The Cognitive Perspective on the Polysemy of the English Spatial Preposition Over

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INTRODUCTION

Since the very beginning of their existence, human beings have functioned in space, related to it and tried to manage it in a variety of ways. It is no wonder, then, that space is also ubiquitous in language, the means of exchanging experiences of everyday human life. Speakers use spatial prepositions in order to talk about the place they occupy in the surrounding world, the location of objects in the environment and relations between them. Linguistically, for a long time, spatial prepositions have been regarded as a function or grammatical words with little semantic content. Present advances in cognitive linguistics allow us to have a better insight into the nature of the content expressed by spatial prepositions bringing about the conclusion that prepositions encode rich and diverse information both grammatical and semantic.

The view that spatial prepositions encode complex semantic information is relatively new and not at all widespread. Even when it is acknowledged that the semantics of prepositions is extended, scholars express various opinions on the matter of their categorical status. Radford (1997:45), for instance, considers prepositions as lexical items because they come in antonymous pairs, such as inside/outside, just like nouns, verbs, adjectives and certain adverbs. Hagège makes a more moderate claim that prepositions, “elements allegedly belonging to grammar, (...) also belong to the lexicon” (2010:332). Evans (2010) refers to prepositions as lexical concepts which suggests a relation with lexemes and a reference to specific concepts or a body of rich encyclopaedic knowledge people have about the world. Other linguists investigating prepositions, such as Lakoff (1987), Brugman (1988), Herskovits ([1986] 2009), Talmy (2000), or Coventry and Garrod (2004), take a more traditional stance on the matter, conceiving of prepositions as closed-class (functional/grammatical) words. An important research endeavour is to discover if the meaning of spatial prepositions is, in fact, rich and complex enough for them to be treated as lexical units rather than only functional ones.

The present work is a continuation of the tradition of research into the nature and the semantic properties of spatial prepositions in general, and of the preposition over in particular. One of the earliest works on the semantics of prepositions is Klebanowska’s (1971) study of spatial prepositions in Polish. She discusses primary senses of prepositions, geometrical relations between the objects involved, and conditions that have to be met in order for a certain
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preposition to encode a particular relation. The earliest works involving the preposition *over* in English are Brugman’s (1988) and Lakoff’s (1987) prototype models of the polysemy of the preposition. Herskovits ([1986] 2009) discusses notions such as normal situation types, ideal meanings, pragmatic factors in the understanding of prepositions and geometric descriptions of objects in spatial relations. Talmy (2000, 2005) elaborates on the geometry of the objects which enter into a spatial relation and formulates categories which apply to the spatial structure of language. Przybylska (2002) presents Polish spatial prepositions in the cognitive perspective, arranging prototypical senses and their extensions into semantic networks. Tyler and Evans (2003) provide a comprehensive study of English spatial prepositions, introduce schematic diagrams to represent spatial relations encoded by the prepositions discussed, and use the notion of pragmatic strengthening to explain how new senses come into being. Coventry and Garrod’s (2004) main contribution into the research is the identification of functional elements in spatial scenes.

In the history of linguistic investigation inquiries into the nature of meaning have taken different forms. The cognitive research with its basic assumptions has its predecessor in the nineteenth century. At that time, language was thought to be embedded in the human experience and to store the cognitive categories with which people understand the world around them. Bréal (1897), for instance, highlighted the psychological orientation in semantics and maintained that linguistic meaning is a psychological phenomenon involving the workings of psychological processes. Meanings of words were considered to be psychological entities, that is, kinds of thoughts or ideas, as they constitute personal reflections and reconstructions of experience. One of the achievements of the historical-philological tradition prevailing in the nineteenth century was the introduction of the distinction between the “usual” and “occasional” meanings and of the notion of context. The usual meaning was “the total representational content that is associated with a word for any member of speech community”, whereas the occasional meaning referred to “the representational content that an interlocutor associates with a word when he uses it, and which he expects the hearer to associate with the word as well” (Paul 1920:75).

Although the achievements of historical-philological semantics cannot be underestimated as many issues discussed by linguists working in this tradition appear to be present in the contemporary linguistic thought, in the 1930s a new approach to semantics started to emerge. Based mostly on the work of de Saussure, structural semantics set a new direction in the word meaning research (Geeraerts 2010:50). Word meaning was defined as part of the linguistic system and not as part of the psychological life of an individual using the language. A linguistic sign was described in relation to other linguistic
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signs and its value was determined by the oppositions it entered into with regard to other items. Thus, structural semantics brought with it the shift from semasiology to onomasiology—the scholarly interest addressed the question of how sets of words carve up the world and how they name the reality.

