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# Research on the functional semantic field of spatial orientation in russian and chinese languages

# 俄汉语空间方向功能语义场对比研究

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#### Abstract

According to Bondarko's functional grammar theory, combined with the corpus of the Russian State Corpus and the BCC Corpus of Peking University, this paper discusses the language expression means of each subfield of the functional semantic field of spatial orientational category in Russian and Chinese Languages, and constructs the structure of directional functional semantic field. The research results of this paper will help Chinese students better grasp the grammatical structure of Russian spatial direction prepositions. At the same time, This paper systematically compares and analyzes the characteristics of the expressions about the directional functional semantic field in the two languages, provides theoretical guidance for Chinese college students to learn Russian, and provides theoretical support for teachers engaged in Russian teaching.

**Key Words:** functional semantic field, orientation, Russian spatial preposition, Chinese spatial preposition, semantic.

#### Introduction

The concept of "field" was originally used in physics and has since been borrowed by many scientific disciplines to describe the phenomena they study. In recent years, the study of combined structural fields composed of different language

## 摘要

本文根据邦达尔科功能语法理论,结合俄 语国家语料库和北京大学BCC语料库中的 语料,探讨了俄汉空间方向范畴的功能语 义场各子场的语言表达手段,构建了俄汉 语空间方向功能语义场结构系统。本文的 研究结果有助于中国学生更好地掌握俄语 空间方向前置词的语法结构。同时,对比 分析两种语言在方向功能语义场中表达方 式特点,对中国大学生学习俄语提供理论 上的指导,对从事俄语教学的教师提供理 论支撑。

关键词:功能语义场;方向;俄语空间前 置词;汉语空间介词;语义

units has become a research trend. These language units can not only systematically present the picture of the language world, but also study language phenomena from the perspectives of onomatics and semantics.



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Shchur (Щур  $\Gamma$ . C.) devoted himself to the study of the basic theory of field division of labor in linguistics, with special attention to the functional semantic field. He pointed out the use of functional semantics for "field" research. The advantages of studying with this method are: firstly, the "field" is regarded as a spatial phenomenon; secondly, not only the function of language units, but also the common semantic features of language units are considered (Shchur, 1974:66). In other words, unlike other fields, the functional semantic field is based on two criteria-functionality and semantics. Therefore, the functional semantic field is defined as "a multi-level system of expressions that reflects the unity of functions and the interaction between functions in a language based on a certain semantic category" (Bondarko, 1984:21-22).

The purpose of the paper is to identify the variety of the spatial orientational category in modern Russian and Chinese languages, to determine similarities and differences in the expression of this category, to classify the ways of expression in methodological purposes for predicting and preventing possible interference in the speech of the Chinese students.

#### Literature review

According to Bondarko (Бондарко A.B.), there are two main structural types of functional semantic fields: monocentric fields with the same grammaticalized structure and polycentric fields without the same structure but with the same specific characteristics. Among them, the core structure of the polycentric field can be composed of several linguistic structures. Any functional semantic field is a subsystem in the language structure, and each language unit in the system has common semantic features and has the characteristics of semantic commonality. The structure of functional semantic field is divided into core field, transition field and fringe field (Popova et al., 1989: 6).

According to the characteristics of semantic Bondarko divided categories, functional semantic fields into four categories: predicate functional semantic field, subject-object functional semantic field, quality-quantitative functional semantic field, and sparse functional semantic field (Bondarko, 2002:35). The spatial functional semantic field belongs to the predicate functional semantic field. As a special language system, it has a complex language structure, and its constituent elements are connected by semantic categories and syntactic relations. The

functional semantic field is a multi-dimensional. huge and ordered aggregate of language units, and one of its main characteristics is to completely include language units into the aggregate of language units through the same semantic category. The spatial functional semantic field is mainly composed of the locational functional semantic field and the directional functional semantic field. This paper mainly studies the functional semantic field of Russian-Chinese spatial orientation and its composition, and compares and analyzes the similarities and differences of language expressions in each subfield of the two-language spatial directional functional semantic fields. According to Bondarko's functional semantic field theory, we divide the directional functional semantic field into core field, transition field and fringe field.

