Grammatical Devices for Building Spaces in Cognitive Semantics

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Abstract. The paper sets out to investigate space in cognitive semantics from a linguistic perspective. The notion of mental spaces, from which the meaning of a sentence can be derived, plays a crucial role in cognitive semantics. In addition to reality or base space, space builders (built space) set up a mental space in the reader's mind which may differ from the real world. Thus, the way in which language structures space requires investigation both from a linguistic and a psychological point of view. By dividing meaning into conceptualisation and knowledge representation, cognitive linguists investigate issues traditionally dealt with in pragmatics as well as semantics. A variety of grammatical forms can be used to function as space builders, out of which the paper is concerned with illocutionary adverbials and discourse particles and their role in communication. Within the relevance-theory framework an attempt is made to examine whether illocutionary adverbials and discourse particles encode procedural and/or conceptual meaning. Relying on examples from different sources and genres, the author seeks to identify the linguistic and conceptual resources in meaning construction.

Keywords: linguistic and social categories, ethnic identity, schema theory, prototypes vs. stereotypes

1. Introduction

Thinking about the connection between language and mind, and focusing on problems associated with the operations of the mind and brain has a long history. Suffice it to quote the great English poet, Samuel Taylor Coleridge (1827):

> It is the fundamental mistake of grammarians and writers on the philosophy of grammar and language to suppose that words and their syntaxis are the immediate representatives of *things*, or that they correspond to *things*. Words correspond to thoughts, and the legitimate order and connection of words to the *laws* of thinking and to the acts and affections of the thinker's mind.

In spite of a long interest in trying to understand the relationship between language and thought, it is possible to talk about the emergence of novel approaches to the topic only since the 1970s and 1980s.

The first part of the paper deals with recent trends and advances of mind study emphasising the importance of interdisciplinary research in linguistics and cognitive psychology. The studies mentioned address and answer both fundamental and universal questions about how the mind works. Within the cognitive linguistic framework the study of language means the study of conceptualisation, i.e. patterns of thought.

The second part of the paper examines how the theoretical findings are reflected in a practical approach to space builders realised by various grammatical devices.

2. Cognitive dimensions

2.1. The relation of grammar to cognition

Cognitive science is an inherently multi-disciplinary field with the help of which one tries to understand the notions of cognition, perception, human behaviour and the workings of the brain. For cognitive grammarians language is embedded in man's general cognitive capacities. As Fauconnier & Turner (2002) put it, cognitive linguistics investigates the complex operations of cognition that create not only grammar and discourse, but also thought. Language, this biologically innate and species-specific human faculty, is embedded in cognition, which mediates between language and the external world. Relying on Talmy (1997), we also claim that human cognition seems to include distinct cognitive systems that have comparable properties of organisation. Language and cultural structure may have been the last general purpose type of systems to evolve as a result of human activity, viz. conceptualisation and communication. Cognitive

capacities that play a fundamental role in the organisation of language are not specific to language. The characteristic features of grammar resemble those of neural systems. Cognitive linguists believe that language is based on our experience of the world, in other words it is based on how we perceive and conceptualise what surrounds us. Unlike formal grammars, cognitive linguistics is primarily meaning-based, and depends on a cognitive semantics.

Langacker is positive that grammar is meaningful and as such, it is not only an integral part of cognition but also a key to understanding it even if grammar has often been treated as "a system of arbitrary forms based on abstract principles unrelated to other aspects of cognition or human endeavour" (2008: 3). He argues as well that cognitive grammar as a linguistic theory has not only succeeded in offering a coherent view of language structure but has also manifested that grammar is symbolic in nature. We are able to construct the more elaborate meanings of phrases, clauses, and sentences due to the fact that the elements of grammar have meanings in their own right.

2.2. The relation of semantics to linguistic theory

Goddard (2011: 3) argues that "One of the main concerns of linguistic theory is to identify the governing principles that account for the regularity and orderliness of languages." In fact, we try to find answers to questions why one language has the grammatical rules it has or why languages differ in the way they do. His view is that "for many years in the last century the orthodoxy was that semantics did not have much relevance to questions like these, because it was believed that the syntactic workings of language were independent of meaning" (Goddard 2011: 3).

As Langacker (2010: 94) points out, this view depended in part on a particular attitude to meaning:

> How linguists think about grammar is greatly influenced by how they think about meaning. Approaches to meaning that bypass the role of human conception – treating it in terms of formal logic, truth conditions, or correspondences to the world – resonate with the view of grammar as an autonomous formal system.

