

Review Article:

Polysemy and Cognitive Lexical Semantics: The Structure of Word Meaning

Oringalieva Nurjayna Orazgalievna¹

¹Karakalpak State University

ABSTRACT:

This article provides an analysis of polysemy and cognitive lexical semantics, focusing on how a single word form can have multiple, related meanings organized in motivated networks. Polysemy is a pervasive feature of natural language, and cognitive linguistics offers a principled account of how word senses are related through metaphorical, metonymic, and other extensions. The article examines the distinction between polysemy and homonymy, the cognitive mechanisms that motivate polysemy, the radial category model of word meaning, the role of image schemas and conceptual metaphors in lexical extension, and the implications of the framework for lexicography, language teaching, and computational linguistics. It is argued that polysemy is not a problem to be solved but a reflection of the dynamic, creative, and embodied nature of human cognition.

Keywords: Polysemy, cognitive lexical semantics, radial categories, conceptual metaphor, metonymy, word meaning, lexical extension, prototypicality, cognitive linguistics.

INTRODUCTION

One of the most striking features of natural language is that most words have more than one meaning. This phenomenon is called polysemy, from the Greek "poly" (many) and "sema" (sign). For example, the English word "head" can refer to a part of the body, the leader of an organization, the top of a table, the source of a river, the foam on a glass of beer, and many other things. The word "paper" can refer to a material, a written document, a newspaper, a research article, and an examination. Traditionally, polysemy was often treated as a problem for semantics. How can a single word have so many meanings? And how do speakers understand which meaning is intended in a given context? Generative linguistics treated polysemy as a lexical ambiguity to be resolved by context, or as a set of unrelated senses that must be listed separately in the lexicon. Cognitive linguistics offers a radically different account. In cognitive lexical semantics, polysemy is not a problem but a natural consequence of the human capacity for creative conceptualization. The multiple senses of a word are not random or arbitrary; they are systematically related through cognitive processes such as metaphorical and metonymic extension. These senses are organized

into radial categories, with a prototypical central sense and peripheral extensions. This article provides a concise yet comprehensive overview of polysemy and cognitive lexical semantics. It examines the distinction between polysemy and homonymy, the cognitive mechanisms that motivate polysemy, the radial category model, and the implications of the framework for lexicography and language teaching.

POLYSEMY AND HOMONYMY: A CRUCIAL DISTINCTION:

Before analyzing polysemy, it is important to distinguish it from homonymy. Homonymy occurs when two or more words have the same form but are etymologically unrelated and have unrelated meanings. For example, the English word "bank" can mean a financial institution (from Italian "banca") or the side of a river (from Old Norse "bakki"). These are two different words that happen to have the same form. Their meanings are unrelated, and they are listed as separate entries in dictionaries. Polysemy, in contrast, occurs when a single word has multiple related meanings. For example, the word "mouth" can refer to the opening in the face, the opening of a cave, the opening of a bottle, or the source of a river. These

Corresponding author: Oringalieva Nurjayna Orazgalievna

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senses are historically and conceptually related: they all involve an opening or an entrance. They are listed as different senses of the same word in dictionaries. The distinction between polysemy and homonymy is not always clear-cut. Words can shift over time from one category to another. However, the distinction is important because polysemous senses are systematically related, while homonyms are not. In cognitive lexical semantics, the focus is on polysemy and the systematic relationships between senses.

THE COGNITIVE MECHANISMS OF POLYSEMY

Cognitive linguistics identifies several mechanisms that motivate polysemous extensions. The most important are conceptual metaphor and metonymy. Conceptual metaphor maps structure from a concrete source domain to an abstract target domain. For example, the word "head" has a concrete spatial meaning (the upper part of the body). This meaning is metaphorically extended to time ("the head of the line"), to objects ("the head of a pin"), to organizations ("the head of the department"), and to abstract concepts ("the head of the argument"). Metonymy uses one entity to stand for another related entity. For example, the word "hand" can refer to the body part or to the worker who uses it ("we need extra hands"). The word "face" can refer to the front of a person's head or to the surface of a clock ("the face of the watch"). The metonymic link is based on contiguity: the part stands for the whole, the container stands for the contents, or the producer stands for the product. Other mechanisms include image-schema transformations, contextual inference, and cultural models. Image-schema transformations extend spatial meanings to temporal, causal, and other abstract domains. Contextual inference allows new senses to emerge from specific uses in context. Cultural models motivate extensions that reflect shared cultural knowledge and values.

