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Aspectual Pair Formation in Russian Verbs: A Cognitive Approach

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Keywords	Abstract
Russian Aspect Aspectual Pair Formation Cognitive Linguistics Prefixation and Suppletion	Aspectual pair formation in Russian verbs represents a core grammatical feature that governs the temporal and contextual framing of actions. Traditional approaches to aspect focus on morphological mechanisms such as prefixation, suffixation, and suppletion, yet they often fail to address irregularities and semantic nuances. This study adopts a cognitive linguistic perspective, exploring how conceptual metaphors, image schemas, and mental mappings underpin aspectual distinctions. By analyzing patterns of pair formation, including both regular and irregular verbs, the research highlights the cognitive processes that align with bounded and unbounded conceptualizations of actions. The findings contribute to linguistic theory by integrating semantic and cognitive frameworks, while practical applications offer innovative strategies for teaching aspect to learners through mental imagery and contextualized learning. Challenges and unanswered questions, such as the treatment of suppletive forms and cross-linguistic comparisons, underscore the need for further interdisciplinary research to refine this approach.

Introduction

Aspect, as a grammatical category, plays a pivotal role in Russian linguistics, defining the temporal structure of actions and events in a nuanced manner. Russian verbs are categorized into perfective and imperfective aspects, which allow speakers to articulate distinctions between completed and ongoing actions. This dichotomy, while central to the grammatical system, presents challenges for both native and non-native speakers due to its inherent complexity and context-dependent usage (Janda & Korba, 2008). Aspectual pairs, which represent a key mechanism in this system, are often formed through processes like prefixation, suffixation, and suppletion, providing a systematic yet intricate framework for understanding verb forms.

Traditional approaches to studying Russian aspect focus on morphological and syntactic rules, leaving room for deeper exploration of the cognitive underpinnings that drive these linguistic phenomena. Cognitive linguistics offers a fresh perspective by examining how mental processes and conceptual structures shape the formation and usage of aspectual pairs. For instance, the metaphorical mapping of "bounded" versus "unbounded" actions sheds light on how speakers intuitively differentiate between perfective and imperfective aspects (Dickey, 2024). Moreover, the interplay of Aktionsart, or lexical aspect, with grammatical aspect adds another layer of complexity, influencing acquisition and processing in both first and second language learners (Stoll, 1998; Mikhaylova, 2019).



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This article adopts a cognitive approach to analyze aspectual pair formation in Russian verbs, aiming to uncover the mental frameworks and patterns that underlie this process. Drawing from cognitive linguistic principles such as conceptual blending and image schemas, the study seeks to complement traditional grammatical models and address gaps in existing research. In doing so, it contributes to a growing body of work that integrates cognitive and linguistic insights to provide a holistic understanding of Russian aspect (Janda & Korba, 2008; Gerasymova, Steels, & Van Trijp, 2009).

2. The Role of Aspect in Russian Grammar

Aspect in Russian grammar is a fundamental category that shapes how speakers express the temporal structure of actions and events. It is primarily realized through two forms: **perfective** and **imperfective** aspects. The perfective aspect signifies actions viewed as complete or bounded, while the imperfective aspect represents actions as ongoing, habitual, or unbounded. This dichotomy is not only critical to understanding Russian verbs but also to effectively communicating nuanced temporal and contextual relationships within sentences (Dickey, 2024).

Aspectual pairs form the backbone of this system, with each pair comprising a perfective and an imperfective counterpart. These pairs serve to express a range of temporal and aspectual nuances. For instance:

- **Process:** The imperfective aspect often describes actions in progress (e.g., *писать* – “to write”).
- **Completion:** The perfective aspect highlights the completion of an action (e.g., *написать* – “to write to completion”).
- **Repetition or Habitual Actions:** The imperfective aspect frequently denotes actions that are repetitive or habitual in nature (e.g., *читал* – “used to read”).

This system allows speakers to communicate both the nature of the action and its temporal framework. For example, the sentence *Он написал письмо* ("He wrote a letter") uses the perfective form to indicate a completed action, while *Он писал письмо* ("He was writing a letter") employs the imperfective form to focus on the process.