## The materials and methods

We selected the corpus from the Russian State Corpus and the BCC Corpus of Peking University. According to the sampling method, we extracted 1000 corpora from the two corpora respectively, searched for the corpus expressing the structure of the spatial direction functional semantic field in these 1000 corpora, analyzed the proportion of each expression type in the field, and then based on these corpora. The proportion of the corpus in the 1000 corpus is calculated to calculate the number of entries for each expression means in each functional semantic field in the corpus. To this end, we use data analysis and comparative methods to explore the functional semantic field of Russian-Chinese spatial orientation.

#### **Results and Discussion**

Functional Semantic Field of Russian Spatial Orientation

Guided by Bondarko's functional semantic field theory, we constructed a functional semantic field of Russian spatial orientation. Its core field, transition field and fringe field are as follows:

#### 1. Core field

The expression means of the core field in functional semantic field of Russian spatial orientation is the spatial preposition structure that expresses the orientational meaning. Among them, " $\sigma$ ", " $\mu a$ ", " $no\partial$ ", "3a", " $\kappa$ ", "u3", "c", "om", " $\partial o$ ", "no" and other prepositions are the most typical symbolic words for orientation.



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There are three types of spatial preposition structures that express the meaning of orientation: Verb + Spatial Preposition + the accusative N., Verb + Spatial Preposition + the dative N., Verb + Spatial Preposition + the genitive N.

- Verb + Spatial Preposition + the accusative N.: Verb + *в*, *на*, *no∂*, *за* + the accusative N., For example:
- (а) Вышел *на* улицу, походил ничего не нашёл.

I went to the street to look for something and found nothing.

- (b) Он садился на поезд, ехал в Москву.
- He took the train to Moscow.

(с) Я осел на пол и полез под кровать.

I fell to the ground and crawled under the bed.

- 2) Verb + spatial preposition + the dative N.: verb +  $\kappa$ , *no* + the dative N., for example:
- (a) Когда она первый раз пришла ко мне и зашла в мою комнату.

The first time she came to my place, she walked into my room.

(b) А Кэт любила ходить с Аськой *по* магазинам.

Kate likes to go shopping with Aska.

- **3)** Verb + spatial preposition + the genitive N.: verb + *u*<sub>3</sub>, *c*, *om*, *∂o* + the genitive N., for example:
- (а) Я отдал ему замок и вышел из дома.
- I gave him the lock and left the house.
- (b) Никто не прокрался *с* улицы, что очень сомнительно.

No one sneaked in from the street, it is suspicious.

(c) И нам приятно узнавать *от* вас самые разные подробности о нашем городе.

We are delighted to have learned various details about our city from you.

(d) За пять минут Таня добежала  $\partial o$  дома. Five minutes later Tanya ran into the house.

2. Transition field

The expression types of the transition field in the functional semantic field of Russian orientation are mainly adverbs (*myda, cioda, omcioda, enepëd,* etc.), prepositional combinations (*om...do..., c...do...*, etc.).

- 1) Adverbs indicating the meaning of orientation
- (a) Очень давно не был в цирке по-моему, даже в детстве ходил *туда* только один раз.

It's been a long time since I've been to a circus in my opinion, even as a kid, I've only been there once.

- (b) Я узнал про этих железнодорожников, что они ездят *туда* и *сюда*.
- I heard that these railway workers travel by car.
- 2) prepositional combinations: *om...do..., u3...6/Ha...*etc.
- (а) Александр Терехов сопровождает недаром учителя *от университета до дома* темным и льдистым арбатским переулкам.

No wonder Alexander Terekhov accompanied the teacher from school to home, because the alley of Arbat is dark and gloomy.

(b) Все бегали *из дома на улицу*, таскали вещи...

Everyone ran from home to the street, dragging things...

3. Fringe field

The fringe field in the functional semantic field of Russian orientation is an infinitely vast space system that intersects with other semantic categories. The main types of expressions are: adverbs, verbs that express the meaning of departure (покинуть/покидать, etc.), mainsubordinate compound sentences (откуда-led main-subordinate compound sentences) and so on.

