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CONSTRUCTION GRAMMAR: BASIC PRINCIPLES AND CONCEPTS

The article provides an overview of Construction Grammar. First, a general survey of the basic principles and major strands of the grammatical theory is given. The main assumptions include the recognition that all linguistic knowledge is of the same type as knowledge in general and follows the same principles such as categorization, abstraction and generalization.

In the second part, the presentation focuses on two important elements of construction grammar research: the concept of the construction as complex sign and the abandoning of the distinction between lexicon and grammar.

Using examples from Ukrainian, the different relationships between constructions of different complexity and schematicity in the so-called construction – the common space of both lexical and grammatical knowledge – are described. It is shown, how abstract constructions offer slots for other elements and how these are constrained regarding form and meaning. In addition, the status of constructions as complex signs is assessed from the perspective of semantics and compositionality. It is highlighted that Construction Grammar rejects the assumption of compositionality and rather conceptualizes meaning as determined by the construction itself. At the same time, semantics is understood in an encyclopaedic sense, which renders the description of constructions highly detailed and language-specific.

Keywords: Construction Grammar, Ukrainian, Constructions, Sign, Grammatical Theory.

1. Introduction. Since Chomsky's rejection of the behaviourist paradigm, syntax theory as an attempt to model cognitive processes taking place during speaking and listening has taken centre stage in linguistics. In addition to a still strong formal perspective in Western linguistics and functional grammars, from the 1980s onwards an approach has developed that to some extent unites these two antipodes of syntax research: Cognitive Linguistics. In contrast to the formal and functional approaches, which are also in principle cognitive to the extent that they do not consider the speaker's mind to be a black box, Cognitive Linguistics attempts to apply exclusively those principles to language description that are also used in other cognitive

disciplines such as psychology. Cognitive Linguistics is a multifaceted theory of language that combines several theories (e.g. Metaphor Theory and Frame Semantics). One of those is Construction Grammar, which so to speak represents the grammatical extension of Cognitive Linguistics. In the following, its main features will be presented on the basis of Ukrainian examples.

2. Construction Grammar. Under the name Construction Grammar (abbreviated as “CxG”), a family of theories is summarized, which is based on the conviction that linguistic form and linguistic meaning do not represent levels independent of each other, but are inseparably interconnected. Construction Grammar assumes that associative form-meaning pairs are not only the basis for words, but that all linguistic knowledge is stored in such symbolic connections.

This conviction is first based on the observation that speakers use resources that do not have to be generated with every utterance but are stored as fixed units in the mental lexicon. Langacker defines such a linguistic unit as “thoroughly mastered structure, i.e. one that a speaker can activate as a preassembled whole without attending to the specifics of its internal composition” [Langacker 1991 : 15]. At the same time, construction grammatsists emphasize that “(i) even semantically opaque expressions (idioms) may share certain aspects of regular syntactic structure with fully productive syntactic expressions <...> and (ii) even seemingly transparent syntactic structures may involve all sorts of unpredictable constraints that cannot be simply derived from the syntax alone <...>” [Fried 2015 : 2; cf. also Langacker 1987 : 59]. While most theories of grammar certainly operate with the concept of construction, they see it merely as an exception to rule-based syntactic structures. Construction Grammar, however, does not limit the use of constructions to special cases. Rather, it focuses on these units and assumes that the entire language system is exclusively based on constructions [Stefanowitsch : 20]. It is assumed that constructions exist on all traditional levels of linguistic description. Constructions can be words, more or less fixed idioms, collocations, verb class specific argument structures, partially filled words (morphemes), argument structures or even turns and texts. The linguistic description within the framework of Construction Grammar thus attempts to capture all kinds of linguistic knowl-

edge in one concept, emphasizing that both regular and irregular patterns serve the goal of communication equally well. This implies that no or no strict separation between grammar and lexicon is assumed. Instead, linguistic knowledge is understood as learnable symbolic links between form and meaning all the way through.

Table 1
Several examples of constructions

| Construction type | Form ¹ | Meaning | Example |
|----------------------------------|-------------------------------|-------------------------|--|
| lexical morpheme | [MICTO] | ‘city’ | місто |
| partially filled word (morpheme) | [__-у] | ‘patient’ | дівчин-у |
| Idiom | [ГРАТИ <i>першу скрипку</i>] | ‘Be the most important’ | У цьому проекті <i>першу скрипку</i> грав Олександр. |
| Sentence pattern | [V + NNOM + NACC + NDAT] | ‘Transfer’ | передала мати лист синові |

Construction Grammar can be located as a theory within Cognitive Linguistics. The cognitive orientation of Construction Grammar is not only lip service but concerns the core of the grammatical theory. The goal of Construction Grammar is to develop a language theory that includes all linguistic knowledge regardless of its regularity and simultaneously depicts linguistic behaviour as creative and repetitive [Goldberg 2013 : 26]. Furthermore, the description not only aims at the language system itself, but also at its acquisition, storage and processing. This distinguishes Construction grammar from other grammatical theories, which often concentrate on purely linguistic, sometimes even purely “syntactic” questions. The epistemological interest of Construction Grammar is not so much to develop a well-functioning model for the generation of linguistic structures, but to develop a psychologically realistic