The 20th century was not a favourable time for semantics. However, since the mid-1980s, many linguists have begun to realise that a well-developed approach to semantics is essential to the study of grammar. Some outstanding scholars and their groundbreaking research findings include Fauconnier's research on mental spaces (1994, 1997), Fillmore's frame semantics (1977), Jackendoff on meaning in natural language, its relation to the human conceptual system, and how it is expressed

linguistically (1983, 1990, 2010), Lakoff's research on metaphor (1987), Langacker's cognitive grammar framework (1987/1991, 2008), or Talmy's theories regarding figure and ground (2000). According to these scholars, and others, meaning should be a primary focus of study because of its central position in language. The perceptual and experiential basis of conceptual categories has become an important topic of inquiry in cognitive semantics.

In the 21st century, meaning is moving back to the centre in the linguistic enterprise and in cognitive semantics equals the conceptualisation associated with linguistic expressions.

Geeraerts' (2006) collection of classic articles also makes it clear that language is about meaning and shows how meaning is conceptualised through "the perspectival, dynamic, non-autonomous, experiential nature of natural language" (2006: 18). Other comprehensive writings include Evans (2009), Evans & Chilton (2010), Fauconnier & Turner (2002).

2.3. Structure and function in discourse

Based on Talmy (1997), we accept that a typical feature of language is its two subsystems. Closed-class items express grammatical categories, in other words conceptual structure. Open-class words, on the other hand, express lexical content. Looking at a sentence from a semantic and functional point of view will reveal differences in discourse. Open-class items are rich both semantically and referentially, whereas closed class meanings are rare and referentially constrained. As far as function is concerned, most of the content is contributed by the open-class forms, while most of the structure is determined by closed-class forms.

Table 1. Grammatical Properties of Closed-Class Words

	overt (phonologically substansive):
bound	inflections/derivations/clitics
free	determiners/adpositions/conjunctions/particles
suprasegmental	intonation/stress patterns
	abstract (implicit)
word order	
grammatical categories	Verb, Prepositional Phrase, etc.
grammatical relations	Subject, Verb, Object, etc.
grammatical complexes	syntactic structures/grammatical constructions phrase structure & immediate constituency

To demonstrate the differences between closed-class forms and open-class items we are able to identify 11 closed-class items, and 3 open-class forms in a single sentence:

(1)   *A driver cornered the criminals.*

Among the 11 closed-class forms it is possible to distinguish the following indicators:
i/ *a* speaker infers that addressee cannot readily identify the specific referent
ii/ *a* unitary instantiation of object
iii/ *-er* performer of the specified action
iv/*-ed* occurring at a time before that of the present communication. The concept 'past' is experienced as setting structure when expressed by closed-class forms: when he arrived, but is experienced as contributing additional content when expressed by open-class words: on his previous arrival.
v/ *the* speaker infers that addressee can readily identify the specific referent
vi/ *-s* multiple instantiation of object
vii/ grammatical category *'verb'* fo*r corner* 'eventhood'
viii/ grammatical category *'noun'* for *driver/criminal* Objecthood (for one possibility)
ix/ grammatical relations *'subject'/'object'* for *driver/criminal*
x/ active voice *'point-of-view of the agent'*
xi/ intonation, word-order, character of auxiliaries *'the speaker* knows *the situation to be true and asserts it for the addressed persons'*

There are 3 open-class items, each a complex of concepts:
i/ *drive* - to guide, control, or direct (a vehicle).
        the performer of a particular mode of activity
ii/ *corner* - to place or drive into a corner
        accompanying cognitive intending, directing, monitoring
iii/ *criminal* - one that has committed or been legally convicted of a crime.
Language consists of complex patterns that integrate form and meaning in conventionalised ways. Form may refer to any combination, be it syntactic or morphological patterns, whereas meaning includes lexical semantics, pragmatics, and discourse structure, too.

2.4. Grammatical forms functioning as space builders

Cognitive semantics, as part of the cognitive linguistics movement, investigates mental spaces that are complex conceptual networks constructed in the course of speaking or thinking. These interconnected networks or domains are formed in the working memory and are expanded as the process of thinking or

conceptualisation continues. In the natural language, linguistic expressions give an impetus to setting up mental spaces, where meaning is also constructed. Mental spaces, according to Fauconnier (1997), are internally structured by frames and cognitive models and externally are linked by so-called connectors that relate mental spaces to one another. New elements are added to spaces by linguistic and also non-linguistic expressions, consequently sentence meaning depends on an understanding of the context and the speaker's intention, too.

