that the configurations of containers, fundamental to the syntactic architecture of languages, display considerable diversity. This diversity reflects not merely linguistic intricacies but also encompasses broader cognitive and cultural paradigms. Our typological scrutiny of sentence structures has exposed distinct cultural underpinnings within these constructions: Chinese emphasizes holistic integration, as seen in the concepts of merging opposites and the unity of humanity with nature; Russian prioritizes dichotomy, evidenced by the idea of segmenting wholes into components; and English shows a tendency towards dichotomy as well, though it does not completely converge with the Russian perspective on cultural thought.

Looking towards the future, these findings lay the groundwork for a new viewpoint in linguistic research. The intricate relationship between cognitive conceptualization and syntactic structure presents vast opportunities for further exploration. As linguistics continues to evolve, incorporating diverse cognitive and cultural perspectives in the analysis of syntax becomes increasingly imperative. We advocate for a continued exploration into the cognitive dimensions of syntax, aiming to unravel the deeper connections between language, thought, and culture.

Библиография

1. Бломберг Й. (2014). Движение в языке и опыте: Фактическое и нефактическое движение в шведском, французском и тайском языках.
<https://api.semanticscholar.org/CorpusID:60732474>
2. Бломберг Й. (2017). Нефактическое движение в языке и опыте. Движение и

- пространство в разных языках, 205-227. <https://doi.org/10.1075/hcp.59.09bol>
3. Крофт В. (1994). Семантические универсалии в системах классификаторов. *Word*, 45(2): 145-171. <https://doi.org/10.1080/00437956.1994.11435922>
 4. Крофт В. (2001). Радикальная конструктивная грамматика: Синтаксическая теория с типологической точки зрения. Оксфордское университетское издательство.
 5. Крофт В. (2005). Логические и типологические аргументы в пользу Радикальной конструктивной грамматики. Конструктивные грамматики: когнитивные основания и теоретическое расширение. Амстердам: Бенджаминс. <https://doi.org/10.1075/cal.3.11cro>
 6. Фейркло Н, Джессоп Б, Сейер А. (2002). Критический реализм и семиозис. *Alethia*, 5(1): 2-10. <https://doi.org/10.1558/aleth.v5i1.2>
 7. Фэмили Н. (2008). Конструктивистский подход к "легкому глаголу" *xordæn* "есть" в персидском языке. В *From polysemy to semantic change: towards a typology of lexical semantic associations* (с. 139–162). Издательство Джон Бенджаминс.
 8. Филлмор С. Дж., Кэй П., О'Коннор М. К. (1988). Регулярность и идиоматичность в грамматических конструкциях: случай *let alone*. *Language*, 501-538. <https://doi.org/10.2307/414531>
 9. Галлезе В., Лакофф Г. (2005). Концепции мозга: роль сенсорно-моторной системы в концептуальных знаниях. *Cognitive neuropsychology*, 22(3-4), 455-479. <https://doi.org/10.1080/02643290442000310>
 10. Лакофф Г. (1987). Женщины, огонь и опасные вещи: Что категории раскрывают о разуме. Издательство Чикагского университета.
 11. Лакофф Г. (1990). Гипотеза инвариантности: основывается ли абстрактное рассуждение на образных схемах? <https://doi.org/10.1515/cogl.1990.1.1.39>
 12. Лакофф Г. (2014). Картографирование метафорической схемы мозга: метафорическое мышление в повседневном рассуждении. *Frontiers in human neuroscience*, 8: 958. <https://doi.org/10.3389/fnhum.2014.00958>
 13. Лакофф Г, Джонсон М. (1980). Метафоры, которыми мы живем. Издательство Чикагского университета.
 14. Лангакер Р. В. (1987). Основы когнитивной грамматики. Том 1, Теоретические предпосылки. Издательство Стэнфордского университета.
 15. Лангакер Р. В. (1991). Основы когнитивной грамматики. Том 2. Описательное применение. Издательство Стэнфордского университета.
 16. Лангакер Р. В. (2014). Концептуализация, символизация и грамматика. В *The New Psychology of Language* (с. 1–37). Издательство Psychology Press.
 17. Рощ Э. (1999). Возвращение понятий. *Journal of consciousness studies*, 6(11-12): 61-77.
 18. Талми Л. (1991). Путь к реализации: Типология слияния событий. Ежегодная встреча Берклийского лингвистического общества, 17(1), 480–519. <https://doi.org/10.3765/bls.v17i0.1620>
 19. Талми Л. (2000). К познавательной семантике: Системы структурирования концепций. Издательство Массачусетского технологического института.
 20. Тендахл М, Гиббс мл. Р. В. (2008). Дополнительные перспективы на метафору: когнитивная лингвистика и теория релевантности. *Journal of pragmatics*, 40(11): 1823-1864. <https://doi.org/10.1016/j.pragma.2008.02.001>
 21. Верзбицкая А. (1986). Отражает ли язык культуру? Доказательства из австралийского английского. *Language in Society*, 15(3): 349-373.

