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# Some preliminary remarks on spatial distinctions in Lithuanian

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The aim of this paper is to provide a conceptual framework for the description of spatial expressions in Lithuanian. Until now, only structuralist descriptions of Lithuanian spatial expressions have been offered. The author argues that the structuralist approach should be abandoned in favour of a cognitive one, and introduces a number of basic notions which the now classical studies by such authors as Talmy and Herskovits have proved to be useful tools for investigating the conceptualization of space in language.

### 1. INTRODUCTORY REMARKS

Spatial cognition in the Baltic languages has not been thoroughly studied so far. Previous linguistic studies of spatial relations, by such authors as Valiulytė (1995, 1998) or Šukys (1998) as well as the descriptions in the Academy Grammar of Lithuanian are rather limited in scope and based on the structural method of description. This mode of description provides us with a wide variety of lists, compiled on the basis of the morphological or syntactic structure of verbs or phrases. From the point of view of cognitive linguistics, this is not quite the result that should be produced by research into the spatial system of language. As I will attempt to prove in the further parts of this paper, in order to describe spatial structuring and to understand the origin of some so far quite cursorily described spatial phrases in Lithuanian (e.g., the so-called compound prepositions or samplaikiniai prielinksniai), one should, first of all, recognize and understand the way in which speakers conceptualize space and objects located within it. Cognitive description is at present commonly regarded as the most appropriate paradigm for the exploration of spatial systems in natural language.

The foundations for the cognitive study of space have been laid in the early seventies<sup>1</sup>, along with the very first descriptions of spatial categories. It is thus a quite recently established discipline, and the advantages associated with it are undeniable. Like other new ideas, it is conducive to experiments, to the development of new research tools and, last but not least, to interdisciplinary contacts, as cognitive research eagerly takes advantage of methods and conceptions developed by other disciplines that are not strictly connected with linguistics.

The developmental path of cognitive linguistics from its beginnings till current research was depicted in accessible way by Ungerer & Schmid (1996).

The primary aim of this paper is to provide, in a tentative way, a basic conceptual framework for the description of the Lithuanian spatial system. The basic geometric and dimensional distinctions marked in Lithuanian will also be briefly characterized. The descriptive framework I have made use of is based, on the one hand, on studies focusing on spatial structuring as conceived in cognitive linguistics (Talmy 1983), and, on the other hand, on studies whose aim is to present an analysis of the semantics and pragmatics of locative expressions (Herskovits 1986). Owing to the significant differences between the English system of spatial expressions investigated in the above-mentioned studies and the Lithuanian one, some elements of description are formulated in a slightly different way, adjusted to the general structural properties of the Lithuanian language<sup>2</sup>.

# 2. THE PRIMARY BREAKUP OF A SPATIAL SCENE. SCHEMATIZATION

It is an obvious and undisputed fact that everybody perceives his surroundings, and thereby space in general, as a set of specific elements, visible or located through senses other than sight, as in (1):

Už sienos dainavo vaikai.
 'The children were singing behind the wall'.

At the level of linguistic structure, a spatial scene cannot be represented by all of the components that can be perceived through the human senses. When we take a look at any sentence describing spatial relations, it becomes clear that only a few relevant components of reality are singled out to represent the whole referent scene. The remaining components are left out of consideration.

Thus, it would not be correct to say that a spatial scene is represented in language just as a complex of many elements related to each other in a specific way. As noticed by Talmy, language uses its closed-class elements<sup>3</sup> as well as the structure of the sentence to single out certain elements which are relevant to the description of spatial relations. This kind of process has acquired the name of SCHEMATIZATION.

In the course of this process, one portion of the spatial scene is singled out for primary focus. Its spatial features, viz. its site when stationary, its path when moving, and its orientation within the referent scene, regardless of movement, are characterized in terms of another portion of the scene. Sometimes a third portion may be involved as well<sup>4</sup>. These objects can be provisionally referred to as 'primary object' and 'secondary object'.

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A class of words of morphemes whose membership is fixed and can be listed, e.g. personal pronouns (cf. Matthews 1997: 57).

The so-called 'Secondary Ground'. This problem will not be discussed in the present paper, for further description cf. Talmy (1983).