A space builder is a grammatical expression that either opens a new space or shifts focus to an existing space. Space builders take on a variety of grammatical forms, such as prepositional phrases (cf. Tyler & Evans 2003), deictic expressions as discussed in Cruse (2000), subject-verb complexes followed by dependent clauses that create 'belief' contexts after verbs like *believe/think/hope/imagine* (cf. Saeed 1997), the highly culture-specific interjections, which express self-contained messages, therefore they are far from being natural and universal, according to Goddard (2011).

Sentence adverbials, also labelled as illocutionary adverbials, and discourse particles usually express the personal intentions, attitudes, assumptions and feelings of the speaker. They constitute an important category. Conjunctions or discourse connectives are analysed in Hall (2004) and Wilson & Sperber (1993), among others. Fauconnier (1997) mentions a number of discourse particles and discusses their function: *even/but/already* signal implicit scales for reasoning and argumentation, *therefore* signals deductive relationships that may not have been explicitly stated. Goddard's (2011) broad definition of discourse particles includes "most English prepositions and subordinating conjunctions, as well as words like *well, just, even,* and *too*, which are more typical examples of the way the term 'particle' (or discourse particle) is employed in modern linguistics" (2011: 162). The author adds on the same page: "Ordinary conversations are peppered with them. Not surprisingly, they are often misunderstood and misused by second-language learners."

3. The relevance-theory framework

Relevance theory, as proposed by Sperber & Wilson (1986/1995), and Wilson & Sperber (1993), is a psychological model for understanding the cognitive interpretation of language and an approach to pragmatics. Since it is impossible to talk about pragmatics without bearing in mind semantics, or vice versa, the relevance theoretical approach to pragmatics is accompanied by a view of semantics. This theory intends to explain how implicit inferences are made and argues that the hearer or reader is interested in looking for meaning in any communication situation and will stop searching when a meaning corresponding to his/her expectation of relevance has been found.

3.1. The conceptual and procedural distinction

Relevance theorists, such as Blakemore (2002), have argued that we must distinguish between words that encode concepts and those that encode procedures. The latter encode instructions that constrain the inferential phase of verbal communication. This raises the question as to how we are to understand the notion of procedural encoding. Bezuidenhout (2004) thinks that the notion of a procedural unit is something that has a place in an account of language use, and hence it belongs to a theory of pragmatic performance and not to a theory of semantic competence. A very strong statement of this claim would be that the phrase "procedural semantics" is a contradiction in terms. She admits that thanks to Blakemore's (1987) fundamental work, the distinction between conceptual and procedural meaning has been recognised. Utterances typically contain both conceptual and procedural encodings.

Grundy and Jiang's (2001) analysis also supports the well-motivated distinction made in relevance theory between conceptual and procedural meaning. Conceptual meaning is the term used to describe propositional representations, while procedural meaning describes the instruction/s an utterance may contain for its own interpretation in the context in which it occurs. However, it is arguable whether the two meanings are mutually exclusive or that a linguistic form should be analysed as encoding either one or the other.

3.2. Illocutionary adverbials in the light of the conceptual/procedural contrast

Wilson and Sperber remark: "Illocutionary adverbials such as *seriously*, *frankly* are treated as making no contribution to the truth conditions of utterances in which they occur.

(2)a. *Seriously, I can't help you.*
(2)b. *Frankly, I can't help you.*" (1993: 18).

This would be the case when the adverbial functions as disjunct, and it is interpreted as a comment on or an external evaluation of the form or content of an utterance. When functioning as adjuncts, the same adverbials are integrated within the clause; consequently they contribute to the conceptual meaning of the utterance.

(3)a. *Has he been seriously injured?*
(3)b. *Why don't you talk to me frankly?*

In addition, in some cases an illocutionary adverbial seems to contribute directly to the truth conditions of the associated utterance. Consider (4):

(4)a.   Peter: *What can I tell our readers about your private life*?
(4)b.   Mary: *On the record, I'm happily married; off the record, I'm about to divorce.*

If the illocutionary adverbials *on the record* and *off the record* made no contribution to the truth conditions of (4)b., then Mary's utterance should be perceived as contradictory; yet it is not. But if these adverbials contribute to truth conditions, then they encode conceptual representations, and the procedural analysis is disconfirmed.

Bezuidenhout (2004) provides a detailed description of the contrast between procedural and conceptual encoding. The vast majority of lexical items have conceptual meaning, including common nouns, verbs, etc., that is to say, these items encode concepts. If a lexical item has conceptual meaning, this meaning can potentially contribute to the truth-conditional content of an utterance containing that lexical item. However, having conceptual meaning does not guarantee that the item will be truth-conditionally relevant, since items with conceptual meanings sometimes play a non-truth-conditional role.

