

A Contrastive Analysis of Chinese-Uyghur Spatial Relation Constructions from a Typological Perspective

Li Yong

Editorial Office of "Language and Translation", Journal Press of Xinjiang Normal University, Urumqi, Xinjiang, China

Abstract: *Based on the theories of linguistic typology and cognitive linguistics, this paper compares the typological differences between Chinese and Uyghur in the expression of spatial relations. Using Talmy's lexicalization patterns and the Figure-Ground Theory as analytical tools, it examines the encoding mechanisms and syntactic strategies of the two languages from the dimensions of static location and dynamic motion. In terms of static location, Chinese flexibly adjusts the salience order of "Figure-Ground" through word order, while Uyghur highlights the spatial relation itself via morphological encapsulation. In dynamic motion, Chinese presents sequentially scanned paths through "linear serial clauses," whereas Uyghur achieves the overall packaging of paths with "case marker chains + core verbs," resulting in a compact structure. The study finds that these differences stem from the opposition in grammatical types: Chinese constructs spatial semantics through modular lexical combinations, while Uyghur encapsulates spatial information via morphological markers. Such differences not only affect the representation of physical space but also map onto the domain of abstract cognition. This research provides theoretical and practical references for Chinese-Uyghur contrastive studies, bilingual teaching, and cross-cultural communication.*

Keywords: *Chinese; Uyghur; Spatial Relations; Constructions*

1. Introduction

Spatial relations are concepts formed by humans through perception and cognitive processing, encoded and expressed via linguistic structures. A construction consists of a syntactic structure that matches a semantic structure, where its components are connected to the semantic structure through symbolic links—these links constitute the core of grammatical meaning.^[1] Based on these spatial relations, a construction is defined as a linguistic form that expresses the mutual positional relations between two or more entities in space, i.e., a form-meaning correspondence or symbolic structure representing spatial relations between two or more entities. Spatial relation constructions open up a new perspective for understanding spatial relations.^[2]

Chinese and Uyghur differ in grammatical types. A systematic comparison of their spatial relation constructions helps reveal the diversity of encoding strategies and provides empirical cases for linguistic typology and cross-cultural communication. This study is based on Talmy's (2000) Motion Event Framing Theory, which classifies languages into satellite-framed languages (e.g., Chinese, where path is encoded in satellite elements) and verb-framed languages (e.g., Uyghur, where path is integrated into verbs or affixes) according to the encoding method of path information. This dichotomy provides a core perspective for examining the differences between Chinese and Uyghur spatial relation constructions.

Existing studies have revealed the satellite-framed characteristics of Chinese (relying on prepositions + localizers) and the grammaticalized encapsulation features of Uyghur (via case affixes and postpositions). However, most research focuses on a single language or fragmented comparisons, lacking a systematic typological interpretation of Chinese-Uyghur locative, motion, and metaphorical relations under a unified cognitive construction framework. This paper aims to explore the systematic differences between Chinese and Uyghur spatial relation constructions in terms of location, motion, and metaphor, so as to verify their typological opposition (satellite-framed vs. verb-framed) and differences in cognitive packaging mechanisms.

Following the path of "phenomenon description → systematic comparison → cognitive interpretation," this study, under the guidance of Talmy's theory, analyzes three types of spatial relation

constructions in Chinese and Uyghur to understand the interaction between language types, cognitive patterns, and encoding strategies.

2. Contrastive Analysis of Chinese-Uyghur Spatial Location Constructions

Spatial location constructions are fundamental linguistic means for representing static positional relations between objects. To achieve this identical cognitive function, Chinese and Uyghur employ distinct grammatical resources endowed by their typological features: the former relies on analytic lexical combinations, while the latter depends on synthetic morphological encapsulation.

2.1. Chinese: Analytic Combinations Dominated by Lexicons

As a typical analytic language, Chinese lacks rich morphological changes. Its expression of spatial location highly depends on the linear combination of function words (prepositions, localizers) and content words (locative nouns) in a specific word order. Its core construction can be summarized as:

【Preposition + Noun (Reference Object/Ground) + Localizer】

In this construction, the three lexical components perform distinct functions to jointly "construct" a complete spatial scenario:

Prepositions (e.g., [at/in], [to], [from]) introduce general spatial relations (e.g., static existence, dynamic endpoint, path origin).

Nouns serve as the cognitive Ground or reference object, providing a reference point for spatial positioning.