¹ Throughout the paper, the following notational conventions are used: [] = linguistic unit (construction); __ = slot; ___{SUBSCRIPT} = semantic restriction of a slot; CAPITALS = morphological paradigm; *italics* = fixed form.

description of the nature of language as one of many cognitive and social systems available to humans [Fried 2015 : 1]. Construction Grammar is therefore not primarily a theory about linguistic systems, but about linguistic knowledge [Stefanowitsch : 12], the processing of which is based on general cognitive and communicative strategies.

The linguistic interest in constructions is not new and can at least be traced back to the Latin grammar writers [Goldberg 2006]. Even American structuralism and early versions of generative approaches used the term construction [Schönefeld]. The constructional approaches, however, developed primarily in contrast to Generative Linguistics and focus on the concept of construction.

The early studies developed the basic features of Construction Grammar mainly for so-called peripheral linguistic structures, for which generative analyses offered no solution [Fillmore 1988 : 36], for example in George Lakoff's work on English constructions with here and there [Lakoff], Knud Lambrechts analysis of colloquial French constructions [Lambrecht] or in the article by Charles Fillmore, Paul Kay and Catherine O'Connor on *let alone*-construction [Fillmore et al. 1988]. A conceptually very similar approach was developed simultaneously by Ronald Langacker [1987], even though he did not (yet) refer to his analyses as construction grammatical.

3. Construction Grammars. The so-called Construction Grammar is not a monolithic theory, but a family of approaches that share important fundamental assumptions about the nature of language.

The different theories, which are called Construction Grammar, differ in some theoretical details and in their methodological approaches. However, there is a core of assumptions that unites all constructional theories. Fischer, Stefanowitsch and Goldberg identify the following four principles:

1. All linguistic knowledge (whether explicit or implicit) consists of learned pairings of form and meaning (constructions). Both lexicon and grammar are based on constructions, so there is no separation between the two.

2. The meaning of constructions is directly connected with the perceptible form. There are no derivations or transformations in language processing. Meaning and form are not stored in different modules, but inseparably linked with each other.

3. Constructions form a network of reciprocal interdependencies with hierarchical and inheritance relationships.

4. There is no set of universal, innate constructions, neither intra-linguistically nor cross-linguistically. Generalizations that can be analysed across languages are the result of common cognitive strategies [Fischer, Stefanowitsch : 4–5; Goldberg 2013 : 15–16].

There are also a number of assumptions that differ between the theories (see [Fischer, Stefanowitsch] for a discussion). This starts with very general theoretical premises. Some construction grammars attempt to be psycholinguistically realistic or at least plausible (Goldberg's Cognitive CxG, Croft's Radical CxG, Langacker's Cognitive Grammar, cf. Fried [Fried 2015 : 5]), while others attach less importance to this (Berkeley CxG, cf. Kay [Kay]). At the same time, there are differences in the conception of the task of a grammatical model as such. Some assume that a grammar should be able to generate grammatical utterances (or sentences) or make general predictions about the form and meaning of utterances [Hoffmann, Trousdale : 3], while others take the view that it is not grammar but speakers who generate sentences, while the language system can only motivate and license possible structures [Langacker 1986 : 17]. The relationships between individual constructions are also discussed diversely. While some assume that abstract and schematic constructions inherit their properties from less schematic ones [Goldberg 1995 : 16], others prefer an approach without inheritance [Trousdale]. Among the authors who accept inheritance, it is controversial whether it should be full or partial. In addition, there are dividing lines between the individual construction grammars concerning the universality of constructions, the formalisation of the model, the issue of compositionality and the semantics of constructions, which I will discuss later in more detail. Overviews and comparisons of the different construction grammars can be found in [Croft 2007; Goldberg 2006; Langacker 2005; Fischer, Stefanowitsch].

4. The Constructicon. Construction Grammar assumes that form-meaning pairs, which are called constructions, can cover all linguistic knowledge. It is assumed that all linguistic information is conventionalized in constructions. Therefore, the concept of construction covers every linguistic level of description from morphology

to syntax and description of texts. Since constructions themselves are closed-class items, they are said to be stored in the *constructicon* that, like the lexicon for words, contains the sum of all constructions.

The respective constructions differ, so the assumption, not in their basic architecture, but in (i) their complexity, i.e. in whether they incorporate smaller symbolic components, and (ii) in their schematicity, i.e. in the proportion of phonologically or otherwise formally specified elements. In addition, constructions form networks. These networks arise partly from less complex constructions being connected to more complex ones, and partly from schematic constructions being created by generalizations over specific constructions.