3.3. Discourse connectives in the light of the conceptual/procedural contrast

Discourse connectives are defined in Bezuidenhout (2010: 80) as follows: "words and phrases such as *however*, *yet*, *nevertheless*, *after all*, *since*, *because*, *so*, *as a result*, etc." Since information is implicit in context it must be inferred from other background information. It typically happens so that "discourse relations relate the content of one utterance to the content of another either as a reason for, or an elaboration on, or a contradiction of, etc. what has previously been conveyed" (2010: 80-81).

Wilson and Sperber (1993) consider whether discourse connectives such as *so*, *after all*, *on the other hand*, etc., are best analysed in conceptual or procedural terms. Consider (5):

(5) a.   *It's raining*.
(5) b.   *So the grass is wet*.

The use of '*so*' in (5)b. indicates that the speaker is 'performing the speech-act of explaining', with (5)a. being put forward as an explanation of (5)b. For Blakemore (1987), *so* is an inferential connective indicating that the assumption which follows it

is a conclusion. On her account, (5)b. is put forward as a conclusion drawn from (5)a. (6) is another of Blakemore's examples. The speaker sees someone arrive home laden with parcels and says:

(6)   *So you've spent all your money.*

Here, there is no explanatory clause that would correspond to (5)a. The speaker is not explaining the fact that the hearer has spent all her money, but is drawing a conclusion from an observation she has made, consequently Blakemore's account is acceptable.

In contrast to items such as common nouns, verbs, etc., relevance theorists have claimed that words such as '*but*', '*however*', encode procedures. These items guide the hearer towards intended contextual effects, and reduce the overall effort required to process the discourse. Consider utterances such as:

(7)   *Tom is poor but happy.*

(8)   *Tom is nice but his father is repulsive.*

The use of *but* in (7) is sometimes called the "denial of expectation" use. This use of *but* presupposes that one cannot be happy if he/she is poor. It is possible that the speaker shares this view. However, even if the speaker rejects this presupposition, he must be assuming that this assumption is widely held by members of a certain cultural or social community. The *but* in (8) signals a contrast between two sets of implications. It signals that whatever propositions the listener was prepared to infer from the utterance of the first conjunct, he should infer a parallel but opposite set of propositions from the utterance of the second conjunct.

Wilson and Sperber (1993) enumerate further lexical items such as inferential *since*, *as* and *because*, and words and phrases such as *moreover* and *after all* that are also said to encode procedures. Consider:

(9)   *As/since/because John was hungry, he went to McDonalds.*

(10)   *As/since John isn't here, he must still be in his meeting.*

(11)   *John owes me money. Moreover, he owes me a lot.*

(12)   *Have another drink. After all, it's your birthday.*

As, *since* and *because* may signal that what follows is a cause, as in (9), or a reason, as in (10). *Moreover* in (11) signals that what follows is an elaboration, and *after all* in (12) signals that what follows offers justification or support.

How can we explain that lexical items of the sort mentioned above encode procedural information, or as Blakemore (1992: 151) puts it, "encode instructions for processing propositional representations"? The explanation could be that the entries for these items in an ideal speaker-hearer's mental lexicon contain these instructions. In other words, to say that the lexical entry for a particular item contains procedural information is to say that there is a rule 'written' in the entry for that particular item that specifies that a certain procedure must be followed if certain conditions are fulfilled.

Bezuidenhout (2004) points out that procedural knowledge is distinguished from encyclopaedic knowledge, even though both fall on the side of pragmatics. The latter is conceptual knowledge, whereas the former is tacitly stored in the causal architecture of the performance system. Moreover, she assumes that there is a language module and that the concepts entered in the mental lexicon are not only part of this module, but are also accessed via a decoding procedure. What the author rejects is that all decoding processes access concepts. In some cases they may trigger procedures, and these procedures are not strictly part of the language system. Their role is to guide an interaction between something that belongs to the language system (lexical concepts) and something that lies outside that system (encyclopaedic and other non-linguistic knowledge).

A compromise between the extreme cases could be that procedural knowledge belongs to the language performance system and is pragmatic, whereas lexical conceptual knowledge is declaratively represented and constitutes a speaker's semantic competence.