The findings of structuralist semantics were further developed in the tradition of the generative approach to language. In the 1960s, Katz and Fodor attempted to combine a structuralist method of analysis, a formalist system of description and a mentalist conception of meaning (Geeraerts 2010:105-110). The issues crucial for structuralist semantics such as the semantic identity of words, oppositeness of meaning, taxonomical organization and semantic relations between the terms in a lexical field came into focus. At the same time, scholars introduced a psychological element into natural language semantics, concentrating the investigation not on the structure of the language but on the ability of the language user to interpret sentences. Katz and Fodor’s research triggered the incorporation of semantics in the formal theory of grammar, which resulted in the formulation of Interpretive Semantics within the mainstream of generative grammar.

Structuralist semantics continued to develop after the introduction of componential analysis into generative grammar. Contemporary structural theories consider the psychological reality of semantic analyses and the adequacy of the formal representations of word meaning as the basic issues to be discussed. One of such approaches is Wierzbicka’s Natural Semantic Meta-language. The model has a decompositional orientation attempting to reduce the semantic description to a set of primitive meaning components and it seeks a truly linguistic, not encyclopedic, level of description (Geeraerts 2010:126-128). The approach implies that the concepts which people have are clearly delineated even though the world is essentially blurry. The theory aims at establishing a set of universal primitive concepts which constitute definitional elements employed to define the meaning of words and rejects the link between meaning and extralinguistic knowledge. This link is introduced by Jackendoff’s Conceptual Semantics, where linguistic is complemented with extralinguistic knowledge and where both modules are assigned different tasks (Jackendoff 1996a, Jackendoff 1996b).

In the 1980s, as a result of dissatisfaction with the notion of the autonomy of grammar and the secondary position of semantics in the generative theory of language, cognitive semantics emerged as part of a loosely structured theoretical movement of cognitive linguistics. I believe that the theory offers valuable tools for the investigation into the nature of spatial prepositions. In particular, cognitive semantics considers the meaning of prepositions, as well as meaning in general, a cognitive phenomenon. Meaning is no longer seen as being carried by words, but rather it is seen as emergent when speakers filter
the semantic content of individual words in a particular situation of use. It is speakers with their various abilities, both linguistic, cognitive, and, more broadly, psychological, who actually construe the meaning of the message they receive in a sociocultural, physical and temporal setting. Understanding meaning in such an extensive way allows us to explain semantic mechanisms in a much more exhaustive way than it is possible with the tools of traditional linguistics. In what follows, I approach the meaning of the preposition *over* from such a broad perspective, showing that the kind of organisms we have, our experiences and knowledge about the world, contribute to our understanding of the meanings of prepositions. I am also of the opinion that there is a need to continue incorporating the latest findings of the psychological and neurocognitive research into the study of this word class.

One of the assumptions of cognitive semantics differentiating it from more traditional linguistic theories is a maximalist perspective on meaning and the rejection of a clear borderline between semantic and encyclopedic knowledge. In the present investigation, I attempt to demonstrate that vast domains of encyclopedic knowledge can be used in order to arrive at a deeper understanding of the preposition *over*. Extended knowledge about how human beings and other animate and inanimate objects function in space, in what kind of geometrical configurations they can participate, as well as what consequences such geometric relations have for the participants, is needed to explain the semantic structure encoded by spatial prepositions.

The central notions of prototype and categorization find their expression in the description of the polysemy of the preposition *over*. Its distinct senses represent a graded centrality, with the Primary Sense functioning as the prototype of the category and the remaining senses as more or less peripheral members related to the prototype by means of the process of specification or by means of the metaphoric link. The proto-scene, constituting an idealized geometric relation between two objects, suggests the presence of what Langacker (1987) calls the schema. It can be repeated after Brugman (1988) that the preposition *over* reflects the notion of the prototype in two ways. On a higher category level, it contrasts with other higher level categories such as ABOVE or ACROSS, and on a lower category level its various senses represent members of the category OVER. As the act of linguistic categorization rests upon using a particular preposition in relation to a certain spatial, temporal or functional relation between two (or more) objects, the present inquiry can be thought of as a survey of all possible spatial relations to be referred to with the preposition *over*.