Despite its systematic nature, aspectual distinctions in Russian present significant challenges for learners and linguists alike. The difficulty arises from the interplay of semantics and context, which often governs the choice of aspectual forms. For non-native learners, understanding when to use perfective versus imperfective forms can be particularly daunting, as it requires a deep comprehension of subtle contextual cues and mental imagery (Stoll, 1998; Janda & Korba, 2008). Additionally, irregularities in aspectual pair formation, such as suppletion (*идти/пойти* – “to go”), further complicate the learning process.

For linguists, the complexity lies in the theoretical modeling of aspect, especially in explaining exceptions and the cognitive mechanisms behind pair formation. As Gerasymova, Steels, and Van Trijp (2009) argue, the reliance on both morphological rules and semantic interpretations necessitates a broader, interdisciplinary approach to fully capture the intricacies of Russian aspect.

Understanding the role of aspect in Russian grammar, therefore, is not merely a question of memorizing rules but requires engaging with the deeper cognitive and contextual factors that shape its



usage. This underscores the need for frameworks, such as cognitive linguistics, to address these challenges and provide more accessible pathways for both linguistic analysis and language learning.

3. Traditional Explanations of Aspectual Pair Formation

Aspectual pair formation in Russian has traditionally been studied through morphological and syntactic approaches, which categorize the mechanisms into three main processes: prefixation, suffixation, and suppletion. These processes provide a structured framework for understanding how perfective and imperfective verb forms are systematically related, yet they also present challenges in explaining exceptions and irregularities.

Prefixation

One of the most common methods of forming perfective verbs from imperfective ones is **prefixation**, where a prefix is added to the base form of the verb. For example:

- *писать* (to write, imperfective) → *написать* (to write to completion, perfective)
- *говорить* (to speak, imperfective) → *сказать* (to say, perfective)

In these cases, the prefix often introduces the concept of boundedness or completion, aligning with the semantic shift from imperfective to perfective aspect. However, prefixes are not always straightforward. Some prefixes carry additional meanings that modify the verb's semantics, such as directional movement (*входить* – "to enter" vs. *войти* – "to have entered") or iterative actions (*записывать* – "to record repeatedly" vs. *записать* – "to record once"). This semantic layering can complicate the learner's understanding of prefixation as a rule-bound process (Janda & Korba, 2008).

Suffixation

Suffixation is another method, though it is less common than prefixation. In these cases, a suffix is added to form an imperfective verb from its perfective counterpart. For instance:

- *увидеть* (to see, perfective) → *видеть* (to see, imperfective)
- *обучить* (to teach, perfective) → *обучать* (to teach, imperfective)

Suffixation often signifies a shift from a specific, completed action to a general, ongoing, or habitual action. While this method is relatively systematic, it occurs with far fewer verbs compared to prefixation, limiting its applicability as a universal rule (Samedova-Hajiyeva, 2020).

Suppletion

The third method, **suppletion**, involves the use of entirely different roots for the imperfective and perfective forms of a verb. Examples include:

- *идти* (to go, imperfective) → *пойти* (to go, perfective)
- *брать* (to take, imperfective) → *взять* (to take, perfective)

Suppletion represents a significant challenge for learners and linguists because it deviates from the predictable morphological patterns found in prefixation and suffixation. These pairs often reflect historical



developments in the Russian language and lack a clear cognitive or morphological explanation (Dickey, 2024).

Strengths and Limitations

Traditional approaches to aspectual pair formation excel in providing a broad, systematic description of morphological patterns. Prefixation and suffixation, in particular, offer clear models for understanding the majority of aspectual pairs. These methods are effective in teaching and describing the standard behavior of verbs in Russian.

However, the limitations of these approaches become evident when addressing exceptions and irregularities. Suppletive pairs, for example, defy morphological logic and require historical or lexical explanations. Additionally, traditional frameworks often fail to account for how speakers intuitively process and produce aspectual pairs in real-time. This gap highlights the need for more interdisciplinary perspectives, such as cognitive linguistics, to explore the mental and conceptual mechanisms underlying these processes (Gerasymova, Steels, & Van Trijp, 2009).

