Statistical Analysis of Tibetan Orientation Words from the Perspective of Cognition

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ABSTRACT: This paper explores the direction of Tibetan orientation words in real texts from the perspectives of grammar, semantics, statistics and cognitive linguistics. Studying on the expression of the research direction in the text, it further explores the grammaticalization and lexicalization of Tibetan positional words, especially the sentence components of the positional words in the text. Finally, the direction category of position words is analyzed from the perspective of cognitive grammar, which also paves the way for the deep research of cognitive mechanism.

1. INTRODUCTION

At present, many scholars regard Tibetan positional words as a subcategory of subordinates. No scholars list them or conducts in-depth analysis. The article only uses Chinese orientation words as the entry point for analysis and research. The study of Chinese positional words is systematic and mature from the historical perspective. The research on the orientation words of common language is more in-depth, and the dialect words are less from the perspective of regional characteristics. The study of Chinese positional words is generally distinguished from the position words and the words, the differences and connections between the individual position words, the nature, scope, grammatical function and use of the position words. It is Lu Shuxiang who studied the orientation words from the perspective of spatial concept expression. In 1956, he proposed to study grammar from two different angles in "Chinese grammar and reprinting inscriptions (1982)". One is to explain the grammatical meaning expressed by the grammatical structure, word order and function words from the perspective of the person listening and reading. The other is from the perspective of the person who speaks and writes, focusing on the categories and relationships in the grammatical meaning, explaining the grammatical forms that depend on it [1]. Based on the above researches, the article takes the Tibetan textual corpus as the research object and further describes the language facts and characteristics. The expression of the research direction category in the text further explores the grammaticalization and lexicalization of Tibetan positional words, especially the sentence components of the positional words.
in the text. Finally, the direction category of position words is analyzed from the perspective of cognitive grammar.

2. LOCATION WORDS

In "New Modern Chinese", Zhang Bin classifies the positional words as an addendum of nouns. He believes that the positional words include both simple and synthetic. Lu Shuxiang regards the position word as a subclass of nouns in "The Eight Hundred Words of Modern Chinese". He believes that the position words have single and double notes. The positional words of the two-tone can be added to form the orientation phrase after other words, especially after the noun or the phrase. Comparing the three languages of English, Chinese and Tibetan, their definitions of orientation words are also different. However, from the cognitive point of view, the positional word is a category of human language to language in the spatial relationship, and its different grammatical means to represent the concept of space between different languages.

2.1 Tibetan position words

There are about 81 orientation words commonly used in Tibetan: yna mna ysa msa rnga mgo mjug rting thog mthva bra phra rol tshur rol phra tshur sngo phyi vgo mgo rked yra mra snga gzhusa mtha ma vgo ma rnga ma mjug ma gzhug ma yna cha mna cha stod cha smd cha sngon rjes dbus dkyil vbring khog nnga khrod gma logs vgrma drung gysa gyon ysa msa shra lho nub bynga stod smda gshma gong gyo gyen thur klda steng gong thog rkyba mdun phyi nga gyon gyo gysa gong gya gyon shra ngos lho ngos nub ngos bynga ngos lho lho bynga bynga dkyil gzhung lho nub nub bynga shra lho lho bynga, Tibetan language position words do not have a clear number. The above is only the result based on text statistics. The Tibetan orientation words cannot correspond to the typical Chinese plain position words, and the Tibetan orientation words also have the phenomenon of synonymous polymorphism. For example, "yna ysa steng stod gong thog gyen" means "above". There is also a polysemy in the Tibetan positional words. For example, "rnga ma" means not only the end but also the tail of the animal. "mgo" means not only the head but also the up, and "vbring" means not only the middle but also medium meaning. "ysa msa" generally means the meaning of the left and right in the written language, but also means the upper and lower meaning in the dpva ris dialect. We can see that the above vocabulary is also extended in the semantics of the word itself. Tibetan orientation words usually appear after the suffixes such as “pa ba ma cha”. Although many scholars believe that the "pa ba" in Tibetan is a nominal materialization mark, there are also discrepancies in practice. It will not be discussed in detail here. Tibetan orientation words also include simple orientation words and synthetic orientation words. Simple orientation words are generally composed of monosyllabic words, for example: "nnga vgrma dbus gshma dkyil, etc.”. A synthetic position word is generally composed of two monosyllabic orientation words, for example: "nub phyogs nub bynga gysa gyon shra nub, etc.". In the real Tibetan texts, it is also found that Tibetan monosyllabic orientation words and affixes have lexicalization phenomena, such as: “nub kha stod cha rgyba gzugs, etc.”. Tibetan orientation words are also a kind of nouns. In general research, we classify them as nouns. From the current point of view, there is no clear distinction between position words and nouns. The article regards position words as a subclass of nouns. Tibetan orientation words generally have the following typical characteristics in sentence components. The first is to assume the subject component in the subject position, and the second is to define the component of the noun word before the auxiliary word. The third is the simple orientation word followed by the affixation to form the lexical component.