4.1. Complexity. Constructions differ in whether they are complex or not. Simplex constructions are known as morphemes or words and are often referred to as lexical constructions. Complex constructions incorporate other elements, either semantic, phonological or symbolic. Complex constructions, for example, are idiomatic coincidences. The possible complexity of constructions is independent of their schematicity.

The phrase [*hi napu 3 ycm*; 'keep quiet'] differs from the lexical construction [*micmo*; 'city'] in its complexity in that it incorporates several lexical constructions.

4.2. Schematicity. The formal side of the constructions in (1) is fully specified, no deviation from this form is permitted if the constructions' meanings are to be communicated. However, there are also constructions which allow a certain variability in their form. Thus, the idiom [теревені ____VERB] can be found in the following variants a. *теревені правити*. This is called flexibility.

(2) a. *теревені* правити
b. *теревені* розводити
c. *теревені* точити
d. *теревені* розпустити
e. *теревені* городити

The construction therefore consists of fully specified (*передовіні*) and partially specified elements (the list of possible verbs). Under-specified elements are referred to as slots. As soon as a construction contains slots, it can be called schematic. The degree of schematicity can increase regardless of complexity. For example, the construction [чорна вівця; ‘black sheep’] is not schematic because both elements are prescribed. The forms in (3) on the other hand are based on the slightly more schematic construction [ЧОРН-TIME; ‘bad time’]. In principle, only the first element {ЧОРН-} is defined here. The slot behind it is phonologically not specified, but only semantically, since any element that can be inserted here has to signify a period of time. However, since there are not many such time expressions, the variability is rather small. The similar constructs in (4) have been licensed by the even more schematic construction [ЧОРН-NOUN; ‘bad/dangerous X’] that can assign the property of being bad or dangerous to basically any noun (although mostly to human agents) inserted into the slot. Basically, the construction in (3) is a more specific type of the construction underlying the examples in (4).

- (3) a. *чорний день*
 b. *чорний рік*
- (4) a. *Чорний Козак* (Film)
 b. *чорна магія*

Both the construction [чорна вівця; ‘black sheep’] and the constructions [ЧОРН-TIME; ‘bad time’] and [ЧОРН-NOUN; ‘bad / dangerous X’] are based on an even more schematic construction: the modification construction [ADJ NOUN; ‘X of the type Y’] [Fried 2015 : 9]. Both elements of this construction are phonologically unspecified, so it can license forms as in (5), which have no idiomatic character. However, the speaker must have learned the modification construction to understand that the first element that he or she can identify as a property modifies the second element that is an object or a unit that can be construed as an object. That this conventionalization is important for correct inter-

pretation can be seen when the order is reversed (6), and a predicative expression is obtained. Here it becomes clear that the meaning of the expressions ('a chicken with the property of being black', 'a building with the property of being beautiful') is not simply the sum of the two components involved. In order to achieve an integration of the meanings and thus a possible interpretation, the schematic modification construction must have been learned.

- (5) a. *чорне курча*
 b. *гарний будинок*
- (6) a. *курча чорне*
 b. *будинок гарний*

The least complex partial schematic constructions are morphological constructions [Booij 2007a; Booij 2007b]. Goldberg calls them "partially filled words (aka morphemes)" [Goldberg 2013 : 15–16]. For example, the Ukrainian agent noun construction $[_{\text{VERB}}\text{-}a\chi]$; 'someone who VERBs'] has a specific phonological element known as word formation morpheme { $a\chi$ }. However, the unit / $a\chi$ / cannot occur alone (hence traditionally described as a bound morpheme) but can only be produced in conjunction with a verb stem as for example in *засідув-аχ* and *гляд-аχ*. This lack of independence of the unit / $a\chi$ / refers not only to its form, but also to its meaning. In fact, it is not the morpheme that carries the information 'agent noun', but rather all nouns that contain the element / $a\chi$ / happen to denominate agents who carry out the activity expressed by the verb stem. So, the function or meaning of agency is not connected to the element / $a\chi$ /, but to the whole unit. We hence call this meaning the constructional meaning [Booij 2007b : 11]. Construction Grammar looks at this communicative unit as a whole and defines its components with regard to the role they play within this whole. The word formation construction $[_{\text{VERB}}\text{-}a\chi]$; 'someone who VERBs'] therefore formally consists of a phonologically specified element / $a\chi$ / and an empty spot. Semantically, the construction designates an agent and contains a semantic restriction of the slot: Only linguistic elements that express an action (verbs, that is) can be used.

Also and above all more complex constructions can show a high degree of schematicity. The best known and most discussed examples are argument structure constructions as described by Goldberg [1995]. Depending on the language, argument structures on the form pole specify case markers or define the position of the construction's components. The Ukrainian transitive construction, for example, formally specifies only (and not in all cases) the marking on the patient. The usual notation is $[N_{NOM} V N_{ACC}]$, where N_{ACC} stands for a paradigm that includes forms such as *сулиц-ю* and *Андрi-я*. The transitive construction, however, is merely an abstraction, which speakers achieve by generalizing over actually occurring and partially specified constructions.