The selection of secondary elements or REFERENCE OBJECTS, used for characterizing the Primary Object's spatial features, is not accidental. The reference object selected within the scene has a location, and sometimes also geometrical properties, that are already known, or assumed to be known, to the addressee. This is a necessary prerequisite, as it is only under such conditions that an object can be used as a point of reference.

Site, path, or orientation of the primary object can be indicated in terms of distance as well as by describing its relation to the geometry of the second object:

- Dviratis stovėjo šalia mokyklos.
   'The bike stood near the school'.
- (3) Jonas gulėjo skersai lovos.'John was lying across the bed'.

As we see in (2), the location of the primary object, the bike, is characterized by *šalia* in terms of distance from the location of the school, without any further information on the geometrical properties of any object. Information of a different type is involved in (3), where certain obvious geometrical properties of objects and relations between them are described by means of the preposition *skersai*. The basic information relating to spatial orientation and geometry of the objects characterized in (3) can be briefly summarized as follows: (a) the objects are collocated (distance), and (b) the length of one of the objects is perpendicular to the other's width. The geometrical properties of the primary and secondary objects will be discussed in more detail in the second part of this paper.

Apart from certain properties of the objects, known or assumed to be know to the addressee, and from orientation in space, the distribution of referencing functions is usually determined by some additional relations between two objects, selected as primary and secondary. Talmy proposes for these relations the following kind of alignment (the table is reproduced as in Talmy, 1983: 230–231):

TABLE 1. PROPERTIES OF PRIMARY AND SECONDARY OBJECTS

	PRIMARY OBJECT	SECONDARY OBJECT
a	has spatial variables to be determined	acts as a reference object with known
		spatial characteristics
b	more movable	more permanently located
С	smaller	larger
d	conceived as geometrically simpler	taken to have greater geometric
	(often point-like)	complexity

## CONTINUATION OF TABLE 1

	PRIMARY OBJECT	SECONDARY OBJECT
е	more salient	more backgrounded
	more recently on the scene / in awareness	earlier on the scene / in memory

This table reflects the assumption that two objects, located in the reference scene, are usually not of equal status. This assumption can be conveniently illustrated by example (2). If both objects were equal in status, we could just interchange them and create a pair of sentences carrying the same meaning. As we see in (4) and (4'), such an interchange does not produce a correct sentence; although there is no violation of grammatical rules in the asterisked sentence (4'), it sounds unnatural:

- (4) Dviratis stovėjo šalia mokyklos.'The bike stood near the school':
- (4') \*Mokykla stovėjo šalia dviračio. \*'The school stood near the bike'.

It should be noted, however, that there are cases when relatively large and more permanently located objects are not used as points of reference. This is observed when the main purpose of the use of an expression is to identify an object rather than to describe its spatial properties. In such a case, the location of the object is left out of consideration, as in:

- (5) Kalnas, kuris šiuo momentu yra po lėktuvu, vadinasi Mount Shasta. 'The mountain under the plane just now is Mount Shasta'.
- (6) Paduok man šitą knygą šalia pieštuko! 'Give me the book next to the pencil!'5

Thus, when the main purpose is just to identify the object without paying attention to its spatial properties, the criteria for choosing primary and secondary object may depart from the general principles.

# 2.1 Prototypes and ideal meanings

The asymmetry observed in (4) is conditioned mainly by the semantic function of both nouns, i. e., by our common knowledge of the world, in which buildings are generally larger than objects like a bike and have also a more permanent location. According to the prototype theory of word meaning, when we think of a school and a bike we use prototypical instances of buildings and vehicles and then we relate par-

<sup>&</sup>lt;sup>5</sup> Cf. Herskovits (1986: 36–38).

ticular types of objects to these instances. Thus, prototypes enable us to establish the approximate size and mobility of the objects and to classify them in this way as a Primary or Secondary Object, according to the table above.

The use of prototypes in the description of meanings enables us to assume a quite coherent categorization of the world and to describe some aspects of spatial modelling in a more straightforward way. It allows us to understand the way language users treat objects in their utterances. Of course, there are no prototypes in the real world, and when describing designates we should rather speak of degrees of prototypicality. Thus, prototypes should be conceived of as a gradient category that allows us to classify objects and their cognition in a more consistent way.

