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## Construal operations having to do with overall structure

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The article analyzes cognitive operations having to do with overall structure. Overall structure is considered in terms of structural schematization, force dynamics, and relationality.

**Key words:** cognitive operations, overall structure, structural schematization, force dynamics, and relationality.

**Бокун І. А. Інтерпретативні операції, пов'язані з загальною структурою.** Проаналізовано когнітивні операції, які включають загальну структуру. Загальну структуру розглянуто у межах структурної схематизації, динаміки сили.

**Ключові слова:** когнітивні операції, загальна структура, структурна схематизація, динаміка сили.

**Бокун И. А. Операции интерпретации, связанные с общей структурой.** Анализируются когнитивные операции, затрагивающие общую структуру. Общая структура рассматривается в рамках структурной схематизации, динамики силы и относительности.

**Ключевые слова:** когнитивные операции, общая структура, структурная схематизация, динамика силы, относительность.

**The scientific problem and its importance.** In Cognitive Linguistics construal is a way of understanding an aspect of the world. It is used in the sense of interpretation or conceptualization [3, 227]. When we say that an entity or situation is construed in a particular way, what we mean is that it is interpreted or conceptualized in some way. Often there are several different ways of conceptualizing the same «thing». We call such different ways of conceptualizing the same thing alternative construal. Alternative construal may be achieved by means of a variety of cognitive operations, such as categorization, framing, metaphor, and others. We can often categorize, frame, or metaphorically understand the same thing in several different ways.

The notion of alternative construal changes our conception of meaning. In the new view, meaning is not to be identified with conceptual content alone; it is constituted by *conceptual content, as well as the construal of that content*. In many cases, the construal aspect of meaning plays a more important function in discourse than conceptual content.

Construal operations have been discussed by a number of cognitive linguists. The four who proposed a classification, or taxonomy, of such mental operations are Ronald Langacker [4], Leonard Talmy [6], and William Croft and Alan Cruse [2]. Here we will follow Croft and Cruse's classification in its general outline because theirs seems to be the most comprehensive one and takes into account the results of the other two authors.

Croft and Cruse[2] provide a four-way classification of construal operations. First, there are construal operations that have to do with *attention*. A second group is based on what they call *judgment* and *comparison*. A third group is organized around the operation of taking a *perspective* on an entity. Fourth and finally, a group of construal operations relies on how we establish the *overall structure* of entities and events. I have already described construal operations having to do with *attention* [1].

**The aim of this paper** is to examine thoroughly operations that we use to make sense of the overall structure of entities and events in a scene. For this purpose, we have three extremely basic operations at our disposal: structural schematization, force dynamics, and relationality [2]. **The task of this paper** is to describe and analyze these three operations in detail.

**Basic material and the results of the research.** One aspect of the operation of structural schematization is concerned with whether the entities in a scene are individuated or not [2; 4].

For most purposes, we construe *a dress, a desk, a car, and a flower* as individuated or «bounded entities». We see them as individuated entities in spatiotemporal reality. When we conceptualize «things» in this way, we code them linguistically as count nouns.

By contrast, things that we conceptualize as nonindividuated are «unbounded entities». Typical examples include *meat, sand, copper*, and so forth. Such entities are linguistically coded as mass nouns.

When we perceive a large number of bounded entities, we can construe them as «multiple bounded entities». Multiple bounded entities appear as plural count nouns in language. Thus, we talk about *dresses, desks, cars, and flowers*.

However, we can also construe many bounded entities as «unbounded entities». For example, if we see many cars, we can alternatively refer to them as *transport*. The word *transport* is a singular mass noun that is unbounded. Similarly, we can think of several instances of computers, scanners, and so on, as *hardware* and refer to them by the singular mass noun *hardware*.