In summary, while prefixation, suffixation, and suppletion provide a foundation for understanding aspectual pair formation, their limitations in explaining semantic and cognitive subtleties call for complementary approaches that integrate both traditional and modern linguistic insights.

4. Cognitive Linguistics: A New Perspective

Cognitive linguistics offers a groundbreaking perspective on the study of aspectual pair formation in Russian verbs by focusing on how conceptual structures and mental processes influence language. Unlike traditional approaches that emphasize morphological and syntactic rules, cognitive linguistics explores the interplay of meaning, perception, and mental organization in the formation and use of aspectual pairs. Three key principles—mental mapping, conceptual blending, and image schemas—form the foundation of this framework.

Mental Mapping

Mental mapping refers to the way speakers conceptualize events in terms of spatial and temporal dimensions. In the context of Russian aspect, this principle helps explain how verbs are cognitively categorized into perfective (bounded) and imperfective (unbounded) forms. For example:

- A perfective verb like *написать* (“to write to completion”) is conceptualized as a “bounded event” with a clear endpoint.
- An imperfective verb like *писать* (“to write”) is seen as an “unbounded process” without a defined completion.

This metaphor of boundedness versus unboundedness reflects how speakers mentally map events to linguistic forms. The prefixation of *на-* in *написать* reinforces the idea of reaching a goal or endpoint, while the base form *писать* leaves the event open-ended. These mental mappings allow speakers to intuitively choose aspectual forms based on their intended meaning (Dickey, 2024).

Conceptual Blending



Conceptual blending involves the integration of multiple mental spaces to create new meaning. In Russian aspectual pair formation, blending occurs when speakers combine the lexical meaning of a verb with aspectual markers (prefixes, suffixes, or suppletive roots) to form a cohesive concept. For instance:

- *Брать* (to take, imperfective) and *взять* (to take, perfective) involve a blend of the root action ("to take") with temporal markers indicating whether the action is ongoing or completed.

The choice of aspectual form is influenced by contextual factors and the speaker's intention, such as emphasizing the duration (*брать деньги из банка* – “to be taking money from the bank”) or the result (*взять деньги из банка* – “to have taken money from the bank”). Conceptual blending accounts for the fluidity and flexibility with which speakers navigate these distinctions (Gerasymova, Steels, & Van Trijp, 2009).

Image Schemas

Image schemas are recurring patterns of bodily experience that shape our understanding of abstract concepts. These schemas play a vital role in how aspectual pairs are formed and interpreted. For instance:

- The **CONTAINER** schema can be used to explain the perfective aspect, where an action is conceptualized as "filling" or "completing" a container.
- The **PATH** schema underpins the imperfective aspect, where an action is seen as a continuous journey along a path without a clear endpoint.

An example of these schemas can be observed in the verb pair *читать* (to read, imperfective) and *прочитать* (to read through, perfective). The prefix *про-* evokes the sense of traversing a path to completion, aligning with the boundedness of the perfective aspect. These image schemas highlight the embodied and experiential nature of linguistic meaning (Janda & Korba, 2008).

Integration of Semantics and Mental Processing

Cognitive linguistics bridges the gap between semantics and grammar by emphasizing the role of mental processing in linguistic behavior. Rather than viewing aspectual markers as arbitrary morphological elements, cognitive linguistics frames them as tools that speakers use to convey specific conceptualizations of events. This perspective not only explains the regularities in aspectual pair formation but also accounts for irregularities and exceptions, such as suppletive pairs (*иду/ноюму* – "to go"), which are shaped by unique historical and cognitive factors.

Furthermore, cognitive linguistics integrates insights from psycholinguistics and neurolinguistics, exploring how aspect is processed in real-time language use. Studies suggest that speakers draw on mental simulations of events when choosing aspectual forms, engaging in a dynamic interplay of memory, perception, and context (Mikhaylova, 2019). This holistic approach provides a deeper understanding of how aspect functions not just as a grammatical category but as a reflection of human cognition.