Prototypes are generally useful for the description of the spatial properties of individual objects. In order to give a more detailed account of spatial relationships between two or more objects as described, for instance, by prepositional phrases, an additional notion is needed that could be used as an auxiliary descriptive tool and that would represent the most clear and obvious spatial situations, thereby providing a basis for further description. For such 'most typical' situations Herskovits (1986) proposes the term IDEAL MEANING.

The ideal meaning of a preposition may be comprehended as simple relation, proposed as the meaning of a preposition in grammars and linguistic studies. It is a relation between two or more geometrically ideal objects, such as points or lines. Thus, all possible uses of concrete prepositions are derived from an ideal meaning, using various, less or more significant transformations. Some clear instances of the ideal meaning and its modified use are provided by one of the basic topological prepositions, *ant*. The most characteristic instance of the use of *ant* will be a situation in which an object of average size (e.g. a book) is located on a flat, horizontal surface. There are also two essential conditions that must be satisfied in order for this preposition to be used: (a) the primary object must be in direct contiguity with the surface; (b) the reference object must support the primary object. All the stipulations just listed can be easily found in expressions like:

(7) Knyga yra ant stalo. 'The book is on the table'.

This expression will normally be interpreted as meaning that the book is directly on the table, without tablecloth, and that the book is not on top of a pile of other books located on the table; under these circumstances one can say that example (7) reflects the ideal meaning of the preposition *ant*<sup>6</sup>.

On the other hand, one could also imagine a situation where location is replaced with movement and there is no direct contiguity, though support is still required. This can be interpreted as a further adaptation of the ideal meaning described above:

Herskovits (1986: 49) defines the ideal meaning of the English preposition on in the following way: "[...] on: for a geometric construct X to be contiguous with a line or surface Y; if Y is the surface of an object  $O_{y}$ , and X is the space occupied by another object  $O_{y}$ , for  $O_{y}$  to support  $O_{y}$ ."

(8) Ant grindų žaidė Jonukas, baisiai purvindamas kilimą.
'Johnny was playing on the floor, soiling the carpet terribly'.

In the following example, the requirements with regard to contiguity and support are not met at all:

(9) Simbolis išraižytas ant akmens.'A symbol carved on the stone'.

Expressions (8) and (9) are quite distant from the ideal meaning, as various adaptations and shifts have been applied. But both examples can still be interpreted as varieties of the 'optimal situation' shown in (7). On the other hand, our knowledge of the secondary object and certain instances of the use of locative expressions suggest a second possibility, as the meaning of the locative case is conceptually close to instances like (9). Thus, for part of the Lithuanian language users, the following expression will probably also be acceptable, alongside (9):

(10) Simbolis išraižytas akmenyje. 'A symbol carved in the stone'.

# 2.2 Figure & Ground (Reference Object)

The primary and secondary objects described above for the purposes of schematization and basic breakup of a spatial scene are working terms, and they sound rather vague. For a more concise and transparent spatial description one should use conventional, standardized terms. Linguists working so far on space have employed many different, but in fact very similar notions. Among all these terms the pair used by Talmy seems to be quite suggestive and useful. Talmy has noticed a close similarity between the theory of 'first' an 'secondary' objects and Gestalt Psychology, which makes use of the notions of FIGURE and GROUND. He gives the following characterization of the Figure and Ground, appropriate for linguistic purposes (Talmy 1983: 232):

The Figure is a moving or conceptually moveable object, whose site, path, or orientation is conceived as a variable the particular value of which is the salient issue.

The Ground is a reference object (itself having a stationary setting within a reference frame) with respect to which the Figure's site, path, or orientation receives characterization.

As Talmy concedes, for some types of situations the notion of Reference Object may be more expressive than that of Ground, so that it may be in use instead. This terminological usage will be followed in the further parts of this paper.

# 3. FIGURE AND GROUND GEOMETRIES AND THEIR RELATIONS

The constituent parts of the language system are related to space, and its closedclass elements ascribe to objects certain spatial properties. Spatial studies commonly term them GEOMETRIES.