There is an interesting difference in construal between bounded entities conceptualized as bounded entities and bounded entities conceptualized as unbounded entities (resulting in mass nouns). The conceptualization of a large number of bounded entities as unbounded ones, such as *hardware* and *transport*, suggests a coarse-grained construal, whereas the conceptualization of a large number of bounded entities, such as *flowers, desks*, taken collectively, suggests a fine-grained construal. In short, to see a large number of bounded entities as a mass ignores many of the details that are characteristic of the conceptualization of individual entities.

Multiple bounded entities can also be construed as a singular bounded entity. For example, *a crew* or *a department* consists of multiple bounded entities that we conceptualize as a unit. The conceptualization of multiple bounded entities as a unit results in singular count nouns, such as *crew* or *department*.

Interestingly, the bounded-unbounded distinction can be extended to the analysis of states—and not just entities. Consider the following two sentences:

(1) *She is thick.*

(2) *She is being thick.*

The difference between the use of the «simple present tense» and the «present continuous tense» in the two sentences can be accounted for by the bounded-unbounded distinction. The simple present tense suggests the construal of the situation as unbounded (as in the first sentence), whereas the present continuous tense suggests the construal of the situation as bounded (as in the second sentence). What this means is that the simple present «draws» no temporal boundaries around the state, whereas the present continuous presents the state as having temporal boundaries relative to the «now» of the speech event.

Another aspect of the overall structure of entities concerns their image-schematic structure. The understanding of situations in terms of image-schemas can be metaphorical; that is, not only physical entities can be conceptualized in terms of image-schemas but also states and events. Since image schemas were thoroughly discussed by Kövesces [3, 240–242], I will make only a few observations that seem relevant to the study of alternative conceptualization based on image-schemas [2; 4; 5].

First, the same entity can be construed in different ways in different languages. Compare, for instance, the noun *bush* in English and Ukrainian:

(3) *There is a bird in the bush.*

*На кущі сиділа пташка.*

As these two sentences indicate, in English the entity *bush* is conceptualized as a container, whereas in Ukrainian it is construed as a surface.

As a matter of fact, even two dialects of the same language can reveal alternative construal for the same entity. Let us take the entity *street* and how this is talked about in American and British English:

(4) *The children were warned not to play on this street.*

(5) *The children were warned not to play in this street.*

The entity is viewed as a surface in American English, whereas it is seen as a container in British English.

Second, the same image-schema-based linguistic expression can be differentially interpreted depending on context. Consider the preposition *under*.

When we say that someone stood under the tree, we think of a canonical position in which the person is standing under the lowest branches of a tree and is above the ground. Compare, however, the following two sentences:

(6) *She was under the tree.*

(7) *She was buried under the tree.*

Given the first sentence, we imagine the person to be standing in the canonical position, that is, standing (or sitting) above the ground under the lowest branches of the tree. However, the second sentence suggests another construal for the expression *under the tree*, namely, that the person is lying under the surface of the ground in the region under the branches of the tree. In other words, we may have a canonical interpretation for the expression in many cases, but in the appropriate context this canonical interpretation, or construal, can be significantly modified.

Let us take another example:

(8) *The dog was under the table.*

Here again, when we hear the preceding sentence, we are inclined to imagine the dog as being under the tabletop – not under the legs of the table. That is the canonical, more conventional position for the dog to be in. In other contexts, though, such as a situation after an earthquake, one could imagine a dog as being under the legs of the table – not simply under the tabletop. In other words, the very same sentence can be used to denote very different situations.

Third, following Langacker, Taylor [5] draws a distinction between «simple» and «complex relations». A simple relation is one where we construe a single relation between the trajector and landmark. Take the phrase *the picture above the sofa* [5, 217]. We construe a single relation between the picture and the sofa. The word *above* represents a simple relation between the trajector (picture) and the landmark (sofa). Other words that designate simple relations include stative verbs, such as *be*, *stand*, *lie*, and *resemble*. If you say that someone resembles someone else, you are construing a static, unchanging relation between the trajector and landmark.

