



# COGNITIVE–FUNCTIONAL INTERFACE IN MULTILINGUAL SPEAKERS: REASSESSING THE ROLE OF CONSTRUCTIONAL SCHEMAS IN CROSS- LINGUISTIC TRANSFER

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**Abstract.** *This paper investigates how multilingual speakers activate and restructure constructional schemas during cross-linguistic transfer, offering a cognitive–functional account of how syntactic and semantic patterns migrate across languages. Building on Construction Grammar (CxG) and usage-based approaches, the study argues that transfer is not merely the replication of surface structures but a dynamic process shaped by cognitive salience, entrenchment, and discourse-functional pressures. Drawing on cross-linguistic data from Uzbek–English–Russian trilinguals, the paper demonstrates that multilinguals rely on abstract constructions—argument-structure frames, conceptual metaphors, and information-packaging schemas—rather than lexical items alone. The findings provide new insights into the architecture of multilingual grammars and the gradient nature of constructions in the mind.*

**Keywords:** *Construction Grammar; Cross-linguistic transfer; Multilingual cognition; Usage-based linguistics; Argument-structure constructions; Conceptual metaphors; Information-packaging schemas; Cognitive salience; Entrenchment; Uzbek–English–Russian multilinguals; Constructional alignment; Cognitive–functional linguistics.*

## 1. Introduction

Multilingualism has long been a central topic in applied linguistics, psycholinguistics, and theoretical syntax, but the mechanisms underlying cross-linguistic influence remain contested. Traditional accounts often attribute transfer to structural similarity or markedness hierarchies. More recent usage-based approaches, however, view transfer as an emergent property of language processing shaped by frequency, cognitive load, and discourse demands.

This paper situates multilingual transfer within the broader cognitive–functional paradigm, arguing that the key unit of analysis is the **construction**—a form–meaning pairing that exists at multiple levels of abstraction. Rather than treating transfer as a unidirectional mapping from source language to target language, I propose that multilingual speakers engage in **constructional alignment**, in which they activate mental schemas that best satisfy communicative needs regardless of their language of origin.





The goal of this study is threefold:

1. To describe the types of constructional schemas that are most susceptible to cross-linguistic transfer.
2. To identify how cognitive factors such as salience, entrenchment, and analogical reasoning shape transfer patterns.
3. To provide empirical evidence from multilingual speakers whose first languages differ typologically, thereby expanding the theoretical scope of current models.

## 2. Theoretical Background

### 2.1. Construction Grammar and its multidimensional representation

Construction Grammar posits that linguistic knowledge consists of a network of constructions, ranging from fully idiosyncratic lexical items to abstract argument-structure patterns (Goldberg 2006). In multilingual contexts, these networks interact dynamically, allowing speakers to activate cross-linguistic analogues of constructions even when formal similarities are minimal.

The representation of constructions is multidimensional, including:

- **Formal properties:** linear order, morphological marking, and prosodic contours
- **Semantic properties:** event structure, participant roles, scalar implicatures
- **Discourse-pragmatic properties:** information structure, topicality, focus alignment

This multidimensionality makes constructions highly transferable because multilinguals may recognize partial overlaps even if no single dimension fully matches.

### 2.2. Usage-based models and entrenchment

Usage-based models emphasize that linguistic structures become entrenched through repeated exposure. Entrenched constructions gain cognitive salience, making them more likely to be activated during real-time processing. For multilinguals, entrenchment interacts with language dominance, recency of use, and contextual activation.

Cross-linguistic transfer often reflects **analogical mapping**, where learners align new linguistic material with entrenched patterns from other languages. This perspective explains why transfer sometimes occurs counter to typological predictions.

### 2.3. Cognitive–functional motivations for transfer

Transfer is not purely structural. It is modulated by:

- **Conceptual accessibility:** how easily a concept can be activated
- **Processing economy:** preference for cognitively effortless constructions
- **Communicative efficiency:** optimizing information flow

Thus, multilingual speakers often choose constructions that align with their conceptual preferences—even if those constructions originate in a non-target language.





### 3. Methodology

#### 3.1. Participants

The study investigates 28 Uzbek–English–Russian multilinguals (aged 19–27) enrolled in an international university. Uzbek is their L1, Russian their L2, and English their academic L3. All participants reported active use of all three languages.