Localizers (e.g., [on], [under], [inside], [outside], [in front of], [behind]) bear the core locative semantics, specifying the exact spatial topological relation between the Target (Figure) and the Reference Object.^[3]

Example (1): When Ji Changming and Chen Hai arrived at Building 2 of the Compound, they saw that the lights inside the building were brightly lit, and staff members were coming and going as if it were a normal workday.

Example (2): I set up a table under a beautiful tree behind the house and picked some of the freshest strawberries, for I knew you liked them.

In Example (1), (building) is the Reference Object (Ground). The localizer (inside) independently bears the spatial semantic meaning of "inclusiveness," clearly indicating that the Figure ([lights]) is located in the internal space of the Ground. The preposition (at) is omitted here, but the construction itself implies the semantics of static existence. In Example (2), the preposition (at) appears explicitly to introduce the static positional relation. (house) serves as the Reference Object, and the localizer (behind) specifies the "adjacency" spatial relation between the Figure ([tree]) and the Reference Object.

The cognitive effect of this analytic combination is sequential scanning: the speaker needs to sequentially activate three conceptual modules—"positional relation → reference object → specific location"—and linearly combine them in syntax. Its advantage lies in transparent structure and clear logic, but its expression strictly relies on fixed word order and the coordination of function words.

2.2. Uyghur: Grammaticalized Encapsulation Dominated by Morphology

In sharp contrast to Chinese's "construction" model, Uyghur, as an agglutinative synthetic language, exhibits a high degree of morphologicalization and encapsulation in spatial location expression. It packages the core grammatical meaning of spatial relations into specific, non-independent affixes (mainly case affixes) and directly attaches them to the stem of the noun (Reference Object).^[4] Its core construction can be summarized as:

【Noun (Reference Object/Ground) + Case Affix】

In this construction, a single morphological component (case affix) often integrates the semantic functions that Chinese assigns to prepositions and localizers separately, pre-packaging the Reference Object and spatial relation into a grammaticalized whole.

Example (3): ular pa x tɛzarda iʃɛwatidu.

(Translation: They work in the cotton field.)

In Example (3), *paɣtezar* (cotton field) is the Reference Object. The temporal-locative case affix *-da* is directly attached to the noun, and this single affix simultaneously encodes the dual semantics of "(at/in)" (static location) and "(inside)" (inclusive relation). The entire word *paɣtezarda* functions as an indivisible locative adverbial component in syntax. Similarly, when expressing adjacency (e.g., *arqisida uni* [behind him]), the postpositional structure *arqisida* itself is a morphological relational phrase that mandatorily specifies the exact spatial location.

The cognitive effect of this morphological encapsulation is holistic scanning: for the speaker, concepts like "in the cotton field" or "behind him" are themselves complete conceptual units with clear spatial coordinate attributes. This model makes Uyghur's spatial expression extremely compact; grammatical relations are mandatorily guaranteed by morphological means, so word order is relatively flexible.

2.3. Differences in Cognitive Salience

The fundamental differences in encoding methods lead to distinct cognitive salience between Chinese and Uyghur. Chinese's analytic nature makes word order a crucial means of arranging information structure, so the salience order of "Figure-Ground" can be flexibly reflected in syntax. For example, in "(the lights inside the building were brightly lit)," the Ground precedes the Figure to highlight the overall scenario; while in "(I behind the house...)," the Figure precedes the Ground to highlight the moving or state-bearing subject.

In contrast, Uyghur's morphological encapsulation focuses salience on the spatial relation itself^[5]. Regardless of word order, case affixes and postpositions mandatorily and clearly define and highlight the spatial configuration relation between the Figure and the Ground. Its cognitive weight lies in the "relation" marked by morphology, rather than the alternation of scenarios or subjects. (see Table 1)

Table 1 Comparison of Grammatical Features between Chinese and Uyghur

Contrast Dimension	Chinese(Satellite-framed/Analytic Language)	Uyghur(Verb-framed/Synthetic Language)
Core Strategy	Lexical combination, high analyticity	Morphological encapsulation, high syntheticity
Syntactic Features	Relies on word order and function words	Relies on morphological changes, flexible word order
Cognitive Style	Sequential scanning, on-line construction	Holistic scanning, pre-packaging

Through the contrastive analysis in Table 1, it is evident that Chinese and Uyghur already show the embryonic form of typological opposition in expressing static location relations: Chinese adopts a modular combination mechanism, integrating discrete lexical units into spatial scenarios through linear sequencing according to grammatical rules; Uyghur uses synthetic morphological markers to directly integrate complete spatial relations into the Reference Object noun. This essential difference will be more prominently reflected in the differentiated representation of their typological features when expressing complex dynamic motion events.