THE RADIAL CATEGORY MODEL OF POLYSEMY

The radial category model, developed by George Lakoff, provides a framework for understanding how polysemous senses are organized. In a radial category, there is a central, prototypical sense that is the most salient or basic meaning of the word. Around this central sense, there are extensions that are motivated by various

cognitive and cultural principles. The extensions form a network, not a random collection. Each extension is linked to the central sense or to other extensions through specific relationships. For example, the word "over" has a central spatial sense: "the bird flew over the wall." From this central sense, there are extensions: "the sign is over the door" (vertical above), "she put the blanket over the child" (covering), "the meeting is over" (completion), "she is over 30" (excess), "he won over his rival" (superiority), and "she is over her illness" (recovery). Each extension is motivated by a cognitive or cultural principle. The network is not arbitrary but is structured by the relationships between senses. The radial model accounts for the gradedness of polysemy: some senses are more central; others are more peripheral. It also accounts for the productivity of polysemy: new senses can be added to the network as new metaphors, metonymies, or contextual uses emerge.

POLYSEMY AND THE LEXICON:

Cognitive lexical semantics views the lexicon as a structured network of words and their senses. Words are not isolated items but are connected through shared frames, image schemas, and conceptual metaphors. The lexicon is dynamic, not static. New senses emerge, old senses become obsolete, and the relationships between senses can shift over time. For example, the word "mouse" originally referred to the small rodent. With the advent of computers, "mouse" has been extended to refer to the pointing device used with computers. The extension is motivated by metaphor: the device is similar in shape and size to the animal and moves in a similar way. This new sense has become conventionalized and is now a common part of the lexicon. The lexicon also shows patterns of systematic polysemy. For example, many words for containers are extended to refer to their contents ("I ate a whole plate"), many words for producers are extended to refer to their products ("I bought a Ford"), and many words for locations are extended to refer to the institutions located there ("The White House announced"). These systematic patterns of polysemy reflect common cognitive and cultural structures.

IMPLICATIONS FOR LEXICOGRAPHY AND LANGUAGE TEACHING:

Cognitive lexical semantics has important implications for lexicography (dictionary-making)

and language teaching. Traditional dictionaries often list multiple senses of a word as separate entries, without showing the relationships between them. This can be confusing for learners, who may not understand how the senses are related. A cognitive approach to lexicography would present the senses in a radial network, showing the prototypical sense and the various extensions. This would help learners understand the systematic relationships between senses and make vocabulary learning more efficient. In language teaching, a cognitive approach would focus on teaching the prototypical sense first and then showing how it extends to other senses. This would help learners develop a richer and more flexible understanding of word meaning. It would also help them recognize new uses of words in context, which is a key skill in language comprehension. The cognitive approach also emphasizes the importance of teaching the metaphors, metonymies, and image schemas that motivate polysemy. This would help learners understand not just what words mean but why they have the meanings they do.

CRITICISMS AND CHALLENGES:

Despite its influence, cognitive lexical semantics has faced several criticisms. The radial category model is descriptive rather than predictive. It can account for existing polysemous senses but does not provide a clear way to predict new senses. The mechanisms of metaphorical and metonymic extension are powerful but can be used

to account for almost any extension, making the model difficult to falsify. The model also struggles with the problem of distinguishing between polysemy and homonymy in borderline cases. The distinction is clear for some words but less clear for others. The role of context is also debated. Some researchers argue that context plays a more important role in determining meaning than the model accounts for. Despite these criticisms, cognitive lexical semantics remains one of the most productive and influential frameworks for the study of word meaning.

CONCLUSION:

Polysemy is a fundamental feature of natural language, and cognitive lexical semantics provides a principled account of how multiple senses are organized and related. The radial category model, supported by mechanisms of metaphor and metonymy, offers a coherent framework for understanding the structure of word meaning. Polysemy is not a problem to be solved but a reflection of the dynamic, creative, and embodied nature of human cognition. The cognitive approach has important implications for lexicography, language teaching, and computational linguistics. Future research will likely explore the neural basis of polysemy, its developmental origins, and its cross-linguistic variation. Polysemy will remain a central topic in cognitive linguistics and lexical semantics.

REFERENCES:

1. Lakoff G. (1987). *Women, Fire, and Dangerous Things*. — Chicago: University of Chicago Press.
2. Lakoff G., Johnson M. (1980). *Metaphors We Live By*. — Chicago: University of Chicago Press.
3. Lakoff G., Johnson M. (1999). *Philosophy in the Flesh*. — New York: Basic Books.
4. Langacker R.W. (1987). *Foundations of Cognitive Grammar, Vol. I*. — Stanford: Stanford University Press.
5. Evans V., Green M. (2006). *Cognitive Linguistics: An Introduction*. — Edinburgh: Edinburgh University Press.
6. Evans V. (2019). *Cognitive Linguistics: A Complete Guide*. — Edinburgh: Edinburgh University Press.