The maximally schematic transitive construction is therefore just like the modification construction the head of a hierarchy of constructions whose phonological form and meaning become increasingly concrete (see [Croft 2001; Booij 2007b; de Beule, Steels]. Traugott distinguishes between macro-constructions (highest level), meso-constructions (similar constructions), micro-constructions (individual construction types) and constructs (tokens) [Traugott] (see also [Diewald : 451]):

Table 2
Levels of constructional schematicity

| Level | Construction | Meaning |
|--------------------|--|--|
| macro-construction | $[N_{NOM} V N_{ACC}]$ | ‘someone acts on something’ |
| meso-construction | $[N_{NOM} \text{ЛОВИТИ} N_{ACC}]$ | ‘someone catches something’ |
| micro-construction | $[N_{NOM} \text{ЛОВИТИ} N_{ACC.ANIMAL}]$ $[N_{NOM} \text{ЛОВИТИ} \text{момент}]$ $[N_{NOM} \text{ЛОВИТИ} \text{тави}]$ | ‘someone hunts an animal’ ‘someone uses a fitting moment’ ‘someone is inattentive’ |
| construct | <i>[Хлопці ловлять метеликів]</i> | ‘The guys hunt (for) butterflies’ |

In addition, the complexity can also differ between schematic constructions. In some cases, it is possible to display relationships that include the inheritance of certain properties. For example, the transitive construction may be “related” to the ditransitive construction and to the so-called caused-motion construction, since both also express a transitive process. For Ukrainian, it makes sense to assume that the ditransitive construction and the caused-motion construction are also incorporated in another construction, the “caused transfer construction” or “transfer caused motion construction” [Goldberg 1995 : 93]. The constructions thus form a network of related (however not hierarchically connected, but independent) structures, see *Figure 1*.

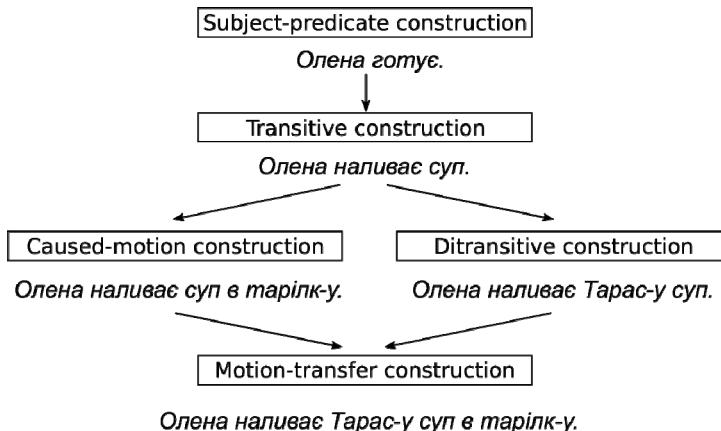


Figure 1: Network of argument structure constructions
(cf. Goldberg 1995 : 109)

4.3. Slots. Complex schematic constructions have slots in which other constructions can be inserted. These slots are under-specified, but not unspecified. All slots are at least semantically restricted. The components of constructions are often subject to rather fine-grained restrictions with regard to the properties that are required for another construction to be integrated into this slot. Depending on whether grammatical categories are accepted as meaningful abstractions, general categorizations of this type can also be part of the semantic restrictions of slots. The slot before the accusative marker in the Ukrainian transitive

construction $[_N.NOM _V _ACC]$ for example is semantically defined as an object (i.e. entity) or any linguistic unit that can be interpreted as an object. Thus, also actions can be inserted – if they are construed as entities. The verbal slot in the ditransitive construction is somewhat more specific and allows only verbs belonging to a limited number of semantic verb classes. Goldberg [1995] identifies for the English construction verbs of generation, attainment, giving, commitment, future possession, permission, and rejection. For the [ЧОРН- $_TIME$; ‘bad time’] construction described above, the slot is limited in that it can only be filled with an element that can be interpreted as a timespan.

The definitions of a slot are often (or always) based on a prime example (an *exemplar* [Bybee 2010 : 81]). For the English ditransitive construction, this exemplar is the verb GIVE, as shown by Stefanowitsch and Gries. Prototypical representatives, i.e. exemplars, of empty slots also play a decisive role in language acquisition [Casenhiser, Goldberg].

The question as to which degree of abstraction and generalization is plausible for the processing and storage of constructions is subject to the same considerations as they were presented on the form and meaning of constructions. Concretely this means that “while abstract constructions may be sufficient for comprehension, for production we need to refer to more detailed information” [Boas : 132]. Bybee thus states that a “schematic slot in a construction might consist of a list of all the items that have occurred in that slot (as predicted by an exemplar model), or it might be considered a set of abstract semantic features that constrains the slot, as usually proposed. It could, of course, be both” [Bybee 2013 : 57].

