FACTORS RELEVANT TO THE USE OF LOCATIVE NOUNS IN ENGLISH

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ABSTRACT

One of the important issues of spatial language research is what factors influence the use of spatial terms. The article focuses on spatial terms such as 'position' and 'area' as important components of spatial language and explores if their production and comprehension are affected by the same general factors that work for the core spatial terms. It is shown that the locative nouns' usage patterns employ the same properties of spatial scenes – geometric and functional – but in a different way: 'position' refers to the topological aspect of space whereas 'area' refers to the meronymic aspect of space.

Key words: spatial language, spatial cognition, geometric factors, functional factors, locative nouns

1. INTRODUCTION

Similarly to other conceptual domains, spatial domain can be represented by different language means, i. e. by separate language units, for example, by prepositions, by certain types of utterances, for example, by the construction 'something is somewhere', by the whole texts, for example, route directions. However, spatial domain is regarded as fundamental in cognitive system and as structural basis to metaphorically convey other domains of knowledge.

Prepositions are the prototypical language units to represent spatial knowledge therefore they have been studied most intensively and there is considerable body of knowledge about how they function in language use. However, there is much to be explored in other areas of spatial language. This article focuses on abstract spatial terms such as 'position' and 'area'. In contrast to prepositions they do not directly name spatial relations but they name the whole spatial scenes or their fragments. Taking into consideration that spatial relations encoded in prepositions are parts of those spatial scenes we expect that factors influencing the use of prepositions may also influence the use of the nouns in question.

What factors influence the use of spatial terms is one of the important issues of spatial language research [1- 3]. Recent works show that knowledge associated with a definite language unit is far more complex than that of spatio-geometric properties of the spatial scene. It even applies to prepositions as core components of spatial language.

Thus, V. Evans writes about the simple relations model which focuses only on the so-called simple relations, i. e. geometric, in accounting for parameters responsible for the use of prepositions. He notes that this model is not complete and that correct interpretation of 'spatial' lexical concepts requires their functional understanding. By functional he means the following. “To understand how language users employ the core ‘spatial’ lexical concept of a preposition we must also allow for non-spatial parameters which form part of the linguistic content encoded by the lexical concept. The use of the term ‘functional’ is motivated by the observation that such non-spatial parameters are a functional consequence of humanly relevant interactions with the spatio-geometric properties in question” [4].

Coventry et al confirm that “there is now a large body of evidence documenting the importance of a range of so-called ‘extra-geometric’ variables that affect the comprehension and production of a range of spatial prepositions” [5]. They come to the conclusion that “spatial language comprehension is associated with a situational representation of how objects usually function, and thus can invoke a range of types of perceptual simulations, including motion processing where attention is directed to objects not mentioned in the sentence to be evaluated” [5].

The importance of functional factor and its close relations, even indissociability, with geometric factor in the production and comprehension of spatial language is now evidenced by many researchers [6, 7].

Significance of the functional component of spatial knowledge is understandable as the central point in spatial representation is a human being for whom space is not limited to a set of geometric properties but it is where everything exists and serves purpose.

Another factor that is paramount for producing and interpreting spatial language is Figure-Ground alignment [8, 9]. The terms taken from Gestalt psychology has proved their productivity in relation to semantic events of motion and location. L. Talmy defines the two terms for the use in linguistic semantics in the following way. “The Figure object is a moving or conceptually movable point whose path or site is conceived as a variable the particular value of which is the salient issue. The Ground object is a reference-point, having a stationary setting within a reference-frame, with respect to which the Figure's path or site receives characterization” [8].

These general factors of spatial language use are relevant for understanding abstract spatial nouns described in this article.

2. METHODS

This research employs usage-based approach which accounts for how language is used in real situations and contexts. “Central to the usage-based position is the hypothesis that instances of use impact the cognitive representation of language... Exemplar representations are rich memory representations; they contain, at least potentially, all the information a language user can perceive in a linguistic experience. This information consists of phonetic detail, including redundant and

variable features, the lexical items and constructions used, the meaning, inferences made from this meaning and from the context, and properties of the social, physical and linguistic context" [10].