3. Statistics of position words

The article selects 30 Tibetan texts, including biographies, maxims, essays, Buddhist studies, folk songs, essays, riddles, poems, plays, novels, literature, slang, comments, letters, etc. We take 10 classified texts as an example, including the Tibetan text "Golden Light" ("gser vod dma pvi mdo") the first volume (stod cha), the middle volume (bra cha), the second volume (smda cha), and the total
number of words is 588,065, of which the total number of azimuth words is 5225. The specific distribution is shown in Table 1:

| Title                                    | Chapter number of words | Directional word frequency |
|------------------------------------------|-------------------------|----------------------------|
| gservodmdapvi mdo (stod cha)             | 38290                   | 377                        |
| gservodmdapvi mdo (bra cha)              | 39038                   | 221                        |
| gservodmdapvi mdo (smda cha)             | 15512                   | 96                         |
| byngachubspyod pa                       | 26754                   | 138                        |
| Mkhsapvidxton                           | 328595                  | 3288                       |
| yul gzhnayi vdu vzoms                   | 15010                   | 244                        |
| tshulkhrimsrgya mtsho                   | 14685                   | 190                        |
| lnggra gshegs pvi mdo (stod cha)         | 37552                   | 212                        |
| lnggra gshegs pvi mdo (bra cha)          | 41061                   | 277                        |
| lnggra gshegs pvi mdo (smda cha)         | 31568                   | 182                        |
| **total**                                | **588065**              | **5225**                   |

In the text "Golden Light" (top), there are a total of 38,290 words, and 377 words are found in the frequency of words. Most of them appear in the sentences before the words. There are a total of 39,038 words in "Golden Light" (middle), and 221 directions are found. There are a total of 15512 words in "Golden Light" (below), and 96 positions word are found. "Bodhi" has a total of 26,754 words, and 138 directions are found. "Sages of the Sage" has a total of 328,595 words, and 3288 directions are found. There are 15010 words in different foreign parties, and 244 directions are found. There are a total of 14,685 words in "Zhongcheng see measures", 190 directions word are found. The total number of words in "Into the Sanghajin" (top) was 37,552, and 212 words were found. The total number of words in "Into the Sanghajin" (middle) was 41061, and 277 words were found. The total number of words in "Into the Sanghajin" (below) was 41061, and 277 words were found. It is found from the statistics that the Tibetan positional words mainly bear the subject component, the qualified components of the noun words and the lexical components in the text.

### 3.1 Directional Words Take the Subject Component

It is found that the Tibetan positional words are generally placed in the subject position as the subject component in the Tibetan text through statistics. In the Tibetan sentence structure, the beginning of the sentence is generally undertaken by the subject, and the main components are pronouns, nouns, and positional words. According to the categoriality of nouns, semantically, nouns represent a specific thing, and there is an alleged object in the objective world. From the morphological point of view, the noun has a singular and plural number, and can also have pre-modification components, such as qualifiers, adjectives, and indicators. From the perspective of discourse, it also has the form of anaphora. In Tibetan, pronouns are generally used to refer back. From the perspective of discourse and communicative functions, nouns are participants in the introduction of topics. If a noun has a role-bearing component in a language entity, then it is sufficient to embody the syntactic features of the
noun in the sentence. The position words attributed to the nouns are slightly different from the above discussion. We further confirm from the corpus, as shown in Table 2:

| Orientation | Instance |
|-------------|----------|
| nye vkhor   | nye vkhor/ f na/pl ri lding/n da lta/n vi/pg dgon sa/n la/pd vos pa/vi ynga/d bdug/vimod/c /w |
| shra nub    | Shr nub/fkyi/pgrgya mtsho/nla/pdblta ba/vt vi/pg pyogs/n nsa/pnri/n chen po/a mnga/a du/pl vdug/vi |
| vkrma       | vgrma/f gyi/pgri/n gnyis/m kho na/d lsa/pn mi/d vdug/vi |