3. Contrastive Analysis of Chinese-Uyghur Spatial Motion Constructions

The linguistic encoding of spatial motion relations vividly demonstrates how different languages use their respective grammatical resources to describe the same dynamic scenarios. When expressing motion events, Chinese and Uyghur share basic human spatial cognitive frameworks (e.g., concepts of path, manner, and reference point), but they exhibit distinctive and complementary linguistic features in the grammatical strategies for implementing these elements.

3.1. Chinese: "Manner Verb + Path Satellite"

When describing motion events, Chinese exhibits the typical characteristics of an analytic language, tending to clearly divide and combine the two core elements of motion—"manner" and "path"—through different syntactic components^[6]. Its common construction model is:

【Manner/Cause Verb + Path Satellite】

In this model, the main verb encodes the manner of motion (e.g., [run], [walk], [fly]) or the cause of motion (e.g., [throw], [put], [kick]), while the core schema of the event—the path—is borne by a "satellite" component that is grammatically independent of the verb core. These "satellites" include directional complements (e.g., [out], [in], [back], [up], [come], [go]) and prepositional phrases (e.g., [from...to...]).

Example (4): "We came out of an alley and arrived at a bus stop."

Example (5): "He put the copper powder into a cup, then poured something out of a black bottle."

In the expression of motion events, Chinese exhibits distinct analytic traits through the "Manner Verb + Path Satellite" construction. In Example (4), path satellites like " (come out)" and " (arrive at)" can clearly define the vector direction of motion: " (come out)" emphasizes the movement tendency away from the origin, while " (arrive at)" highlights the trajectory change toward the endpoint, intuitively presenting the dynamic path process from the starting point to the endpoint. Example (5) further reflects the division of semantic components: manner verbs such as " (put)" and " (pour)" encode the fundamental cause of motion, while path satellites like " (into...)" and " (out)" precisely mark the path details through prepositional phrases and directional complements—both coordinate to construct a complete motion semantic structure.

Relying on the combinatorial advantages of Chinese as an analytic language, this construction can combine a limited number of manner verbs (e.g., [run], [throw], [flow]) with path satellites (e.g., [out], [in], [from...to...]) into nearly infinite collocations, generating rich expressions such as " (run out)," " (throw in)," and " (flow into)." Behind this lies the cognitive logic of "sequential scanning"—presenting "motion action" and "path tendency" as separable semantic elements in sequence within the linguistic flow, fully demonstrating the analyticity and combinability of Chinese in expressing motion events.

3.2. Uyghur: "Path Verb / Case Marker Chain"

Contrary to Chinese's "separated" encoding, Uyghur, as a verb-framed language, exhibits a strong tendency toward integration and holism in motion expression. It tends to internalize path information directly into the verb root or express a complete path concept through the coordination of case markers and verb affix chains^[7].

3.2.1. Path Verb as the Core

A large number of Uyghur motion verbs are inherently "path verbs."

Example (6): mEn yrymtfidin kElDim

(Translation: I came from Ürümqi.)

Example (7): jaBliq jantfuqumdin tJyfyp kEtTi.

(Translation: The handkerchief fell out of the pocket.)

In Example (6), the verb kEl- (come) itself contains the complete path meaning of "moving toward the speaker." In Example (7), the verb tJyf- (fall) encodes the downward path, and kEt- (leave) encodes the path of departure; the two combine to form tJyfyp kEt-, clearly outlining the complete path trajectory of "falling out."

3.2.2. Coordinated Encoding by Case Marker Chains

Uyghur's rich case affix system, as a highly grammaticalized "morphological satellite," works in coordination with verbs to mandatorily mark various Grounds in the path:

Ablative case din-: Marks the starting point of motion.

Dative case Ba-/qa-/ge-/ke-: Marks the endpoint or direction of motion.

Temporal-locative case da-, etc.: Can mark the passing point of motion.

This model of internalizing paths into verbs or verb affix chains makes Uyghur's motion expression structurally compact; path information is "holistically packaged" within the grammatical framework jointly formed by verb morphology and case markers. Speakers of Uyghur tend to encode a specific "path + action" as an inherent, holistic event type.