In addition to semantic restrictions or specifications, slots can also have phonological constraints [Steels et al. : 208]. In Ukrainian, constructions involving case marking usually specify the production of palatalized allophones of the dorsal plosives /k/ and /g/ and the dorsal fricative /χ/ at the syllable end if the case marker has an initial /i/ (e.g., dative singular feminine (*рука – руци*) and nominative plural masculine (*друг – друзи*)). Slots can also carry pragmatic constraints, such as allowing only stressed elements in certain constructions.

In general, Construction Grammar allows the speaker to insert all linguistic units into the slots of schematic constructions that correspond or at least do not violate their semantic, phonological, pragmatic or other limitations. If the slot of a construction allows the insertion of the same construction, constructions can also be recursively combined.

If a speaker wishes to insert an element that violates one or more of the constraints, the construction may in some cases impose (coerce) these features onto the insertion. It should not be forgotten, however, that many constraints traditionally attributed to words or morphemes (e.g., argument structure) are understood in Construction Grammar as features of constructions and do not lead to constraint violations.

4.4. Networks. Constructions form different networks based on complexity and schematicity. The transitive construction is thus horizontally connected with other argument structure constructions which have the same components and a similar degree of schematicity (Figure 1). On the other hand, the transitive construction is vertically related to more concrete constructions and phrasemes, which have the same structure as the transitive construction. In a usage-based approach, as Langacker [2009 : 173] points out, the transitive construction, like all other macro-constructions, is not an independent unit, but an abstraction from the more concrete constructions and possibly also phrasemes. When we talk about a transitive construction, all its manifestations will always be taken into account.

Constructions thus exist in different degrees of complexity and schematicity. Some examples are listed here (The names of the constructions are given here ad-hoc. A serious denomination requires a detailed analysis first):

Table 3
Constructions at various degrees of complexity

| Construction | Form | Example (Construct) |
|------------------------------------|------------------------------|---------------------|
| “Grammatical” constructions | | |
| Superlative construction | [най-_____ADJ-ий] | най-гарні-ший |
| Word formation construction | | |
| Agent noun construction | [_____VERB-ац] | переклад-ац |
| Relational construction | [_____NOUN-ськ-] | київ-ськ-ий |
| Compound noun | [_____NOUN-о-_____NOUN] | вод-о-провід |
| Verb-noun compound | [_____NOUN-о-_____VERB-ення] | слов-о-сполуч-ення |

End of the table 3

| Construction | Form | Example (Construct) |
|--------------------------------|--|--|
| Syntactic constructions | | |
| Verb-group construction | [<u> </u> VERB- <i>ся</i> <u> </u> N.GEN] Verb = бояти-, побоювати-, страхати-, лякати-, жахати- | лякатися грому |
| Ditransitive construction | [<u> </u> N.NOM <u> </u> VERB <u> </u> N.ACC <u> </u> N.DAT] | Я дала подарунок брату |
| Phrasemes | | |
| filled | [<i>ні пари з уст</i>] | Сашко не випустив ні пари з уст |
| partially filled | [ЗАРУБАТИ <i>собі на</i> <i>носі</i>] [ДАТИ (<i>драла</i> <i>ходу</i> <i>дьору</i>)] | Я зарубав собі на носі Марічка дала дьору |
| minimally filled | [<i>що</i> <u> </u> ADJ.COMP <i>то</i> <u> </u> ADJ.COMP] [<u> </u> N <u> </u> PREP <u> </u> N] | що гучніше то краще Ми проведемо реформи крок за кроком |
| Textual constructions | | |
| Fairy tale construction | [Був собі <u> </u>] | Були собі дід і баба... |
| Narrative construction | [Orientation + Complicating Action + Evaluation] | Вчора я зустріла Петра в метро. + Ми разом спустилися по ескалатору. І раптом він послизнувся і впав. + Я страшенно злякалася. |

The combination of the properties +/- complex and +/- schematic results in a two-dimensional continuum [Langacker 2005 : 108]. Only lexical morphemes, i.e. traditional signs, are both concrete and simplex. Phrasemes are complex to varying degrees but can reach a high degree of complexity. Their meaning is quite concrete, but rarely as concrete as the meaning of lexical morphemes. In terms of

complexity, argument structure constructions are similar, but at the same time are also very schematic. However, they do not achieve the highest degree of schematicity, since they are still linked to a concrete idea of a situation [Goldberg 1995 : 5] and mostly have clearly defined surface forms. Less complex, but more schematic than argument structure constructions are constructions such the subject-predicate construction. Constructions that are simultaneously simplex and maximally schematic are not actually accepted so far. However, usage-based concepts of parts of speech would be possible candidates here [Broccias : 194]. For they are a cognitive unit that has no fixed form and never incorporates additional symbolic elements. The construction thus consists of a single, semantically defined slot and represent “functional prototypes, as specific focal points along a continuum of categoriality” [Fried 2015 : 4].