From the perspective of the category attribute characteristics of Tibetan position words, the position words assume the subject component in the sentence, which is the body part. The position word here belongs to the noun category. From the perspective of spatial relations, Carlson believes that spatial relations refer to the position of the first object by describing the relative position of an object to a second object. From the perspective of cognitive grammar, cognitive grammar studies grammar from the perspective of physical cognition, that is, using body attributes, activities and perception-motion systems, or interacting with physical experience to understand a language expression. From the example "Shr nub kyi rgya mtsho la blta ba vi pyogs nsa ri chen po a mnga du vdug", you can find out a few information points. First of all, this sentence is translated as "There are many mountains from the east and west of the sea." We can see from the sentence that the author has seen many mountains in the east and west of the sea, not in other directions. Secondly, because the sea is too wide in space, we can only see many mountains through the definition of orientation. According to Talmy's division of spatial scenes, the "many mountains" in the example are the focus, and "the east-west orientation of the sea" defines the extent of this focus in space. The Tibetan orientation word is used as the subject component here to define the spatial orientation. From the perspective of cognitive grammar, the example "from the east and west of the sea, there are many mountains", we know that "the east-west orientation of the sea" as a reference point for environmental cognition is a conceptual component, which helps reduce the conceptual workload. "There are many mountains from the east and west of the sea." The whole sentence is the way of understanding of conceptualists. "East-west orientation" is the projection of the conceptist's physical experience in the syntactic structure, and through the projection of the "many mountains" has a physical understanding.

3.2 Azimuth words bear the limited components of noun words

Through the statistical Tibetan texts, it is found that the orientation words are usually followed by the auxiliary words. Many words in the world have a "grid" category. Due to differences in language and language structure, the form and expression of the lattice are different. The traditional Tibetan language lattice uses a specific morphological sign (the auxiliary word) to reflect the dependence between words and words, and express the unique syntactic role of Tibetan. The traditional Tibetan language and its related categories can fully express the Tibetan sentence structure. At the same time, Tibetan language also contains semantic relations such as object, purpose, place, source, agent, victim, tool and time. [2] We further confirm from the corpus, as shown in Table 3:

| Position of the word | Industry | Position of the word | Genitive | Position of the word | Genitive | Position of the word | Genitive |
|---------------------|----------|---------------------|----------|---------------------|----------|---------------------|----------|
| rjes                | steng    | mla                 | vgrma    | gysa                | msa      | kyi                 |          |
It is found that the positional words in the sentence are connected with the lattice auxiliary words to form the corresponding components in the sentence. The helper words here not only play a role in connection, but also embody an extension meaning, allowing people to further read the exact location of the specific orientation. In addition, it involves the habit of using words, and the syntactic structure gradually becomes a linguistic phenomenon. From the perspective of cognitive grammar, the meaning stems from its own cognition, and it is positioned in strict accordance with the relative position of the speaking moment in the conceptualizer's field of vision, such as: In the three examples of "vphrin yig nnga du yod" means in the letter, "vphrin yig thog tu yod" means on the letter and "vphrin yig vog tu yod" means below the letter. On the top of example sentence are based on the relative vision of the conceptualizer. The location has positioned the target. Therefore, from the cognitive point of view, it is more concerned with its own cognition, which means that the synthetic positional words of "doorside", "head" and "back" in Chinese orientation words are more spatial than the meaning of simple orientation words. Then the simple positional words in the Tibetan orientation words are followed by the business or genitives in order to play the role of connection and concreteness. The true part of the word position is not the helper but the nouns and nouns in front of the positional words and verbs. Therefore, the Tibetan positional words embody the defining components of noun words in this sentence.