In conclusion, cognitive linguistics redefines the study of Russian aspectual pairs by focusing on the mental and conceptual frameworks that underlie their formation. By integrating principles like mental mapping, conceptual blending, and image schemas, this approach offers a nuanced understanding of how speakers conceptualize and communicate temporal relationships. It complements traditional methods,



addressing their limitations and providing a more comprehensive view of the cognitive processes driving aspectual distinctions.

5. Patterns and Mechanisms in Aspectual Pair Formation

The formation of aspectual pairs in Russian verbs is governed by various morphological mechanisms, including prefixation, suffixation, and suppletion. When analyzed through a cognitive lens, these processes reveal underlying conceptual shifts that speakers use to frame actions as bounded or unbounded, completed or ongoing. This perspective not only explains regular patterns but also provides insights into the irregularities that challenge traditional grammatical models.

Prefixation

Prefixation is the most common method of forming perfective verbs from imperfective stems in Russian. The addition of a prefix not only alters the aspect but often introduces semantic nuances that affect the conceptualization of the action. For instance:

- *писать* (to write, imperfective) → *написать* (to write to completion, perfective)
- *делать* (to do, imperfective) → *сделать* (to complete, perfective)

From a cognitive perspective, prefixation involves a shift in mental framing. The base verb (*писать*, *делать*) represents an unbounded process, conceptualized as ongoing or habitual. Adding a prefix (*на-*, *с-*) creates a sense of boundedness, signaling that the action reaches a defined endpoint. This reflects the **CONTAINER schema**, where the perfective action is perceived as filling or completing a metaphorical container (Dickey, 2024).

Moreover, prefixes often carry additional meanings beyond aspect, such as spatial or iterative connotations:

- *входить* (to enter, imperfective) → *войти* (to have entered, perfective)
- *читать* (to read, imperfective) → *перечитать* (to reread, perfective)

These semantic overlays demonstrate how prefixation not only marks aspect but also encodes the speaker's perspective on the nature of the action, blending temporal and spatial cognition (Gerasymova, Steels, & Van Trijp, 2009).

Suffixation and Stem Alternation

Suffixation is less common than prefixation but plays a significant role in forming imperfective verbs from perfective stems. For example:

- *увидеть* (to see, perfective) → *видеть* (to see, imperfective)
- *обучить* (to teach, perfective) → *обучать* (to teach, imperfective)

In cognitive terms, suffixation shifts the focus from the completion of an action to its process or repetition. The addition of suffixes like *-ать* or *-ывать* allows speakers to reframe the action as an ongoing or habitual event. This aligns with the **PATH schema**, where the imperfective aspect is conceptualized as a journey without a defined endpoint.



Stem alternation also contributes to aspectual differentiation, particularly in irregular verbs. For example:

- *брать* (to take, imperfective) → *взять* (to take, perfective)
- *есть* (to eat, imperfective) → *съесть* (to eat completely, perfective)

Here, changes in the verb root reflect shifts in conceptualization, often emphasizing completion or specificity in the perfective form. These alternations, though less systematic, highlight the interplay of historical development and cognitive processing in aspectual pair formation (Samedova-Hajiyeva, 2020).

Suppletion

Suppletion, where entirely different roots are used for the imperfective and perfective forms, represents a notable irregularity in aspectual pair formation. Examples include:

- *идти* (to go, imperfective) → *пойти* (to go, perfective)
- *сказать* (to say, perfective) → *говорить* (to speak, imperfective)

From a cognitive standpoint, suppletion challenges the predictable patterns of prefixation and suffixation but still reflects conceptual distinctions. For instance, in the pair *идти/пойти*, the perfective form *пойти* embodies a shift toward goal orientation, marking the initiation of movement as a bounded event. Such irregularities suggest that speakers rely on mental templates or lexicalized patterns to process these pairs, blending historical irregularities with real-time cognitive framing (Janda & Korba, 2008).