5. Constructions as complex signs. Constructions are linguistic signs as described by de Saussure [Saussure et al.]. They consist of an “image acoustique” on the form side and a meaning on the other side; both sides, the signifier and the signified, are connected by conventionalization; the connection between form and meaning is arbitrary, although sometimes motivated by the background of an existing linguistic system, and the function of a construction is often shaped by its position within a systematic network. Constructions differ from the signs of de Saussure in that they are complex and can also be schematic. Construction Grammar is a continuation of Saussure’s work insofar as it detaches the concept of the sign from the lexicon and establishes it as the universal ordering principle of language. Not only the form side of the sign is extended, but also the meaning side. The idea of Construction Grammar is that all grammatical, all linguistic knowledge is stored in signs, in constructions. Conversely, this means that all linguistic knowledge consists of the same data type: Fixed pairings of form and meaning.

Constructionist approaches differ from other grammatical theories in that they do not give priority to the form side or the meaning side over the other [Croft 2001 : 170]. Rather, linguistic knowledge can be located in the symbolic link between the two sides. Just as the “image acoustique” and the meaning cannot be separated from each other, the two sides of a construction cannot be separated from each other. Constructions are “all conventionalized linguistic expressions

<...> that fulfil the following conditions: (i) their form is directly paired with a certain meaning or function, (ii) their form cannot be (or not completely) derived from other forms of language, and (iii) their semantics are not (or not completely) compositional” [Fischer, Stefanowitsch : 6] (*translation mine*). In contrast to many other grammatical theories, construction grammarians are convinced that the description of a construction must be very extensive both on the formal and especially on the semantic side, since “<...> constructions reflect the interplay of myriad conceptual and functional factors” [Langacker 2009 : 174]. A construction is therefore not “simply” the pairing of a form with an easily definable meaning but encompasses all the knowledge necessary to use this construction in communication. This can be phonological restrictions for the selection of an affix, phonological specifications, prosodic characteristics, semantic characteristics, pragmatic limitations or structural information or information about the frequency of use [Steels et al. : 208].

Constructions are also defined by their connections to other constructions. Schematic constructions have connections to the elements or other constructions that occur in their slots (coined *collostructions* by Stefanowitsch and Gries) and to other constructions with which they are used together (collocations). Phrasemes have connections to more schematic constructions with which they form a hierarchy. In this connectedness constructions are similar to our understanding of words.

Another important role is attributed to the linking of form and meaning, which Croft [2001 : 59] describes as symbolic links. One can differentiate constructions according to a speaker knows a pairing of form and meaning, i.e. whether he or she perceives it as a known unit. If this is the case, the symbolic connections are cognitively *entrenched* [Langacker 2005 : 107–108; Schmid]. Both the symbolic connection as well as the forms and meanings themselves must pass through the process of cognitive entrenchment. Langacker describes this as follows: “Every use of a structure has a positive impact on its degree of entrenchment, whereas extended periods of disuse have a negative impact. With repeated use, a novel structure becomes progressively entrenched, to the point of becoming a unit; moreover, units are variably entrenched depending on the frequency of their occurrence” [Langacker 1987 : 59].

In addition, the strength of the connection is, as already in the sign concept of Saussure, a question of conventionalization within the language community. The two gradual properties entrenchment and conventionalization, together with schematicity and complexity, constitute the most important properties of constructions.

5.1. The Structure of Complex Constructions. The special characteristic of constructions in the sense of construction grammar is that they constitute complex signs. This means that a construction is not simply composed of a phonetic pattern and a corresponding meaning but consists of different elements. Langacker [1987: 75] describes constructions as *composite structures*. In the Berkeley CxG, these parts are also differentiated notationally: “<...> CxG makes a systematic distinction between two layers of specification: the holistic, constructional level (a set of constraints on how a given unit fits in larger syntagmatic contexts) and the constraints that apply to its constituents. The former is referred to as the external properties of a construction and the latter establishes the internal make-up of a construction” [Fried 2015 : 16].

Croft is also very explicit about the general structure of constructions: “Both the formal (syntactic) and functional (semantic) structures may be made up of parts, which define roles in the construction” [Croft 2001 : 175]. He offers the model of a construction in *Figure 2*.