By contrast, complex relations involve the construal of multiple relations between trajector and landmark. As Taylor notes, the verb *leave* designates a number of relations between the two. First you as trajector are in an entity (landmark); then you move through a series of locations to a place that is out of the landmark entity. Dynamic verbs are good examples of words that construe the situation in terms of multiple relations between the trajector and landmark. Other examples include prepositions such as *across*. Compare the following two sentences:

(9) *I walked across the forest.*

(10) *He lives across the forest.*

In the first sentence we have a complex relation between the trajector (I) and the landmark (forest). As I walk across the forest, I occupy a number of different locations along the path of movement. These different locations represent a series of different relations between me and the forest. In the second sentence, however, there is only a single relation – a simple one – between me and the forest.

**Now let me focus on force dynamics. Kövescs briefly introduced force dynamics in [3, 242], where he showed how we can interpret various emotion metaphors as the interaction of forces between the self and the emotion. Following Len Talmy [6], he distinguished two entities that affect each other in a force-dynamic interaction: the agonist (typically corresponding to the self) and the antagonist (typically corresponding to the emotion and the cause of emotion) [3, 242].**

More generally, we can think of force dynamics as a cognitive operation that is used in the conceptualization of events. Whenever we interpret an event, we are interpreting the interplay of forces in the situation. The notions of «agonist» and «antagonist» are helpful in the discussion of how one entity affects or does not affect another entity in the same event. The antagonist can be defined as the entity that causes another entity to change its force tendency (either to rest or to act). The entity that is caused to change its force tendency is the agonist. The agonist has a force tendency to either rest or action (motion), whereas the antagonist has a force tendency to cause change (action or motion) in the agonist.

Take the following sentences from Croft and Cruse [2, 66]:

(11) *I kicked the ball.*

(12) *I held the ball.*

(13) *I dropped the ball.*

We have three different kinds of causation involved in the three sentences: direct causation, causation as resistance to change, and causation as enablement. In the first sentence, *I* is the antagonist that causes the *ball* to move and the *ball* is the agonist that has a force tendency to rest. This is an example of direct



causation. In the second sentence, the antagonist causes the agonist (which has a force tendency to move) to not move, meaning that the antagonist does not allow the *ball* to move (i.e., there is resistance to change). In the third sentence, the antagonist does not succeed in resisting the force tendency of the agonist, thus effectively enabling the *ball* to move. Thus, the antagonist actually causes change in the first sentence, resists change in the second, and enables change in the third.

This generalized pattern of causation in terms of force dynamics stands in contrast to cases where we do not construe the situation as involving forces in interaction with each other. These are stative situations, which we conceptualize as lacking any force-dynamic interaction. Compare the following two sentences:

(14) *The kettle was on the table.*

(15) *The kettle stayed on the table.*

When we use the first sentence, we do not construe the relationship between the kettle and the table as force-dynamically related. The sentence is simply the expression of a static spatial relationship between the two entities. However, the second sentence does imply a force-dynamic construal. It suggests that the kettle stayed on the table despite a force acting on it. What the force acting on the kettle is, is not specified by the sentence.

Although force dynamics as a construal operation is primarily used for the conceptualization of causation, it can also be applied to other domains. These other domains that involve force dynamics will be the areas of our further research.

Now let me analyse relationality. Conceptual entities can be construed as being related or unrelated to other entities [4]. The construal of entities as being unrelated, that is, conceptually autonomous, results in the grammatical category of **NOUNS**. The construal of conceptual entities as being related results in the grammatical category of **VERBS, MODIFIERS, and PREPOSITIONS**. They indicate entities that are not conceptually autonomous. As an example, let us take the sentence

(16) *Jumpers jump high.*

In the sentence, the noun  *jumper*  is construed as a conceptually autonomous entity, while the verb  *jump*  and the modifier  *high*  are conceptually nonautonomous. In general, we can characterize verbs, modifiers, and nouns in the following way:

*Verbs:* conceptual entities construed as *relational* and *sequentially scanned* (i.e., temporal): *jump*

*Modifiers:* conceptual entities construed as *relational* and *summarily scanned* (i.e., atemporal): *high*

*Nouns:* conceptual entities construed as *nonrelational* and *summarily scanned* (i.e., atemporal):  *jumper*

As can be seen, this characterization makes use of both the relationality of conceptual entities and the particular way of mentally scanning them (sequential vs. summary scanning). Conceptually independent entities are «things», whereas conceptually dependent ones are «relations». These latter are processes in time. The two major word classes, nouns and verbs, correspond to things and relations, respectively.