- 1) Adverbs
- (a) Это *издали* он казался всё таким же слонёнком, как при первой встрече.

From a distance, he appears to be the same baby elephant as when they first met.

- **2)** Verbs (покинуть etc. that express the meaning of departure)
- (а) Четверть века прошло, как навсегда, я *покинул* этот город.

Twenty-five years passed away, I have left the city forever.

- Main-subordinate compound sentences (...ommyдa, откуда... or adjective + N. + откудa clause, etc.)
- (а) Очевидно, кто-то там вышел *оттуда, откуда* она звонила.

Obviously, someone over there went out from where she called.

(b) Та самая комната, *откуда* мы ушли утром. Exactly the room left we in the morning.



# Functional Semantic Field of Chinese Spatial Orientation

# 1. Core field

The expression means of the core field in the functional semantic field of Chinese spatial orientation are spatial prepositional phrases and directional verb structures. Among them, the prepositions "cóng 从", "xiàng 向", "wǎng 往", "dào 到", "cháo 朝" and other words express the meaning of orientation. According to statistics, there are six types of spatial prepositional phrases that express orientational meaning: spatial preposition + noun + orientational word, spatial preposition + locational word, spatial preposition + locational word + directional verb, spatial preposition + locational word + verb + directional verb, Spatial preposition + locational noun, spatial preposition + demonstrative pronoun. There are four types of directional verb structures that express the meaning of orientation: directional verb + locational noun, directional verb + common noun, directional verb, verb + directional verb.

Orientational words refer to words that express the names of orientation and relative positional relationship (Yuehua, 2017: 50), such as "shàng  $\pounds$ , xià  $\overline{r}$ , zuǒ  $\underline{E}$ , yòu  $\overline{a}$ , qián  $\underline{m}$ , hòu  $\overline{m}$ , nèi  $\underline{m}$ , wai4  $\underline{m}$ " and so on. This paper adopts Wu Jiadi's definition and identification of orientational words, locational words and locational nouns from the perspective of semantic grammar. orientational words are spatial positional words that express the directional and positional relationship based on reference objects. A total of 123 orientational words are screened (1), of which There are 83 human body orientational words and 40 natural orientational words (Jiadi, 2008: 21-22).

Locational words are spatial locational words that represent places based on buildings (Jiadi, 2009). A total of 115 locational words have been screened (2). For example, the basic semantics are teaching units, place names, administrative divisions, etc., which are classified as "locational nouns", such as Beijing, Shanghai, Harbin, etc.

The directional verb is a special relatively closed part of speech, and it is also the most important means of expressing direction (Jing, 2020). Its characteristic is that it can be used as a complement after the verb. We screened out 26 directional verbs in total:  $shàng \perp$ ,  $xia \top$ , jin $\underline{\mathcal{B}}$ ,  $ch\overline{u} \ \underline{\mathcal{H}}$ ,  $k\overline{a}i \ \underline{\mathcal{T}}$ ,  $hui \ \underline{\mathcal{D}}$ ,  $gu \partial \ \underline{\mathcal{D}}$ ,  $q\overline{i} \ \underline{\mathcal{E}}$ ,  $dao \ \underline{\mathcal{A}}$ ,  $lái \ \underline{\mathcal{R}}$ ,  $shànglái \ \underline{\mathcal{L}}$ ,  $xial i \ \underline{\mathcal{T}}$ , jìnlái 进来、chūlái 出来、开来、huílái 回来、 guòlái 过来、qǐlái 起来、dàolái 到来、qù 去、 shàngqù 上去、xiàqù 下去、jìnqù 进去、chūqù 出去、kāiqù 开去、huíqù 回去、guòqù 过去.

- 1) Spatial preposition + common noun + orientational word
- a) …说着赶紧*从房间里*拿出一叠发票来· 一副悔过自新的神色。

...Then he quickly took out a stack of invoices from the room with a repentant look.

b) 马希山狠狠地咬了咬牙,拳头*向桌子上* 一拍,震得杯盘当当响。

Ma Xishan gritted his teeth fiercely and slapped his fist on the table, making the cups and plates rattle.