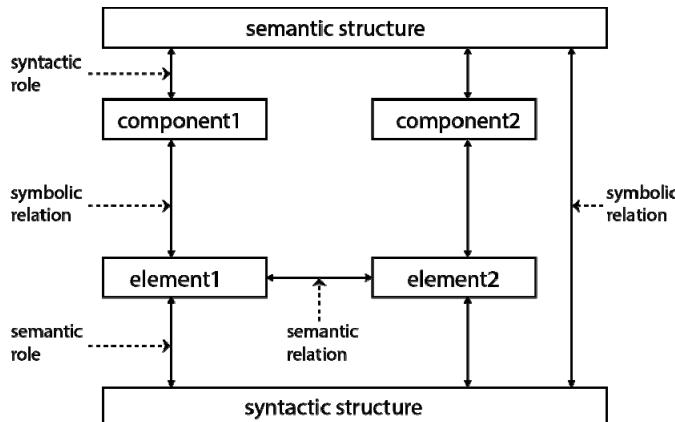


Figure 2: Figure Croft's model of a construction

A construction accordingly consists of a semantic structure and a syntactic structure, both of which are linked by a symbolic link. This means that only the entire syntactic structure can refer to the semantic structure. Both sides are therefore regarded as closed units, similar to a simplex sign. Nevertheless, both sides consist of different parts. Croft describes the parts of the semantic structure as *components*. These components play a certain role in the construction. In argument structure constructions, these are semantic roles. One can, as Croft obviously does, also generalize this term and describe all semantic components of constructions as carriers of a certain role within the complex semantic structure. These semantic roles are of course not only the traditional semantic roles like agents or patients. Between these roles, according to Croft, semantic relations exist [Croft 2001 : 59]. On the other side, the syntactic structure also consists of parts, which Croft calls *elements*. These also have a role within the syntactic structure, which are consequently referred to as syntactic roles. However, Croft rejects relationships between syntactic roles. The relationship of constructions to their elements and components can only be understood through a part-whole relationship, not through relationships that the parts might have with each other. He argues that a listener can interpret linguistic utterances even without the presence of syntactic roles. Therefore, following Ockham's razor, one can completely omit these «'unnecessary' theoretical entities» from the grammar model [Croft 2001 : 205].

It is worth noting that neither Croft nor Goldberg or Langacker assume any relations between the individual formal (syntactic) elements. This is where they differ from Berkeley and Sign-based Construction Grammar. Berkeley CxG, for example, operates with syntactic valencies of lexemes, which are also specified within constructions. These are explicitly described as "roughly analogous to the subcategorization frames of generative theories" [Fillmore 2013 : 119]. Berkeley CxG thus differs from Goldberg's argumentation that the different subcategorization frames with which individual verbs can occur are actually an indication that constructions exist and that these are responsible for the syntactic form [Goldberg 1995 : 42–43]. Syntactic valency also plays an important role in Sign-Based Construction Grammar [Michaelis]. It is this difference that makes Fried conclude that Radical and Cognitive Construction Grammar as well as Cognitive Grammar grant a privileged status to the conceptual level in contrast to the Berkeley School [Fried 2015 : 7].

5.2. Meaning. With Construction Grammar, meaning has gained a new significance in syntax research. It is one of the most notable differences to other grammatical theories that in principle every linguistic structure has a meaning. Meaningless linguistic units occur only marginally, e.g. as result of purely formal generalizations. Even very schematic constructions have a meaning, however maybe in a classical sense. The meaning of a construction can be abstract, it can reflect a certain information-structural weighting, or it can represent a certain way of conceptualizing perceptions and expressing them linguistically. Construction Grammar differs from other theories of grammar in that semantics are included as comprehensively as possible [Stefanowitsch : 19].

Thus, in analysis of the English caused-motion construction by Goldberg [1995], the causative argument may be an agent or a natural force (7), but not an instrument (8). Nor may the verb imply any conscious decision of the agent to use the action designated by the verb for movement (9). Yet movement must cause this implication, even if it is not directly expressed (10). Goldberg also assumes polysemy for each construction, which is normally omitted in the notation. For the English Caused-Motion-Construction she assumes, besides the central meaning ‘X causes Y to move Z’ (11) also the meanings ‘X enables Y to move Z’ (12), ‘X prevents Y from moving Comp(Z)’ (13) and ‘X helps Y to move Z’ (14). As the Ukrainian examples seem to show, these semantic extensions are not compatible with the Ukrainian caused-motion construction².

(7) The rain swept the ring into the gutter.

Трьохгодинний дощ змив провокаторів ПР з Хрещатика
(From the Facebook page of Oleksandr Turchynov / Олександр Турчинов).

(8) *The hammer broke the vase into pieces.

Молоток розбив вазу на шматки.

(9) *Sam encouraged Bob into the room.

*Петро заохочував Тараса у кімнату.

² However, just as with all constructions mentioned in the text, the Ukrainian caused-motion construction still needs to be analysed in full detail in order to make accurate statements about its formal and semantic constraints.

(10) Sam ordered Bob into the jail cell.
Марія подзвонила Олександру в офіс.

(11) Frank kicked the dog into the bathroom.
Ольга кинула жабу у ванну.

(12) Sam allowed Bob out of the room.
*Наташа дозволила Марію з кімнати.

(13) Harry locked Joe into the bathroom.
Олег замкнув Павла у ванну кімнату.

(14) Sam guided him through the terrain.
*Андрій допоміг йому на стіну.