In this view, the same situation can be construed as either a thing or a relation. When we talk about the *collapse of the Town Bridge*, we construe a dynamic situation as thinglike, with static attention and summary scanning (vs. dynamic attention and sequential scanning, as in *The Town bridge collapsed*), that is, as being nonrelational and atemporal. Another example for the same phenomenon would be the pair of sentences:

(17) a. *He suffered severely.*

b. *His suffering was severe.*

The first sentence conceptualizes an experience as a relational and temporal event, while the second views it as nonrelational and atemporal.

Thus, prototypical nouns are conceptual entities that profile things, are conceptually autonomous, and are time-stable. Good examples are nouns like *boot, bush, and stand*.

Finally, there are many nouns that refer to relations – not things. Such nouns include relational nouns, like *daughter, son, aunt, nephew*, and so on. The phrase *the aunt of Natasha* (as in *Marina is the aunt of Natasha*) profiles a thing in a relation. The relation is between the entities, or «things», Marina and Natasha, and it is that of being an aunt. In other words, the noun phrase *the aunt of* profiles a thing in the relation between two entities.

**In conclusion**, construals are particular ways of understanding the world. As we saw, the relationship between language (linguistic expressions), construal, and the world is manifold. The *same linguistic*

*expression* may be used to refer to *different aspects of the same situation* (e.g., *window* can refer to the pane or the frame). *Different linguistic expressions* may be used to reflect *different construals of the same situation* (e.g., *walk across the field* and *walk through the field*). All of these possibilities involve cases of alternative construal.

The main job of the embodied mind is the understanding of the world. The capacity of the mind for alternative construal is one extremely important aspect of the process of comprehending the world. There are many cognitive operations that we use for the purpose of alternative construal. One of them has been identified in this article, namely, cognitive operations having to do with overall structure.

**Further research** will cover other domains that involve force dynamics. Besides, it is interesting also to explore relationship between the construal operations and culture.

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### Vom praktischen Nutzen der Prototypentheorie für den Bereich der Syntax des Deutschen

*Die Arbeit wurde im Lehrstuhl für deutsche Philologie der Wolyner Lessja-Ukrainka-Nationaluniversität gemacht*

In dem Artikel wird die Anwendung der Prototypentheorie in der Phonologie, der Morphologie, der Semantik, der Textlinguistik, insbesondere im Bereich der Syntax, dargelegt und analysiert. Für jede syntaktische Funktion (das Subjekt, das Prädikat, das Objekt, das Adverbial, das Attribut) wird eine Auflistung prototypischer Eigenschaften geboten.

**Schlüssel Wörter:** der Prototyp, prototypische Eigenschaft, syntaktische Funktion.

**Галицька О. Б. Практичний погляд на синтаксис німецької мови через призму теорії прототипів.**

У статті розглянуто практичне застосування теорії прототипів у різних сферах лінгвістики. Проаналізовано прототипний підхід до синтаксису німецької мови та визначено перелік прототипних ознак для кожної синтаксичної функції (підмета, присудка, додатка, обставини, означення).

**Ключові слова:** прототип, прототипна ознака, синтаксична функція.

**Галицкая Е. Б. Практический взгляд на синтаксис немецкого языка сквозь призму теории прототипов.** В статье рассматривается практическая реализация теории прототипов в разных сферах лингвистики. Предлагается применение прототипического подхода для синтаксического анализа и приводится перечень про-