Cognitive Mechanisms Explaining Regularities and Exceptions

While prefixation and suffixation largely follow predictable patterns, exceptions such as suppletion highlight the complexity of aspectual pair formation. Cognitive linguistics provides a framework for understanding both regularities and irregularities:

- **Regularities:** Regular patterns align with cognitive schemas like CONTAINER (bounded events) and PATH (unbounded processes), offering intuitive ways for speakers to frame actions.
- **Exceptions:** Irregular forms, such as suppletive pairs, reflect the influence of historical linguistic evolution and require speakers to rely on memory and associative learning to process them effectively (Divjak, Testini, & Milin, 2024).

In summary, the patterns and mechanisms of aspectual pair formation in Russian verbs reveal the intricate interplay between morphology and cognition. Prefixation and suffixation align with conceptual schemas, while suppletion underscores the role of historical and lexical factors. By adopting a cognitive lens, we gain a deeper understanding of how these processes enable speakers to navigate the complexities of aspect in Russian.

6. Practical Applications of the Cognitive Approach

The cognitive approach to aspectual pair formation offers valuable insights not only for linguistic theory but also for practical applications, particularly in language teaching. By framing Russian aspect through conceptual metaphors, image schemas, and mental mappings, this approach bridges the gap between



abstract grammatical structures and intuitive understanding. Below, we explore its contributions to both linguistic theory and language education, supplemented with concrete examples.

Linguistic Theory

Cognitive linguistics enhances our understanding of Russian grammar by offering a unified framework for analyzing aspect as a mental construct rather than a mere morphological feature. This approach explains both regular and irregular patterns in aspectual pair formation, revealing the conceptual and semantic underpinnings of grammatical structures.

1. Conceptual Metaphors and Mental Mappings

- The **CONTAINER schema** explains how perfective verbs like *написать* (to write to completion) are conceptualized as bounded actions with a clear endpoint, while imperfective verbs like *писать* (to write) are seen as unbounded processes.
- Similarly, the **PATH schema** accounts for verbs like *идти* (to go, imperfective), which depicts an ongoing journey, and *пойти* (to begin going, perfective), which emphasizes the initiation of movement.

2. Explaining Regularities and Exceptions

- Regular forms (e.g., *читать/прочитать*, *делать/сделать*) align with systematic cognitive patterns, where prefixes signal boundedness and completion.
- Suppletive pairs (e.g., *есть/съесть*, *брать/взять*) defy traditional morphological rules but can still be explained as lexicalized mental models formed through associative learning (Divjak, Testini, & Milin, 2024).

3. Semantic Nuances in Aspect

- The cognitive approach reveals how prefixes alter not only the aspect but also the verb's semantic scope. For instance:
 - *бежать* (to run, imperfective) → *прибежать* (to run to a specific destination, perfective).
 - *работать* (to work, imperfective) → *поработать* (to work for a while, perfective, with emphasis on temporality).

By integrating cognitive principles, this framework allows linguists to analyze aspect as a dynamic system that reflects human conceptualization of time and action.

Language Teaching

Traditional methods of teaching Russian aspect often rely on memorizing rules and patterns, which can be overwhelming for learners. A cognitive framework offers an alternative approach by emphasizing understanding through mental imagery, conceptual metaphors, and meaningful contexts. This method makes the complex system of Russian aspect more intuitive and accessible.

1. Teaching Aspect Through Conceptual Metaphors



- Teachers can introduce the **bounded/unbounded** metaphor to explain the difference between perfective and imperfective verbs. For example:
 - Imperfective: *Он писал письмо.* ("He was writing a letter.") – Unbounded process.
 - Perfective: *Он написал письмо.* ("He wrote the letter.") – Bounded, completed action.
- Students can visualize actions as journeys along a path (imperfective) or as reaching a specific destination (perfective). This imagery helps learners internalize aspectual distinctions.

2. Using Image Schemas in Instruction

- **CONTAINER schema:** Teachers can illustrate the idea of "completing the container" for perfective actions:
 - *читать/прочитать* (to read/to read completely).
- **PATH schema:** For imperfective actions, students can imagine being "on the path":
 - *ходить* (to walk, imperfective) vs. *пойти* (to begin walking, perfective).