- 2) Spatial preposition + locational word
- (a) 林玉辉凭着一身好水性,把渡船渐渐*往 岸边*拉。

With his good swimming skill, Lin Yuhui gradually pulled the ferry to the shore.

The Japanese took them to a vacant area outside the city.

- 3) Spatial preposition + locational word + directional verb
- (a) 这时刘勃卡坐到邬丽亚身边来。

At this time, Liu Boka sat down beside Wu Liya. (b) 韩飞飞沉吟了一下道:"你从哪儿来?"

(b) 韩飞飞沉吟了一下道:"你从哪儿来?" 那黑衣壮汉道:"属下刚*从城外来*。"

Han Fei pondered for a moment and said, "Where are you from?" The strong man in black said: "I have just come from outside the city.

- 4) Spatial preposition + locational word + verb
   + directional verb
- (a) 两个戴眼镜的姑娘*从身旁走过*。

Two girls with glasses passed by.

(b) 她睁大了眼睛,吃惊地*向窗外看去*。

She opened her eyes wide and looked out of the window in surprise.

- 5) Spatial preposition + locational noun
- (a) 班长吴猛明天一早,就要离开这前沿阵



<sup>(</sup>b) 日本人把它们带到城外一块空地上。

地 · *到北京*—毛主席的身边去上社会主 义的大学了。

Wu Meng, the monitor, will leave this frontline early tomorrow morning and go to Beijing— Chairman Mao's side to attend a socialist university.

(b) 我们*从哈尔滨*乘夜间火车,一早起来即 已到达鸡西市。

We took the night train from Harbin and arrived in Jixi City early in the morning.

- 6) Spatial Prepositions + Demonstrative Pronouns
- (a) 为了那个微笑的女孩,人们从全世界走

People come from all over the world for that smiling girl - 263 Prinsengracht Street.

(b) 这边有一个地方的坡度较小·我们*从这 儿*下去。

There is a place with a small slope here, let's go down from here.

7) Directional verb + locational noun

(a) "祺尔,我明天要跟你*去上海*。"

"Qi Er, I want to go to Shanghai with you tomorrow."

(b) 1981 年,老赖带着他的部分书画作品来 杭州举行画展。

In 1981, the old Lai brought some of his calligraphy and painting works to Hangzhou for an exhibition.

8) Directional verb + common noun

(a) 她笑着背起筐子, 就跟我上山。

She carried the basket with a smile and followed me up the mountain.

(b) 小燕子刷完了屋顶,飞身下地。

Xiaoyanzi finished painting the roof and flew down to the ground.

9) Directional Verbs

(a) 初霞看了看那"单薄"的滑竿,说什么也 不肯*上去*。

Chuxia looked at the "thin" sliding pole and refused to go up.

(b) 我走到博物馆门口,忽然不想进去了。

I walked to the entrance of the museum and suddenly didn't want to go in.

10) Verb + directional Verb

(a) 巴纳斯山回答说: "从这烟囱里*爬上去*"。 Banas Hill replied: "Climb up from this chimney".

(b) 为了找到我生命的意义,我一定要*走出 去*!

In order to find the meaning of my life, I must go out!

#### 2. Transition field

The expressions of transition field in Chinese directional functional semantic field mainly include: locational word + verb + directional verb, demonstrative pronoun, idiom, orientational word + directional verb, directional verb + orientational word, etc.

1) locational word + verb + directional verb

(a) 街上传来一辆马车的声音·泰伊番先生 家一个穿号衣的当差神色慌张的冲进来

·古的太太一眼便认出了。

There was the sound of a carriage coming from the street, a Mr. Taifan's waiter in a coat rushed in with a flustered look, Mrs. Gu recognized him at a glance.

(b) 忽然*天上飞过*一片黑云,把月亮遮了个 严丝合缝。

Suddenly a black cloud flew across the sky, covering the moon tightly.