In line with this approach our research focuses on the contexts in which spatial nouns occur most frequently. The contexts may be represented as collocations, constructions or even situations. Quantitative studies are important for a usage-based approach as they give the idea of the scope of experience with language.

Corpus study was used to collect the nouns' patterns of use and to perform quantitative analysis of the language data. The corpus that served these purposes was the British National Corpus. Quantitative study was followed by semantic analysis of the collected language data.

3. MAIN PART

The patterns of use of the spatial nouns show what features of spatial scenes become salient. For 'position' geometric factor is important. The definition of the noun is the following: position – "the way someone stands or sits, or the direction in which an object is pointing" (Longman Dictionary of Contemporary English. Edinburgh, 2000). The definition shows that 'position' focuses attention on object's spatial relation to the environment or the relation of object's parts to each other. The frequent situations in which 'position' occurs are those of human functional states: *a standing/sitting/lying position*.

Situationally dependent functional postures, i. e. those that are taken to perform certain actions in contrast to the mentioned above that are connected with biological nature of a human being are *kneeling/squatting position*. Other collocations represent types of the functional states mentioned above: *upright position (=sitting/standing), lotus position (=sitting), prone position (=lying), supine position (=lying), straddle position (=sitting/standing)*. Geometric variants of the functional states are represented by collocations with dimensional adjectives such as *vertical/horizontal position* and *top/middle/low position, front/back position, right/left position*.

The properties described above are also revealed in comparative analysis of nouns 'position' and 'place'. 'Place' implies that object is fixed in space. This noun's usage in the context with motion verbs refers to the forward movement as it is shown in the following example: *We kept moving from place to place*. The sentence demonstrates that motion leads to the change of place, it implies covering some distance. The following sentence also contains the verb 'move' but as a component of the context for the noun 'position': *The dancers moved from position to position*. Compared to the previous example, in this one there is no distance being covered, no change of place, there is movement of the parts of the body in relation to each other. Since in both examples the same construction is used with the only difference in the nouns that are the components of the construction, it is the spatial nouns that are responsible for the difference observed.

So, the use of the noun 'position' proves the importance of both geometric and functional factors. Configuration of the parts of the object may be purely spatial or may be conjoined with functional states.

The use of the noun 'area' is influenced by Figure and Ground alignment. It is worth noting that the use of the noun does not only demonstrate how Figure and Ground are perceived but it also produces evidence for how bounds are imposed on components of spatial scenes via language. Spatial scene construed by language has salient components dependent on the Figure and Ground reversals, which is the result of active processing of the visual information. Semantic variability of the locative nouns especially of the noun 'area' is relevant for referring to spatial scenes whose configuration may be various depending on how they are perceived.

The component of the spatial scene is conceptualised as Figure in the noun's collocations with adjectives: *nearby area, adjoining area, separate area, surrounding area*. Similar conceptualisations are found in the following combinations: *both areas, some areas, groups of areas, many areas, most areas, all areas*.

Figure-Ground alignment is naturally demonstrated in the use of the noun 'area' with prepositions as the prevailing factor of their functioning is geometric. In the following collocations 'area' represents Ground: *within the area, in the area, into the area, to the area, through the area, along the area, throughout the area*.

Fragment of the spatial scene named by the noun 'area' is conceptualised as Ground when the spatial scene is perceived as filled with objects. There are several contextual patterns of this kind in which 'area' occurs. They include the following:

a) 'Area' in combination with the verb 'fill', that conceptualises the scene as filled with objects: *The courthouse was one side of a large square, and the area was already filled with people milling about, laughing and chattering…*

b) The noun 'area' in combination with "geometric" verbs: *All three operas are set in the Bingen-Biebrich-Mainz area which is dotted with castles, fortresses, and notable rock formations*.

c) The noun 'area' in the context with language units conveying the idea of presence of something in the spatial scene: *An excess of endemics in Sinai is perhaps due to the unusually vast area and the presence within this area of high mountains*.

d) There is / are construction as part of the clause referring to the noun 'area': *It was recognized that Tyrone was likely to be the area in which there would be activity subsequent to the activities in Belfast*.

e) The use of the noun 'area' in the X of Y construction that may be transformed into a clause with there is / are construction : *It is an area of (=where there are) curious rock formations and small, narrow valleys*.