3.3 Orientation words bear lexical components

Human beings always grasp the two dimensions of time and space from the outside world. Because the living environment and situation of each community are inconsistent, the expression of each community language gradually serves the real life of the community. For example, in the Tibetan language, vocative (vbod sgra), for example, why there are many expressions in the Huge, such as: “wa ye kye kye kwa ye kho re”, etc. [3]. Among them, the choice of the form of the word in the specific context is based on the object's superiority, peers and contempt tone. In the long run, it has formed a syntactic rule that is customary. The orientation words are also the same, as shown in Table 4:

| Compound position word | Directional affix | Numeral affixes | pa ba suffix | ma suffix |
|------------------------|------------------|----------------|-------------|-----------|
| phyi nnga              | shra phyogs      | mthv bzhi     | lite ba     | bynga ma  |
| yna chda               | nub phyogs       | phyogs bzhi   | dbus pa     | phyi ma   |
| rgynga ring            | bynga phyogs     | Orientation vocabulary | cha suffix | snga ma    |
| nub bynga              | lho phyogs       | phra rol      | stod cha    | bra ma    |
| shra nub               | lho lho          | lho ri        | mla cha     | tha ma    |
| gysa gyon              | nub bynga        | nye vdboz     | Orientation dialect | snga ma    |
Judging from the use of real corpus, these lexical features have been relatively solidified. In the case of positional statistic, there are multiple orientation vocabularies with the same characteristics. We can make corresponding considerations in machine translation through this feature. There are three types of human cognition of language, namely semantic structure, phonological structure and symbolic structure (Langacker, 1987). From the perspective of cognitive grammar, the word class is found to be a symbolic structure of schema, a combination of form and meaning. In cognitive grammar, a noun is defined as a thing, the essence of which is to emboss a region in a cognitive domain, and the region is defined as a set of interconnected entities. Interconnection is related to the process of concept formation and cognitive processing in this process. It is the process of coordinating cognitive events at a lower level to produce higher-level cognitive events.

4. The orientation and time meaning of Tibetan orientation words

In 1983, Talmy proposed the language schematizes space. The process of schemaization is to systematically select all aspects of a reference scene, and to represent some aspects of the scene, however the rest of the scene is ignored. Furthermore, cognitive linguistic characterization has three sets of concepts: the base and the side, the background and the image, the landmark and the shot. [4]We use this concept to make the following analysis of the meaning of Tibetan orientation words:

1) cog tse/nthog/fu/psde cha/angcig/mjod/ve.
2) chu phrna/nvgrma/fdu/pla ling/angcig/mjod/ve.
3) vog/f tu/plhyung ha/vi vi/pg gtya rgyud/n.

The "thog vgrma vog" in the above example is a position word, and an indication of various orientations is indicated in the example. In Example 1), the target is located above the horizontal reference and in contact with the reference, wherein the target is wrapped by the reference; In Example 2), the object is located next to the horizontal reference object, and is not in contact with the reference material nor wrapped; In Example 3), the target is located near the lower side of the horizontal reference, and is not in contact with the reference or wrapped. From the perspective of the spatial meaning of the above positional words, the positional words are generally located after the subject component, and are often used together with the lattice aids that represent the position and orientation. These types of helper words generally include both business and genitive. The components in front of the position words are generally nouns and are used to indicate specific physical names. The "vog" in Tibetan is also the meaning of the word "below" is different from Chinese. In Chinese, the position of the word "down" in "four runs" does not refer to the four directions, instead, it has been replaced by four directions: “East, West, South, and North". [5] The “lower” positional word in Tibetan is often used in conjunction with the commercial auxiliary “tu”, which is only a specific orientation of a position. From the time meaning of the position word, there is an example: "dus tsh dgu thog tu za ma za"means"eat at nine o’clock" and so on. In the example" thog tu "means "up", "up"as a word indicating the location of an object is also used to describe the time of the particular object, thus achieving time and space integrity. The positional word not only assumes the subject component, the qualified component of the noun word and the lexical component in the linguistic fact, but also realizes the integrity and accuracy of the language expression in terms of spatial meaning and time.

5. Conclusion

In the limited component of the noun word, the meaning comes from its own cognition. It is based on the relative position of the speaking moment in the conceptualizer's field of vision. Then the simple positional words in the Tibetan orientation words are followed by the business or genitives in order to
play the role of connection and concreteness. The true part of the word position is not the helper but the nouns and nouns in front of the positional words. The lexicalization feature is a graphical symbolic structure of the word class, a combination of form and meaning. In the Tibetan position words, we can see that the compound position words, position affixes, numeral affixes, suffixes, suffixes and suffixes form a noun part of speech as a symbolic structure in the sentence. Furthermore, it is found from the orientation that the Tibetan orientation words and the business and genitive connections only express a specific orientation of a position. In order to realize the time and the integrity of space exists, it is found that the Tibetan orientation words are the descriptors of the time of the specific object from the time meaning. The article as a whole analyzes the semantic relationship of Tibetan position words in the cognitive framework.

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