One should say that the geometry of the Figure is usually characterized by spatial elements in a more straightforward way than that of the Ground. Thus, in most cases, the Figure may be interpreted just as a point-like, i.e. symmetrical, non-biased object, or as a similar kind of simple form. Nevertheless, one can also find cases where the geometry ascribed to the Figure is quite complex. The most striking example of a preposition that attributes a set of geometrical features to the Figure is *skersai* 'across'. One is able do describe at least a few of the properties indicated by this preposition, which is also possible for the English examples analyzed by Herskovits and Talmy. A typical instance is provided by sentence (11):

(11) Lenta gulėjo skersai geležinkelio bėgių. 'The board lay across the railway bed'.

The basic meaning elements conveyed by this preposition are that *lenta* (the Figure) is linear and the Ground represented by *bėgiai* is a narrow fragment of a plane with two parallel edges. One could describe such type of objects as 'ribbonal'. Apart from this basic information, the Figure's relations to the Ground may be specified in the following way<sup>7</sup>:

- 1) the Figure is a linear object, bounded at both ends;
- 2) the Ground is a 'ribbonal' type of object;
- 3) the Figure is horizontal and thus parallel to the plane of the Ground;
- 4) Figure and Ground are approximately perpendicular;
- 5) the Figure borders on the plane of the Ground and is supported by it;
- 6) the length of the Figure cannot be shorter than the width of the Ground;
- 7) both sides of the Figure stick out (approximately evenly) of the Ground's plane.

All factors specified above are equally relevant. It should be emphasized that one cannot describe them as components of the IDEAL MEANING of the preposition *skersai*. Within the 'ideal meaning' of a preposition, certain shifts and adaptations are acceptable, and such shifts do not cause another preposition to be used. On the other hand, the factors listed above are integral components of the meaning of the preposition *skersai* and if one of them is absent, another preposition must be used. For instance, when the Figure's length is smaller then the Ground's width (condition 6), the preposition *ant* must be used:

(12) Lenta gulėjo ant geležinkelio bėgių kelio. 'The board lay on the railway bed'.

Thus, in some cases the Figure's geometries are depicted in more complex way than just as a point. There is one peculiar type of Figure, described in various ways in the linguistic literature, which seems to be commonly used in most languages. It refers to a point-like or linear Figure which is moving along a linear, specified path (the Ground). Sometimes one can refer in a similar way to a stationary, linear Figure by using a variety of verbs suggesting movement:

(13) Kelias eina netoli kaimo.
'The road runs near the house'.

This virtual movement can be implied here because the Figure is linear, i. e., it may be conceptualized in a way which is markedly different from the way point-like objects are conceptualized. According to Talmy, such a Figure "is scanned along its length by one's focus of attention". This kind of interpretation appears quite useful as a means of describing what has been called 'dynamic localization', viz. a situation when a verb of motion is used though no physical translocation is involved in the expression. The structural method of description yields no explanation for such uses, as it focuses attention on grammatical structure, in which there is no factor motivating the use of a verb of motion. The explanation can only be found outside the structure – in the way the Figure is conceptualized. The only way of accounting for this 'virtual movement' is adopting a cognitive analysis.

Unlike what we observe for the Figure, the closed-class elements of language provide us, in most cases, with a broad range of geometric distinctions for the Ground (Reference Object). For instance, one could speak of a gradable 'partiteness' of the Reference object, which can be expressed by various parts of language system. English uses appropriate prepositions for this; they are bolded in example (14). In Lithuanian the range of prepositional indexes is not so wide, but it is possible to distinguish a similar number of Ground types, depending on its complexity. The examples in (14) illustrate how different degrees of complexity of the Ground are expressed in Lithuanian, using also non-prepositional means:

- (14 a) Jonas stovėjo prie namo. 'John stood near the house'.
- (14 b) Jonas stovėjo tarp namų. 'John stood between the houses'.
- (14 c) Jonas dingo tarp medžių. 'John disappeared among the trees'.
- (14 d) Jonas žingsniavo vidury tūkstančių demonstracijos dalyvių. 'John marched amidst the thousands of the demonstrators'.
- (14 e) *Jonas brovėsi per minią*. 'John struggled **through** the crowd'.