3.3. Comparison of Syntactic Integration Methods

When facing complex motion events involving multiple reference points (multi-landmark motion), the syntactic integration methods of the two languages further demonstrate the complementarity of their strategies. Chinese's "linear narrative" and "serial clause" integration: Chinese tends to use serial verb constructions or decompose events into a series of clauses arranged in chronological order, forming "serial clauses." Uyghur's "coordinate packaging" and "morphological framework" integration: Uyghur makes full use of its morphological advantages to "package" complex paths into a compact syntactic framework by constructing case marker chains and matching them with a core path verb. (see Table 2)

Table 2 Comparison of Linguistic Features between Chinese and Uyghur

Contrast Dimension	Chinese(Satellite-framed/Analytic Language)	Uyghur(Verb-framed/Synthetic Language)
Path Encoding	Path in satellites (complements/prepositions)	Path in verb core/case marker chains
Manner Encoding	Manner in main verbs	Manner in adverbials (if emphasized)
Syntactic Integration	Linear narrative, serial clauses, loose structure	Coordinate packaging, morphological framework, compact structure
Cognitive Style	Sequential scanning, decomposition and combination	Holistic scanning, typological packaging

Based on this framework, we further analyze the differences in syntactic integration strategies between the two languages in multi-Ground motion events:

Example (8): "I wandered casually and aimlessly along the sidewalk in the city until late at night. I walked through... courtyards, crossed... bridges, and finally reached Beyoğlu."

Example (9): quruluf guruppisi bejdziñdin fanxejdin toxtikandin kejin guangzowka jötkeldi.

(Translation: After stopping in Beijing and Shanghai, the construction team moved to Guangzhou.)

Example (8) simulates the actual process of motion through the linear connection of multiple verb phrases (e.g., [along], [walk through], [cross], [reach]). These phrases connect in sequence to form a coherent motion path, vividly presenting a dynamic "path scanning" effect as if guiding the reader to track the movement trajectory step by step. However, although this expression enhances vividness, it results in a relatively loose syntactic structure lacking strict grammatical constraints.

In Example (9), a complete path coordinate chain is constructed by using the ablative case *din-* to mark the starting points (Beijing and Shanghai) and the dative case *ka-* to mark the endpoint (Guangzhou). The core path verb *jötkel-* (move/transfer) is semantically neutral, only confirming the occurrence of motion. Most path information is borne by morphological markers, presenting a highly integrated model of "detailed Ground (case markers) + generalized action (verb)."

4. Differences and Complementarity of Chinese-Uyghur Metaphorical Spatial Relation Constructions

Spatial relations are not only the basis for expressing physical positions but also the cognitive cornerstone for humans to construct abstract concepts. Lakoff & Johnson's (1980) Conceptual Metaphor Theory points out that we often use concrete spatial experiences to understand and express abstract emotions, states, and events^[8]. Both Chinese and Uyghur possess rich metaphorical spatial expressions, which confirms the universality of human cognition. However, when constructing these metaphors, the two languages once again employ different core resources endowed by their typologies, taking distinct paths of implementation.

4.1. Chinese: Verb Metaphor Expansion and the Creation of Dynamic Imagery

In metaphor construction, Chinese's robust verb system and "Verb + Satellite" construction exhibit extraordinary vitality. It is particularly adept at "shaping" and "animating" abstract concepts by activating concrete, dynamic spatial imagery^[9].

4.1.1. Dynamic Fictive Motion

Example (10): "Time slipped away quickly, and the pleasant trip came to a dull end just like that."

In Example (10), the abstract concept of "time" is metaphorically conceptualized as an agile, movable entity. The verb phrase "(slip away)" is the key: it contains both manner ("implying quietly, quickly, and uncontrollably") and path (implying leaving and passing). A concise verb-complement structure transforms the abstract passage of time into a vivid, emotionally charged dynamic scenario.

4.1.2. Container Metaphor and Path Verbs

Example (11): "The difficulties faced by China National Textile Corporation cannot be completely resolved by...; nor does it mean that the corporation can quickly get out of difficulties."

In Example (11), "difficulties" are conceptualized as a container or enclosed space. The path verb construction (get out of) "perfectly maps the abstract cognition of 'solving problems' onto the bodily experience of 'breaking away from a confined space.' Here, 'implies the manner (requiring effort and proceeding step by step), while marks the path vector (from inside to outside)—the imagery is highly intuitive.

4.1.3. Orientation and Vector Metaphors

Example (12): "Technology... will elevate our basic capabilities to a new height."

Example (12) simultaneously employs a vertical orientation metaphor (" [height] represents level or grade") and a path metaphor. The verb "(elevate)" itself is a path verb derived from spatial action (moving upward), which clearly indicates that the direction of change is "upward." The entire model vividly maps the abstract process of capability improvement onto the physical process of "lifting an object higher."