Besides this fine-grained semantic description, a decisive feature of Construction Grammar is that not only the construction itself is complex, but that semantics also constitutes a complex structure. Each meaning consists not only of the constructional meaning, but also of the individual meanings of its components. In the treatment of argument structure constructions, this is partly already integrated in the constructional meaning. For the meaning of the caused-motion construction is a simple concept, but a complex structure which already incorporates the three participants and the action. Here we should remember the notation of Croft, which presents the semantic roles of the participants as ‘property’ of the symbolic links between the components of construction and the construction meaning. On the basis of Goldberg’s description, the semantic part of a caused-motion construction can therefore be depicted as follows:

Table 4

The semantic structure of the caused-motion construction

| | | | | |
|---------------------------------------|--------------------------------------|--------------------------------|---------|---------------------|
| constructional meaning | ‘X causes Y to move Z’ | | | |
| property of the symbolic link | Agent | Action | Patient | Goal |
| (categorial) meaning of the component | person, natural force, instrument | entails movement, conscious | object | range, region, room |

Here, another important aspect of constructions as complex signs comes to light. In principle, the semantic structure of the components could be sufficient to signify the construction meaning. Verhagen [2009] makes a proposal that goes exactly in this direction. He suggests that constructions have an intermediate level, which results from generalizations about paradigmatically occurring components and that the meaning of construction is achieved through the interpretation of this intermediate level. He thus offers an answer to the question of which elements of the structure of a construction are necessary for a listener to perceive a construction as such. His suggestion is that constructions basically consist of two levels of signifiers and signifieds. On the first level, the signifiers are phonological forms that signify their meaning. These meanings are the components of the construction. On a second level, however, the meanings of the components themselves serve as signifiers for another signified – the constructional meaning. Verhagen assumes that the sum of the semantic components triggers the constructional meaning. That the semantic structure can signify the meaning of a construction independently of the form is an important finding that helps to explain synchronous language contact phenomena [Wasserscheidt].

5.3. Compositionality. Since constructions consist of several components, the question arises how to distinguish them from sequences of elements that are not constructions but independent expressions. One can therefore examine the compositionality of linguistic units. Compositionality means that the meaning of a linguistic sequence can be derived from the meaning of its components [Goldberg 1995 : 4]. Non-compositionality accordingly implies that a constructional meaning is more than the sum of the meanings of its components, or at least cannot be predicted from their meaning. In Construction Grammar the position that constructions do not necessarily have to be non-compositional is gaining ground. Accordingly, transparent patterns with a high frequency of use can also become a construction [Goldberg 2006 : 12–13]. Other authors, however, still assume that constructions must always be non-compositional: “The external / internal contrast is related to another constitutive feature of constructions, namely, their non-compositional character: a construction has its own function (or meaning), unpredictable from simply

adding the properties of its constituents” [Fried 2013 : 423]. Indeed, the use of a sequence of phonological elements for the purpose of referring to a semantic content can basically never convey a predictable interpretation in the proper sense. Even seemingly regular linguistic expressions are not regular because of external laws of nature, but because the convention on which they are based can be applied regularly to all units affected by them. The convention itself, however, is not predictable. Langacker also points out that “one could very well claim that entrenchment and conventionalization always result in some measure of idiosyncrasy vis-à-vis other constructions. It can be argued that unit status invariably narrows the range of interpretive options in subtle ways <...>” [Langacker 2009 : 168].

Compositionality is again a gradual phenomenon. The process of grammaticalization, for example, has been defined by the increasing non-compositionality of a pattern [Fried 2013]. But grammaticalized constructions can also show a varying degree of compositionality. The least complex compositional constructions are phrasemes [Wulff]. If the interpretation of Verhagen [Verhagen] is taken up again here, the meanings of the components in highly non-compositional phrasemes can no longer serve as signifiers for the constructional meaning. This does not exclude the possibility that a non-compositional construction is interpreted compositionally, but this leads to insufficient or even misinterpretation (e.g. *собаку з ісму* ‘master sth. well’ vs. ‘eat a dog’, *некти раку* ‘turn red’ vs. ‘bake a crab’).

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Конструкційна граматика: основні принципи і поняття

Описано теоретичні засади конструкційної граматики. Здійснено загальний огляд основних принципів і напрямів граматичної теорії. Основні положення теорії ґрунтуються на тому, що всі лінгвістичні знання, як і знання загалом, слідують за тими самими принципами – категоризації, абстракції й узагальнення.

Виокремлено два важливі елементи дослідження конструкційної граматики: концепцію конструкції як складного знака та відмову від розмежування лексики й граматики.

На прикладах з української мови уточнено закономірності відношень між конструкціями різного ступеня складності та схематичності в так званому конструктионі – спільному просторі лексичних і граматичних знань. Продемонстровано, як абстрактні конструкції пропонують слоти для інших елементів і наскільки вони обмежені щодо форми і значення. Статус конструкцій як складних знаків оцінено з погляду семантики та композиційності.

Наголошено, що конструкційна граматика відкидає притушення про композиційність і радше концептуалізує семантику, визначувану самою конструкцією. Водночас семантика розуміється в енциклопедичному сенсі, що робить опис конструкцій досить докладним і специфічним для конкретної мови.

Ключові слова: конструкційна граматика, українська мова, конструкція, знак, теорія граматики.

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