In the expressions exemplified in (14), one can define the Ground's 'partiteness' as follows: in (a) the Ground is a single point, in (b) it is represented by a pair of points, in (c) the Ground is interpreted as a set of points – more than two, but not too many, and in (d) as an 'aggregate, continuous mass' (as defined by Talmy). The sentence in (e) shows a Ground which can be characterized as a 'medium', viz. something more intimately blended and homogeneous than the 'continuous mass' in example (d).

## 3.1 Biased Ground Geometry

In most of the instances described above, the Ground's geometries are fully regular. However, it should be kept in mind that in most cases Reference Objects are asymmetric, and that they have a directional structure and often also clearly distinguishable parts. Such a 'biased' geometry underlies a broad range of specific spatial distinctions. Reference objects with distinguishable parts usually group them into opposed pairs. One can easily distinguish objects with one such pair (usually this will be a 'front-back' or 'top-bottom' opposition); a more typical model is a three-pair, cube-type object (e.g., a building), which has also a left and a right side. Expressions referring to such an object may localize the Figure as being in physical contact with the Reference Object, as in:

(15) Ant dešinės pastato sienos yra žibintas.
'There is a streetlight on the right wall of the building'.

Another kind of expressions places an object in the direct vicinity of a biased part of the Ground:

(16) Dviratis yra prie pastato užpakalinio įėjimo. 'The bike is at the back entrance of the building'.

The third type of expressions contains information on the Figure as being located at a specified distance from the defined part of the Reference Object, as in:

(17) Telefono būdelė yra dešinėn nuo neseniai nudažytos pastato pusės.
'The phone booth is to the right of the freshly painted side of the building'.

As we can see, a classification of spatial expressions locating the Figure with reference to defined parts of the Ground may be carried out according to different criteria; in the above examples, the criterion of distance is involved.

Biasing of the object's parts is not the only kind of asymmetry that can be observed among Reference Objects. Some of them have also biased directedness. Opposite directions are often set by an axis linking a pair of opposed, asymmetric parts (like a queue, for instance, whose direction is determined by the axis linking its head and its end). In some cases one is able to describe direction on the basis of certain properties of the object without referring to any specific part of it, as in the frequently quoted

example of a river, whose direction can easily be established though its biased parts – source and mouth – are not referred to in normal use. The river is, of course, a peculiar case, as it is an object of nature. Such natural points of reference, among which we may number the Earth itself, are regularly used for structuring space and play a crucial part in cognition processes. Thorough research in this field would certainly yield interesting results.

# 4. THE COGNITIVE POINT OF VIEW AS AN ALTERNATIVE TO STRUCTURAL DESCRIPTION

The main purpose of the foregoing parts of this paper was to give a brief, general introduction to cognitive description, and to prepare the ground for practical application of this method in Lithuanian. We will now turn to particular instances and our purpose will be to present an alternative to the traditional structural approach, and to look for a possibility of describing spatial relations in new, more convincing way. The compound prepositions mentioned in the introduction can serve as a good example here, as the academic grammars describe them in a way that is more than laconic.

The academic grammars of Lithuanian do not offer any classification of the compound prepositions. All they provide is concise information about the morphological structure of compound prepositions and one-sentence definitions of their meaning, followed by lists of examples selected in a random way from Lithuanian literature and dialectological archives. The authors of the definitions referred to here do not recognize any differences between peculiar types of spatial cognition and they postulate, particularly for compound prepositions, the existence of synonyms, although one can see that the examples they list do not represent a homogeneous class. The inadequacy of this approach will be briefly illustrated below in connection with two particular spatial expressions, *iš už* and *iš anapus* 'from behind, beyond', in order to show the advantages of the research tool provided by cognitive science, which enables to describe such pairs of preposition in more exhaustive way.

All compound prepositions of Lithuanian consist of two basic prepositions, each of which has its own meaning. The first component, consisting of the prepositions  $i\bar{s}$  and  $i^{\bar{s}}$ , is common to all. It carries ablative or ablative meaning and does not have any influence on the way in which Reference Object is conceptualized. More important information is stored in the second part of this peculiar structure – in this particular case, in the prepositions  $u\bar{z}$  and anapus. All the differences that may be observed among the examples are related to the second preposition, which distinguishes the Ground from the spatial scene and determines the meaning of the whole phrase. Thus, one should first of all study the way Reference Objects are conceptualized, and on the basis of the results gained from this, describe analogous differences connected with compound prepositions, which in this specific case include ablative meaning.