Chinese's metaphor construction model heavily relies on the metaphorical expansion of verbs and the precise vector positioning of complements. By selecting appropriate verbs derived from spatial experiences, it creates strong dynamic imagery—a metaphor implementation path dominated by lexicons and constructions, rich in imagery.

4.2. Uyghur: Case Marker Metaphors and Grammaticalized Mapping of Abstract Relations

In contrast to Chinese's "imagistic" path, Uyghur's highly grammaticalized case marker system and affixes play a more fundamental and systematic role in metaphor construction. It tends to directly and systematically apply the same spatial grammatical relations to the abstract domain, achieving a "relational structural" mapping.^[10]

4.2.1. Container Metaphor and Morphological Markers

Example (13): u kɵrjɨdiki tygytʃni tɛ x itʃil jɛʃɛlmidi.

(Translation: He hasn't yet resolved the knot in his heart.)

This is a classic psychological container metaphor. "Heart (kɵryl)" is conceptualized as a container, and the scope case affix -diki mandatorily marks "heart" as the scope of an abstract space, meaning "within...". The verb jɛʃɛ- (untie/resolve) is also a mapping from spatial action to the abstract domain. This example shows how Uyghur uses the same morphological rules to handle both physical containers (e.g., "books in the room") and psychological containers.

4.2.2. Up-Down Orientation Metaphor and Case Affixes

Example (14): gominda hɵkymranliqida x ɛlq turmuʃi x araaliʃip.

(Translation: Under the rule of the Kuomintang, people's lives were in dire straits.)

"Rule (hɵkymranliqi)" is metaphorically conceptualized as a space with an up-down orientation. The temporal-locative case affix -da (at/in) here does not indicate a specific physical position but is a systematic metaphorical extension, expressing an abstract meaning of "under the condition of...". This usage reflects the high grammaticalization of Uyghur's spatial case markers, with rigorous and unified rules.

4.2.3. Fictive Motion and Grammaticalized Paths

Example (15): qara uluqta jultuz tɛk tarqaldi.

(Translation: Rumors spread like stars in the darkness.)

In Example (15), "rumors" are metaphorically conceptualized as "stars" spreading in the abstract medium of "darkness." The adverbial verb *tarqal-* (spread/diffuse) itself describes the path, while the postposition *tek* (like) grammatically marks the metaphorical mapping relation (rumors → stars). The entire sentence completes the construction of a complex metaphor through the conventional coordination of verbs and postpositions, with its core mechanism still being the systematic metaphorical application of grammatical components.

Uyghur's metaphor construction focuses more on the systematic mapping of grammatical means. It "transplants" case markers and postpositions for expressing spatial relations into the abstract domain as a whole, using the grammar that defines physical space to rigorously define abstract concepts—a metaphor implementation path dominated by grammar, with rigorous relations.

5. Typological Comparison and Cognitive Interpretation

The previous sections have systematically described the Chinese-Uyghur differences in spatial location, motion, and metaphorical relation constructions. The results show that the two languages adopt different grammatical strategies for similar spatial concepts. This chapter aims to answer two questions: Do these differences follow a unified typological law? What are their cognitive motivations? To this end, the study introduces Talmy's (2000) Motion Event Framing Theory for theoretical integration and cognitive interpretation.

5.1. A Unified Theoretical Framework: Talmy's Typology

To go beyond superficial comparisons of similarities and differences, we need a unified analytical framework that can permeate all spatial relation constructions. The Motion Event Typology Theory proposed by cognitive linguist Leonard Talmy provides such a tool^[11]. This theory constructs an influential linguistic typological dichotomy based on the encoding method of the core schema component in motion events—"Path"^[12]:

Satellite-framed languages: Path information is encoded by "satellite" components (e.g., particles, affixes) attached to the main verb, while the verb itself expresses the manner or cause of motion.

Verb-framed languages: Path information is directly integrated into the root of the main verb, while the manner of motion needs to be expressed by additional components such as adverbials.

This classification is not only applicable to physical motion events but also extendable to the analysis of static location and metaphorical space, providing a powerful predictive ability and explanatory framework for us to uniformly interpret the systematic differences between Chinese and Uyghur spatial relation constructions.

5.2. Encoding Strategies

Based on the above theory, this study macroscopically summarizes the linguistic facts and clearly positions the encoding strategies of Chinese-Uyghur spatial relations in terms of typology:

Chinese is a typical satellite-framed language and analytic language. Its encoding of spatial information relies on "lexically dominated analytical combinations." Specifically, whether in the "preposition + localizer" structure for location expression or the "manner verb + path complement" construction for motion expression, its core feature is assigning semantic elements such as path and manner to different, independent lexical units, which are combined into a complete spatial scenario online through specific word order.