3.4. Extending the class of procedural forms

Existing work on grammatical categories demonstrates figure/ground polarity. Languages have a range of dichotomous grammatical forms like perfective versus imperfective, stative versus dynamic, which are predominantly oriented to expressing figure/ground relations. For Langacker (1991), figure designates the fore-grounded entity in the trajectory/landmark profile of a grammatical relation, such as that of subject and predicate. As the term trajectory suggests, the figure is dynamic rather than static. Various accounts extend a perceptual theory to the understanding of language and show how a relation of figure to ground is basic to language. The structures of language may or perhaps must reflect the cognitive structure of the mind.

The application of the figure/ground *gestalt* is extended to show in Grundy and Jiang (2001) how the broader contextual, and particularly the ideological,

ground is relevant in processing fore-grounded linguistic phenomena. The authors attempt to characterise the way in which mental spaces may, and indeed must, include non-linguistic objects, which provide a ground in relation to the linguistic figures in focus. They analyse how cognitive semantics allows for the construction of the ideological contexts without which the interpretation of the linguistic figure is at best problematic, and sometimes even impossible. They draw on data taken from President Clinton's national television address of 18th August 1998 following his testimony to the grand jury in the Monica Lewinsky affair. The principal focus of their paper is the implications for the nature of a cognitive semantics posed by attempting to model data containing a wide range of procedural forms with space shifting and space building properties. They model the way in which metapragmatic phenomena relate conceptual meaning to background ideological context. It is not surprising that the president's national television address exhibits a very wide range of metalinguistic and metapragmatic procedural encodings. In their view the relation of linguistic figure to contextual ground is indicated by discourse markers, which function as viewpoint shifters and space builders enabling contextual ground to be represented in the mental space model of cognitive semantics.

The procedural use of *even* in (13)b. constrains the interpretation of sentence (13)a. by restricting the set of contexts which are called up:

(13)a. *Presidents have private lives*.
(13)b. *Even presidents have private lives*.

In other words, procedural meaning relates a new notion, a variable figure, to an established context, the invariant ground. This ground perhaps is ideological, at least in part. Or later, when Clinton says:

(14)   *Indeed, I did have a relationship with Ms Lewinsky that was not appropriate. In fact, it was wrong*.

The sentences would need to model at least how the contexts are constructed which are oriented to by maxim hedges *indeed* and *in fact*, by emphatic *did*, by the higher level metalinguistic predicates (which have a metalingual or commenting function) *not appropriate* and *wrong*, and by an utterance that glosses the preceding utterance.

The two examples may support the claim that linguistically filled spaces are built from Focus and Base spaces, and pragmatically conditioned spaces are built from Viewpoint. The latter is the space from which others are accessed and structured. This finding is in harmony with Fauconnier's proposals for a cognitive semantics: "What human grammar reflects is a small number of general frames and

space builders which can apply to organize the very large number of situations that we encounter or imagine" (1997: 190). This definition treats grammar as less than fully determining of structure, recognises the computational nature of grammatical instructions, and acknowledges the role of context in determining meaning.

A mental space configuration for (13)b. might correspond to a model that comprises the spaces outlined below: Base space (also the Viewpoint space) is the discourse context, including Clinton and his TV audience; Focus space (also the Figure space) is embodied by the conceptual content of (13)a. and the procedural content of (13)b., which is an instruction to build new structure from Viewpoint; Viewpoint space (also the Base space): the conceptual content in Focus is enriched to give the full propositional form like:

(15)   *Presidents of the United States such as the speaker are entitled to privacy in their personal relationships.*

This mental model then provides the premises for a deductive inference which is guaranteed to produce the most relevant way of understanding what is meant by saying (13)b.

4. Conclusion

The paper has attempted to investigate space in cognitive semantics from a linguistic perspective, focusing primarily on two types of grammatical devices functioning as space builders, viz. illocutionary adverbials and discourse connectives relying on various sources and genres. It has turned out that even if space building is driven by linguistic information, spaces themselves are not linguistically filled since they constitute a part of a mental representation. An important finding of the analysis has been that complex patterns integrate form and meaning in more or less conventionalised ways, and that the cognitive dimensions in linguistics and semantics have broadened our understanding of the difference between formal, meaning-based and usage-based frameworks to language analysis. Although trying to give an overview of the most exciting areas of cognitive linguistics has been constrained, cognitive categories which influence our use of words, the mental process of categorisation or the role of metaphor in understanding abstract concepts deserve future research.

The contrast or rather the distinction between conceptual and procedural meaning has shed light on whether the two meanings are mutually exclusive or whether a linguistic form should be analysed as encoding either one or the other, or both. One tenet of semantic competence should be seen as a part of linguistic competence, so by studying meaning one may shed light on the relationship between language and culture.

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