Spatio-geometric factor in the use of the noun 'area' is bound with functional factor. The importance of the latter is shown in the following contexts:

a) In combination with 'use', 'exploit', 'serve' and similar verbs: *The area is used mainly for livestock production. They exploit various parts of the area for different purposes*.

b) In collocations where the dependent component describes various spheres of human activity: *vacation area, manufacturing area, industrial area, work area, swimming area, recreation area, picnic area, dining area*.

c) In collocations with the preposition 'for': *area for formal affairs, area for informal entertaining, play areas for the young and young at heart, play area for the young ones to use some energy, areas for visitor information display*.

It is evident that the use of the noun 'area' reveals the importance of both geometric and functional factors.

4. CONCLUSION

Research into spatial language in cognitive linguistics is mostly concentrated on prepositions as core linguistic means of representing spatial relations. Other areas of spatial domain do not enjoy equal scope of attention from researchers. This article is aimed at filling in this gap by focusing on the study of the locative nouns 'position' and 'area'.

In the research presented here, it is hypothesized that production and understanding of the locative nouns in question may be influenced by the same factors that prove their relevance for the use of prepositions.

The abundance of research on prepositions demonstrates the importance of several factors in their use. However, there is a growing body of evidence that knowledge underlying prepositions may be more complex than that associated with one factor and may represent interplay of various factors. Among the most significant ones there are spatio-geometric and functional factors. Equally important is Figure-Ground alignment, that is almost unquestionable parameter of spatial scenes since it manifests one of the most important properties of human perception.

Employing usage-based approach our research focuses on the contexts in which spatial nouns occur most frequently. The contexts may be represented as collocations, constructions or even situations.

Usage patterns in which the noun 'position' occurs show that it refers to an object's spatial relation to the environment or the relation of an object's parts to each other. Configuration of the parts of the object may be purely spatial or may be conjoined with functional states, which proves the importance of both geometric and functional factors.

Usage patterns in which the noun 'area' occurs fall into two groups: geometric factor group and functional factor group. The former is subdivided into area-as-Figure subgroup and area-as-Ground subgroup. Spatio-geometric factor in the use of the noun 'area' is bound with functional factor.

The interrelation of two factors and Figure-Ground variation in the use of the noun also show that describing spatial scenes a human being defines functional fragments of space as areas creating boundaries where they are not shaped geometrically.

Our research shows that production and understanding of the locative nouns in question are influenced by the same factors that prove their relevance for the use of prepositions.

Although the use of the two locative nouns is influenced by the same factors the way geometric and functional properties of spatial scenes are employed in the use of each noun is quite different. The analysis of the most frequent usage patterns allows to differentiate the two nouns in the following way. The noun 'position' refers to the topological aspect of space whereas the noun 'area' refers to the meronymic aspect of space.

5. RESULTS

1. Abstract locative nouns are important components of spatial language whose production and comprehension are affected by the same general factors that work for the core spatial terms: geometric factor, functional factor, Figure-Ground alignment.
2. The locative nouns' usage patterns employ the same properties of spatial scenes – geometric and functional – but in a different way.
3. The noun 'position' refers to an object's spatial relation to the environment or the relation of an object's parts to each other. Configuration of the parts of the object may be purely spatial or may be conjoined with functional states, which proves the importance of both geometric and functional factors.
4. In description of spatial scenes functional fragments of space are defined as areas creating boundaries where they are not shaped geometrically.
5. The noun 'position' refers to the topological aspect of space whereas the noun 'area' refers to the meronymic aspect of space.

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