Uyghur exhibits strong verb-framed language characteristics^[13], and its spatial expression relies on "morphologically dominated grammaticalized encapsulation." This is reflected in two aspects: path information is often internalized into verb roots (e.g., *kirmek* [enter]); the rich case affix system (e.g., temporal-locative case *da-*, ablative case *din-*) serves as a highly grammaticalized means to mandatorily encapsulate spatial relations (e.g., location, starting point, endpoint) into the morphological changes of nouns.

5.3. Regular Manifestations of Core Differences in the Three Types of Constructions

In location relations: The opposition between "lexical combinability" and "morphological encapsulation" (corresponding to Chapter 2). Chinese constructs scenarios through lexical sequences like "(behind the house)," with transparent structure; Uyghur encapsulates relations through postpositional structures like *arqisida* (behind him) or by directly attaching the case affix *da-* to nouns, with concise structure.

In motion relations: The opposition between "separation of manner and path" and "path centralization." Chinese strictly follows the "satellite-framed" model of "[manner] + [path] (run out)"; Uyghur tends to use path verbs like *kirmək* [enter] or background manner, forming path verb complexes like *tıfıfıf ketti* [fell out].

In metaphorical relations: The opposition between "verb metaphors creating imagery" and "case marker metaphors constructing relations." Chinese excels at creating vivid dynamic imagery through the metaphorical expansion of verbs (e.g., [get out of difficulties], [time slips away]); Uyghur focuses more on mapping its case marker system (e.g., *-da*) onto the abstract domain as a whole, using morphological means like *hökymranlıqida* [under the rule] to rigorously mark the structural relations between abstract concepts.

5.4. Cognitive Interpretation

From a cognitive perspective, the above typological differences reveal that the Chinese and Uyghur peoples have different emphases in the "implementation path" of spatial cognition. Undoubtedly, speakers of the two languages share basic human spatial cognitive frameworks (e.g., container schema, path schema). However, different language systems shape their habitual ways of conceptualizing and "packaging" these spatial experiences.

Chinese's "analytical combination" model reflects that its speakers tend to decompose complex spatial events into different semantic elements (e.g., manner, path, reference object), and sequentially scan and combine them online in the linguistic sequence. This cognitive style embodies analyticity, flexibility, and imagery.

Uyghur's "morphological encapsulation" model reflects that its speakers tend to regard specific spatial relations (especially the relation between path and Ground) as a holistic, typological unit and pre-package them through morphological means. This cognitive style embodies integrity, rigor, and logic.

6. Conclusions

Guided by the theories of cognitive linguistics and linguistic typology, this study systematically compares Chinese-Uyghur spatial relation constructions and draws the following core conclusions:

First, Chinese is a satellite-framed language that encodes spatial information through lexically dominated analytical combinations, while Uyghur is a verb-framed language that relies on morphologically dominated grammaticalized encapsulation.

Second, the differences between the two languages correspond regularly across all spatial dimensions: In the location dimension: It manifests as the lexical combinability of Chinese prepositional frameworks vs. the morphological encapsulation of Uyghur case affixes; In the motion dimension: It manifests as the sequential scanning of Chinese "manner verb + path satellite" vs. the holistic packaging of Uyghur "path verb / case marker chain"^[14]; In the metaphorical space dimension: It manifests as the imagery dynamics of Chinese verb metaphors vs. the relational structure of Uyghur case marker metaphors.

Third, the Chinese and Uyghur peoples share basic spatial cognitive frameworks (e.g., container schema), but language systems have shaped different "linguistic personalities": Chinese is characterized by analyticity and flexibility, while Uyghur is characterized by integrity and rigor.

This study provides an empirical spatial cognitive case for the typological comparison between the Uyghur and the Chinese, verifying and deepening the explanatory power of Talmy's theory. Meanwhile, it provides guidance for Chinese-Uyghur bilingual teaching (requiring an understanding of the functional correspondence between complements and verb affixes/case markers) and the construction alignment rules for machine translation.

The limitations of this study include the need to supplement dynamic expressions in spoken language and diachronic research, as well as to verify findings with psycholinguistic experiments. Future research can construct a multimodal spoken corpus, explore the rules of language contact, and extend to more ethnic minority languages in China to build a typological genealogy.

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