The compound preposition už anapus can be treated as pleonastic and is not dealt with in this study.

Among the uses of the prepositions  $u\check{z}$  quoted in the academic grammar and Lithuanian dictionaries, one can single out at least three kinds of phrases in which  $u\check{z}$  cannot be used interchangeably with *anapus*. The first is illustrated in (18):

(18) Nuskintą rūtos šakelę Akelaitis užkišo už kasos jaunesniajai Balsytei. 'Akelaitis stuck the rue twig he had picked behind the younger Balsyte's plait'.

This instance assumes direct, physical contact between the Figure (*rūtos šakelė*) and the Ground (*kasa*). In addition there is another necessary criterion – the primary object is supported by the secondary object. These conditions, connected with certain topological features of both objects, which are relatively small and are both within sight, exclude the use of the preposition *anapus* in this example.

The second instance contains information on a certain distance, which, once measured off, marks a virtual border beyond which the action described by the verb takes place:

(19) Gyveno jisai už kokios mylios, valdžios miškuose. 'He lived some mile away, in the government forests'.

In this example a certain border is introduced to mark the Ground by means the preposition  $u\check{z}$ . As was the case in (18), it is not possible just to change the preposition to anapus. This is conditioned by certain geometrical properties of the Reference Object (mylia) which does not have opposed front and back sides, so that one cannot speak of its 'other side'. For this reason the preposition anapus is excluded here as well.

The last example that which will be used here with the aim of presenting the situations reserved for the preposition  $u\check{z}$  is sentence (20):

(20) Greitai jie užbėgo už krūmų, nusileido pakalnėn ir dingo. 'They quickly ran behind the bushes, descended a hill and disappeared'.

In this particular case the preposition  $u\check{z}$ , additionally supported by the prefix  $u\check{z}$ , indicates certain reference space which is immediately adjacent to the rear part of the Ground. The Figure is localized within this volume of space, and due to certain topological features of the Ground, it is no longer visible to the speaker's eye. The preposition anapus happens to be used in similar instances, but the phrase  $u\check{z}b\dot{e}go$  anapus  $kr\bar{u}mu$  applied in this concrete example would sound quite odd. Anapus is more appropriate when applied to the description of another kind of Reference Objects, viz. larger elements of a landscape or borders set by Nature; moreover, apart from the geometrical properties of the Ground, distances described by anapus are, in most cases, considerably greater, e.g. anapus upės, girios 'beyond the river, the forest'.

The three instances cited above show situations in which the prepositions  $u\check{z}$  and anapus, described as synonyms in Lithuanian grammar, cannot be used interchangeably. This is conditioned by certain slight differences between the geometrical fea-

tures and the localization of the Reference Objects indicated by the prepositional phrases. This way of conceptualization also determines certain differences between the ablative equivalents of these prepositions. As said above, the first part of the compound preposition contains information on how the activity is oriented with respect to the reference space (in this case it has ablative meaning. i.e., it describes an activity or movement which starts in the Reference Space and is aimed away from it). All the remaining information, including all the properties of the Ground, is stored in the second component of the preposition. Thus, certain differences existing between non-compound prepositions are preserved when compound prepositions are created. The reference space indicated by the phrases does not change, only the direction of the activity changes. Thus, if the meaning of prepositions už and anapus can, in some cases, be grasped in different ways, the corresponding ablative phrases iš už and iš anapus cannot be described as synonyms either, as they were described so far in structural approaches.

The above remarks were meant to give a general idea of the advantages the cognitive approach offers in investigating spatial relations and the way they are reflected in language. Cognitive research into the conceptualization of space as reflected by Lithuanian spatial expressions will no doubt partly confirm the results obtained for other languages, such as English, but a study focusing specifically on the Lithuanian material will certainly yield new insights into the way language conceptualizes space; on the other hand, its will also contribute to a more adequate grammatical and lexicographical description of spatial expression in Lithuanian.

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