3. Interactive Exercises with Prefixes and Suffixes

- Students can practice matching prefixes to base verbs, focusing on how the prefix modifies both the aspect and the meaning. For example:
 - *писать/написать* (to write/to complete writing).
 - *смотреть/посмотреть* (to watch/to take a look).
 - *говорить/заговорить* (to speak/to begin speaking).
- Teachers can emphasize semantic shifts, such as directional prefixes (*входить/войти* – "to enter") or iterative prefixes (*перечитать* – "to reread").

4. Highlighting Suppletive Patterns with Contextual Clues

- Suppletive pairs like *идти/пойти* (to go), *брать/взять* (to take), and *есть/съесть* (to eat) can be taught through contextual examples that emphasize cognitive shifts. For example:
 - *Я ем яблоко.* ("I am eating an apple.") – Ongoing process, imperfective.
 - *Я съел яблоко.* ("I ate the apple.") – Completed action, perfective.

5. Practical Contexts and Scenarios

- Role-playing and storytelling exercises can help learners apply aspect in meaningful contexts. For instance:



- Describing a daily routine using imperfective verbs: *Я читаю книги каждый день.* ("I read books every day.")
- Narrating a completed event with perfective verbs: *Вчера я прочитал книгу.* ("Yesterday I finished reading a book.")

6. Addressing Learners' Challenges

- Teachers can focus on common pitfalls, such as overusing perfective forms or misapplying prefixes. Using cognitive tools like mental maps and visual timelines can clarify these distinctions.

The cognitive approach to aspectual pair formation offers transformative possibilities for both linguistic theory and language teaching. By framing aspect through conceptual metaphors, image schemas, and mental mappings, this method deepens our theoretical understanding of Russian grammar while providing practical tools to make aspect more accessible to learners. Whether through visualizations, contextualized examples, or interactive exercises, this approach empowers learners to internalize the complexities of Russian aspect in an intuitive and meaningful way.

7. Challenges and Unanswered Questions

While the cognitive approach offers a fresh perspective on aspectual pair formation in Russian verbs, it is not without its limitations. The complexities of Russian aspect, coupled with historical, semantic, and morphological variations, pose challenges for applying cognitive principles universally. This section examines some of the primary challenges and identifies areas where further research could expand the cognitive framework.

Challenges of the Cognitive Approach

1. Irregular Verbs and Suppletive Forms

- Cognitive linguistics struggles to provide comprehensive explanations for highly irregular verbs and suppletive pairs that lack systematic morphological patterns. For instance:
 - *иду* (to go, imperfective) → *пошёл* (to go, perfective)
 - *ест* (to eat, imperfective) → *съест* (to eat completely, perfective)
- These forms often reflect historical developments rather than cognitive schemas, making it difficult to fit them neatly into conceptual frameworks such as the **PATH schema** or **CONTAINER schema**. While speakers may process these verbs through lexicalized patterns and associative learning, their irregularity challenges the predictive power of cognitive models (Divjak, Testini, & Milin, 2024).

2. Archaic Forms and Obsolete Constructions

- Archaic or less commonly used aspectual pairs, such as *рекать/речь* (to say/speak), do not conform to modern cognitive or morphological patterns. These forms are often preserved for stylistic or poetic purposes and may rely on historical semantics rather than current cognitive mappings.



- Understanding how these forms were conceptualized historically requires a diachronic approach that combines cognitive linguistics with historical linguistics.

3. Semantic Overlaps and Context Dependence

- Verbs with multiple meanings or overlapping aspects create ambiguity in applying cognitive principles. For example:
 - *Играть/сыграть* can mean "to play" in the sense of performing a role or playing a game, with the aspectual pair signaling completion or ongoing action depending on the context.
- The reliance on context makes it difficult to develop generalizable rules or schemas for certain verbs, limiting the cognitive approach's applicability to highly nuanced usage scenarios.

Unanswered Questions and Areas for Further Research

1. Comparative Studies with Other Slavic Languages

- Russian is not the only Slavic language with a complex aspectual system. Comparative studies with languages like Polish, Czech, or Bulgarian could reveal cross-linguistic patterns and differences in how aspectual pairs are formed and conceptualized. For example:
 - How do prefixation patterns in Polish compare to those in Russian?
 - Are there shared cognitive mechanisms across Slavic languages, or do they reflect distinct cultural or linguistic influences?
- Such studies could refine cognitive models by identifying universal principles and language-specific variations (Kwapiszewski, 2022).