In the course of the research, I collected a total of 1095 linguistic items including 708 sentences containing the preposition *over*, 132 compounds with *over* and 255 sentences containing other prepositions used for the grammati-
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cal analysis. The present investigation discusses a total of 417 sentences, out of which 162 contain the preposition *over*, and it focuses on spoken and written registers with the exclusion of slang, literary and academic language. The examples come from contemporary dictionaries of the English language such as the *Longman Dictionary of Contemporary English* (2003), the *Oxford Advanced Learner’s Dictionary* (2005), *Webster’s Third New International Dictionary of the English Language* (1986), *the Free Dictionary¹*, *the Urban Dictionary²* and the most reliable *The Oxford English Dictionary* (1989). The sample gathered is analyzed first and foremost in terms of its semantic content but also in terms of the morphology and syntax. I attempt to describe different facets of the preposition *over* and the semantic structure encoded by its distinct senses.

The present study is organized into three chapters. Chapter 1 outlines the theoretical assumptions of cognitive linguistics relevant for the discussion of the spatial structure of language in general and the preposition *over* in particular. Specifically, it focuses on the psychological and cognitive foundations of language, meaning representation in the human mind and meaning construction. The notions of space and shape perception as well as human cognitive abilities such as the identification of image schemas, along with the categorization and formulation of concepts, are closely related to the construal of meaning. Chapter 2 addresses the morphological properties of the class of prepositions, the areas of overlap with other (lexical and grammatical) word classes, the syntactic behaviour of prepositions and prepositional phrases as well as the morphological and syntactic characteristics of the preposition *over*. Chapter 3 discusses the semantic content of the preposition *over*, in particular the geometrical and functional relations holding between objects in the spatial scene encoded by the preposition.

Throughout the book, the terms *trajector* and *landmark*, abbreviated to TR and LM respectively, are used even though the existence of equally frequently used notions of *figure* and *ground* must be acknowledged. The terms *geometry* and *geometrical* were borrowed from mathematics and they relate to the physical characteristics of objects participating in a spatial relation. I also adhere to the traditional distinction between closed and open classes of words calling prepositions interchangeably grammatical, functional or closed-class words without a change in meaning.

Generally speaking, the present investigation demonstrates that the spatial preposition *over* encodes a broad range of geometric and functional relations which form an extended network of meanings. These meanings, well established in the English language and well entrenched in the minds of its speak-

² *The Urban Dictionary* (http://www.urbandictionary.com/).
ers, can be used creatively in new situations of use, possibly giving rise to new usages or senses. I believe that the detailed description of the semantic content encoded by the preposition *over* allows us to gain a better insight into the human management of space in particular and the workings of the human mind in general.
CHAPTER ONE
A CONCEPTUAL APPROACH TO LANGUAGE

1.1. Psychological foundations of language

The description of spatial prepositions in the light of cognitive linguistics should first and foremost address the issue of the human perception of space. The perception of space and shape is most relevant to the discussion of prepositional meanings as it segments the reality into more manageable units, the so-called spatial scenes. Space perception rests on the sense of vision; however, it also involves all human senses to a certain degree. This section discusses the mechanisms of the visual perception of space and shape.

1.1.1. Human visual perception

Despite the fact that people are able to recognize surrounding objects and events in the world around them and that they orient themselves in the environment relatively easily, perception of the reality in itself is a complex phenomenon. Psychologists divide perception into three subsequent but interrelated stages: sensation, perception, and the identification/recognition of objects (Zimbardo and Weber 1997). During sensation, physical energy is converted into neural activity which registers information about the type and quality of the stimulation. In other words, the light reflected by objects enters the eye and forms an image on the retina, while the brain registers the sensory information and creates an image of the real objects. In the perceptual stage, a percept is formed in the mind of the perceiver, making it possible to answer the question What does a given object look like? A percept is “the internal representation derived from the initial pattern of stimulation and it is this that serves as the basis for subsequent identification processes, i.e. determining what an object looks like, sounds like, smells like, and so on” (Parkin 2002:27). Percepts are attributed with meaning in the final identification/recognition stage. Rectangular objects, for instance, are identified as books, boxes, windows or pictures and the perceiver is, at that moment, aware of various functions the objects can perform. Books can be read, boxes