2) Demonstrative pronouns

(a) 我们一直在找, 就是找不到*哪里*发出来。 We have been looking for it, but we can't find where it was from.

(b) 不久,我们听到*那儿*传来一声枪响。 Soon, we heard a gunshot coming from there.

3) Idioms

(a) 于是我们这个小姑娘就要*东奔西走*。

So our little girl will move out and run away.

(b) 南来北往无数次,有一件事我迄今记得 清清楚楚。

I have traveled from south to north countless times, and there is one thing I remember clearly so far.

4) orientational words (east, south, west, north, etc.) + directional verbs (up, down, etc.)

(a) 他闭上眼, 不愿告知更多, 包括他即将





# *北上*,不告而别。

He closed his eyes and was reluctant to tell more, including that he was about to go north, left without saying goodbye.

(b) 有人称之为"人流*南下*, 广货*北上*"。 Some people call it "the flow of people goes south, the goods from Guangzhou go north".

- 5) directional verb + orientational word
- (a) 风清扬一听端木雪是来报信的,急忙*上前*。

Feng Qingyang hurried forward when he heard that Duanmuxue was here to report.

3. Fringe field

It should be pointed out that the fringe field of the functional semantic field is an infinitely vast space system. The fringe field of one functional semantic field may intersect with another functional semantic field. The fringe field of the functional semantic field of Chinese spatial orientation mainly includes locational words, locational nouns and phrases that express the meaning of time.

1) locational word

(a) — "去哪?"— "*书房*"。
— "Where to go?" — "Study room".

- 2) locational noun
- (a) "走? 往哪儿走?"— "*南京,上海*, 最末不成就是台湾了。"

— "Go? Where to go?" — "Nanjing, Shanghai, Taiwan will be the last."

- 3) Phrases that express the meaning of time
- (a) 自女儿从国外*求学回来至今*,他们两老 等他这个动作可久了。

Since their daughter came back from studying abroad, the old couples have been waiting for his such action for a long time.

(b) *待到出口前*,导游让我们回头观望,但见远 处水面浮着一弯新月,皎洁可人。

At the exit, the tour guide asked us to look back, but we saw a crescent moon floating on the water in the distance, which was bright and pleasant.

# Conclusion

It is well known that any concept expressed in human consciousness can be conveyed through language. Some concepts are systematically reflected in language, while others can only be expressed under specific circumstances, and sometimes these concepts have no difference or connection with other concepts with similar content, which shows that language can distinguish relatively more essential concepts. According to the above research on the functional semantic field of Russian-Chinese spatial orientation, the expression means of functional semantic field of Russian spatial orientation are morphological, lexical and syntactic means, while the expression means of Chinese are lexical and syntactic means. In Chinese, the expression means of core field, transition field and fringe field are much more than those in Russian.

From the perspective of functional semantic fields, we study the set of fields representing directional meaning in Russian and Chinese. We present the similarities and differences of the two language expressions more systematically, realize the integrity of the two language units in the interaction, show the function of the units from the different languages, especially the unmarked way of expressing spatial relationships, it ensures the clarity of the grammatical phenomena we study. The realization of the above goals is based on the theory of functional grammar, that is, the two methods of analyzing language are "from semantics to form" ("from function to means") and "from form to semantics" ("from means to function"), it systematically forms the semantic functions of aggregates of language units.

This paper presents the spatial orientational functional semantic field as a system composed of three subfields: core field, transition field and fringe field, whose basic semantics include the meaning of "path starting point" and "path ending point". The linguistic units in the core field have stronger semantic category functions, and the category meaning in the fringe field intersects with the semantic categories of other fields.

Considering the characteristics of the communicative function method, when we teach Chinese university students the structure of expressing Russian spatial orientation, we can optimize Chinese students to construct the functional semantic field structure of Russian spatial orientation and improve their learning efficiency. The research of this paper will have certain theoretical value in translation studies, speech communication, etc., and will have a certain enlightenment effect for Chinese students to learn Russian grammar, especially the grammatical knowledge of Russian spatial prepositions.

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