2. Psycholinguistic Experiments

- While cognitive linguistics provides theoretical insights, experimental studies are needed to validate these principles. Key research questions include:
 - How do native speakers process aspectual distinctions in real-time?
 - What role do conceptual metaphors and mental schemas play in verb selection?
 - Are perfective and imperfective verbs stored and retrieved differently in the mental lexicon?
- Psycholinguistic methods, such as reaction time tasks or eye-tracking, could offer empirical evidence for the cognitive processes underlying aspectual pair formation.

3. Cognitive Development and Acquisition



- More research is needed on how children acquire aspectual pairs in their first language and how adults learn them as a second or heritage language. Studies like Mikhaylova (2019) suggest that cognitive principles may influence acquisition, but the precise mechanisms remain unclear. For example:
 - Do learners develop an intuitive understanding of the **bounded/unbounded** metaphor early on?
 - How do teaching methods that emphasize cognitive schemas impact language acquisition outcomes?

4. Interaction Between Lexical and Grammatical Aspect

- The interplay between Aktionsart (lexical aspect) and grammatical aspect remains an area of debate. For instance:
 - How do cognitive principles account for verbs whose lexical meaning inherently implies boundedness or unboundedness (e.g., *спать* – "to sleep" vs. *проснуться* – "to wake up")?
 - Can a cognitive framework explain how lexical and grammatical aspects are processed together during language production and comprehension (Stoll, 1998)?

5. The Role of Cultural and Contextual Factors

- Cultural and contextual influences on how speakers conceptualize time and action could further expand the cognitive framework. For instance:
 - Do cultural differences in time perception affect how aspect is used in narrative discourse?
 - How do speakers of other aspect-heavy languages, like Turkish, conceptualize Russian aspect when learning it as a second language (Antonova-Ünlü & Wei, 2016)?

The cognitive approach to aspectual pair formation has advanced our understanding of Russian aspect by highlighting the conceptual and mental processes involved. However, its limitations in addressing irregular forms, contextual nuances, and cross-linguistic variability underscore the need for further research. By exploring comparative studies, psycholinguistic experiments, and the interaction of lexical and grammatical aspect, scholars can refine cognitive models and broaden their applicability. These efforts will not only enhance theoretical frameworks but also provide practical tools for teaching and learning Russian aspect.

8. Conclusion

The study of aspectual pair formation in Russian verbs through a cognitive lens offers significant insights into the interplay of grammar, semantics, and mental processing. By framing aspect as a conceptual distinction between bounded and unbounded events, cognitive linguistics provides a deeper understanding of how speakers mentally organize and express temporal relationships. Key mechanisms, such as



prefixation, suffixation, and suppletion, reveal patterns that align with mental schemas like the **CONTAINER** and **PATH**, enabling a nuanced analysis of regularities and exceptions.

While the cognitive approach excels in explaining systematic formations and offering innovative perspectives for linguistic theory and language teaching, it also encounters limitations. Irregular forms, such as suppletive verbs, and the influence of historical developments challenge its universal applicability. Furthermore, contextual dependencies and semantic overlaps highlight the complexity of Russian aspect, necessitating further interdisciplinary research.

Practical applications of this approach, particularly in language teaching, demonstrate its potential to make the intricacies of Russian aspect more accessible. By emphasizing conceptual metaphors, mental imagery, and contextualized learning, educators can move beyond rote memorization, fostering intuitive comprehension among learners.

Ultimately, the cognitive approach complements traditional grammatical frameworks, addressing gaps in theoretical modeling and pedagogical practice. However, unanswered questions, such as the processing of aspect in real-time language use, cross-linguistic comparisons, and the interplay of lexical and grammatical aspect, underscore the need for continued exploration. By bridging cognitive linguistics with empirical research and practical application, this framework paves the way for a more holistic understanding of Russian aspect and its broader implications for linguistic theory and education.

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