#### 3.2. Data collection

The data were collected through:

1. **Narrative retelling tasks** (Pear Story and Silent Book Picture Task)
2. **Open-ended interviews** to elicit spontaneous discourse
3. **Acceptability judgement tasks** involving constructed sentences in English

The tasks were designed to elicit constructions related to argument structure, metaphoric extension, and information-packaging strategies.

#### 3.3. Analytical framework

All elicited production was coded for:

- Construction type (argument-structure, discourse-pragmatic, metaphoric)
- Degree of transfer (none, partial, full)
- Source language of transfer (Uzbek or Russian)
- Cognitive salience factors (frequency, accessibility, context)

### 4. Results

#### 4.1. Argument-structure transfer

Participants frequently transferred **cause–motion** and **resultative** constructions from Uzbek and Russian into English. While English does possess these patterns, the transferred versions often displayed atypical combinations of manner and result.

Example:

*“She pushed the door open strongly.”*

This over-marking of manner reflects Uzbek and Russian schemas where adverbial modification is obligatory to highlight agent involvement.

#### 4.2. Metaphoric constructional transfer

Multilinguals showed strong preference for Uzbek-derived conceptual metaphors in L3 English, particularly those involving spatialization of time and emotion.

Example:

*“My time went far from me.”* (Uzbek metaphor: *vaqt mendan uzoqlashdi*)

Though nonstandard in English, this reflects a consistent mapping pattern across tasks.

Russian-derived metaphors also appeared, especially aspectual metaphors tied to completion or incompleteness. For instance:

*“I didn’t finish to understand it.”*

This reflects Russian’s imperfective/perfective contrast and its effect on cognitive segmentation of events.





#### 4.3. Information-packaging schemas

Participants frequently transferred discourse-pragmatic constructions such as left-dislocation and topic-fronting:

*“This story, I don’t understand completely.”*

This pattern mirrors Uzbek topic-first structuring and Russian contrastive topicalization.

Interestingly, these constructions appeared even in highly proficient speakers, suggesting deep entrenchment of discourse schemas independent of syntactic proficiency.

#### 4.4. Gradient nature of transfer

Transfer was rarely categorical. Most examples exhibited partial alignment, where the **form** of one language combined with the **semantic** or **pragmatic** properties of another. This supports the argument that multilingual grammars are hybrid networks with overlapping constructional nodes.

### 5. Discussion

#### 5.1. Constructional alignment as the engine of transfer

The findings demonstrate that multilingual transfer is best described as **alignment of mental schemas**, not copying of surface forms. Constructions function as cognitive attractors: when multilinguals speak, they gravitate toward patterns that best satisfy communicative and conceptual needs, even when these patterns are drawn from other languages.

#### 5.2. Cognitive salience and entrenchment outweigh typology

Typological distance alone cannot predict transfer. Uzbek and English differ typologically, yet speaker data showed strong Uzbek-to-English transfer in discourse-pragmatic constructions. The determining factor is **entrenchment**, not structural similarity.

#### 5.3. Multilingual grammars as interconnected networks

The presence of hybrid constructions suggests that multilingual speakers maintain a **single, interconnected cognitive grammar**, rather than separate grammatical systems for each language. Transfer emerges when activation spreads across shared conceptual pathways.


This view aligns with dynamic systems theory: grammatical patterns are fluid, constantly adapting to communicative demands.

#### 5.4. Implications for linguistic theory and pedagogy

- **Theoretical:** Construction-based models more accurately reflect multilingual cognition than modular generative accounts.
- **Pedagogical:** Instruction should target high-salience constructions prone to transfer, not only error types.
- **Empirical:** Future work should examine neurocognitive correlates of constructional alignment using EEG or fMRI.

### 6. Conclusion

This study demonstrates that cross-linguistic transfer among multilinguals is driven by cognitive-functional factors and mediated through abstract constructional schemas. Rather



than viewing transfer as structural interference, the findings support a model in which multilingual speakers draw on a unified, dynamic grammar that integrates experience from all their languages.

The evidence from Uzbek–English–Russian speakers highlights the need for linguistic theories that account for gradient, hybrid constructions and the cognitive motivations behind them. The constructional approach provides a powerful framework for understanding how multilinguals navigate complex linguistic environments and how grammars evolve through use.

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