<http://doi.org/10.1017/S0047404500011805>

22. Златев Й, Янгкланг П. (2004). Третий способ путешествия: место тайского языка в типологии событий движения//Relating Events in Narrative, Volume 2. (с. 159–190). Psychology Press.
23. Златев Й, Бломберг Й, Дэвид К. (2010). Транслокация, язык и категоризация опыта. Пространство в языке и познании: состояние искусства и новые направления, 389–418.
24. Златев Й, Бломберг Й, Девилдер С и др. (2021). Описания событий движения на шведском, французском, тайском и телугу: исследование в рамках пост-Талмийской типологии событий движения. Acta linguistica hafniensia, 53(1): 58-90.
<https://doi.org/10.1080/03740463.2020.1865692>

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Статья представлена на английском языке.

В этой статье рассматривается конкретный аспект синтаксиса: объекты и топология объектов.

Фундаментальная гипотеза исследования сосредоточена на когнитивных процессах, лежащих в основе языковой репрезентации.

В данном исследовании используется многогранный подход, объединяющий как теоретические исследования, так и сравнительные исследования. Такая методологическая интеграция позволяет провести детальное сравнение структур предложений и их семантических ролей в русском, китайском и английском языках, подчеркивая лингвистические и культурные различия между этими языками.

Статья является новаторской, одной из первых в российской филологии, посвященной исследованию подобной тематики в 21 веке. В статье представлена методология исследования, выбор которой вполне адекватен целям и задачам работы. Автор обращается, в том числе, к различным методам для подтверждения выдвинутой гипотезы. В статье используются как общенаучные методы наблюдения и описания, так и общелингвистические методы, а также методы дискурсивного и когнитивного анализа, семиотическая методика. Все теоретические измышления автора подкреплены практическим языковым материалом. Данная работа выполнена профессионально, с соблюдением основных канонов научного исследования. Исследование выполнено в русле современных научных подходов, работа состоит из введения, содержащего постановку проблемы, основной части, традиционно начинающуюся с обзора теоретических источников и научных направлений, исследовательскую и заключительную, в которой представлены выводы, полученные автором. Отметим, что в вводной части слишком скудно представлен обзор разработанности проблематики в науке. Отметим, что заключение требует усиления, оно не отражает в полной мере задачи, поставленные автором и не содержит перспективы дальнейшего исследования в русле заявленной проблематики. Библиография статьи насчитывает 24 источника, среди

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В общем и целом, следует отметить, что статья написана простым, понятным для читателя языком. Опечатки, орфографические и синтаксические ошибки, неточности в тексте работы не обнаружены. Высказанные замечания не являются существенными и не влияют на общее положительное впечатление от рецензируемой работы. Работа является новаторской, представляющей авторское видение решения рассматриваемого вопроса и может иметь логическое продолжение в дальнейших исследованиях. Практическая значимость определяется возможностью использовать представленные наработки в дальнейших тематических исследованиях. Результаты работы могут быть использованы в ходе преподавания на специализированных факультетах. Статья, несомненно, будет полезна широкому кругу лиц, филологам, магистрантам и аспирантам профильных вузов. Статья «Пространственные концепции в синтаксических структурах: Гипотеза топологии-образности» может быть рекомендована к публикации в научном журнале.