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Cognitive Semantics Features In The Process Of Analyzing Contexts

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Abstract: This article analyzes the formation process of the field of cognitive semantics, its main principles, its connection with conceptual systems and thinking, and the cognitive mechanisms of meaning formation in linguistic units. The work is based on research conducted in the cognitive direction of linguistics, emphasizing methodological approaches such as conceptual metaphor and frame analysis. In addition, the article examines the study of cognitive semantic issues in Uzbek linguistics and discusses the prospects of scientific research in this area.

Keywords: Cognitive semantics, concept, mental model, conceptual metaphor, cognition, meaning, frame, perception, semantic network, cognitive linguistics.

Introduction: The interaction between language and thought has always been one of the most complex and urgent issues in the history of linguistics. In the second half of the twentieth century, as science — particularly psychology, neurolinguistics, and artificial intelligence — advanced, a new paradigm emerged in linguistics that focused on the study of meaning formation in the human mind. This paradigm is known as cognitive linguistics, and at its core lies the field of cognitive semantics.

Cognitive semantics seeks to explain the meaning of words and expressions not only within the framework of linguistic systems but also through human perception, conceptualization, and mental processes. It views language as a "mirror of the human mind", where linguistic units are treated as external expressions of the conceptual structures that exist in human cognition.

The central idea of cognitive semantics is that meaning is not merely a linguistic phenomenon, but rather a form of knowledge connected with human perception, experience, and conceptual models. Consequently, this approach studies semantics in close relation to psychological and cognitive processes.

The aim of this article is to analyze the formation, core principles, and methodological directions of cognitive semantics and to examine the application of this theoretical approach in Uzbek linguistics.

Formation and Theoretical Foundations of Cognitive Semantics

Cognitive semantics emerged in the 1970s and 1980s in American and Western European linguistics. Its formation was strongly influenced by the works of George Lakoff, Ronald Langacker, Leonard Talmy, Mark Johnson, and Charles Fillmore. These scholars criticized the formalism of the generative grammar theory, arguing that meaning cannot be explained solely by syntactic structures — it must also account for human thought and conceptual knowledge.

The publication of Lakoff and Johnson's landmark book Metaphors We Live By (1980) served as a methodological foundation for cognitive semantics. The authors demonstrated that metaphor is not just a stylistic device of literary expression, but one of the fundamental mechanisms of human thinking. This idea

opened a new stage in semantic analysis. Langacker's theory of Cognitive Grammar further expanded this framework by explaining grammatical structures from semantic and cognitive perspectives. According to Langacker, grammar is an expression of the conceptual system — linguistic structure reflects the organization of human conceptualization. Thus, cognitive semantics places primary emphasis on how meaning is constructed through human knowledge, experience, and conceptual systems.

Fundamental Concepts and Principles of Cognitive Semantics

As a new paradigm in linguistics, cognitive semantics is grounded on distinctive methodological principles. It connects meaning with extra-linguistic factors — human mental models, conceptual systems, perception, and experience. Understanding its core concepts is essential for grasping the scientific essence of this field.

1. The Concept of "Concept"

One of the central notions in cognitive semantics is the concept. The term originates from the Latin conceptus — meaning "idea" or "notion." However, in cognitive linguistics, a concept is not merely a logical category; it is an integrated structure of mental imagery, perception, emotional experience, and knowledge that exists in human consciousness. For instance, the concept "mother" is not limited to biological or social dimensions — it encompasses notions of love, protection, care, emotional attachment, and lived experience. Thus, a concept represents a semantic model of knowledge in human cognition. Russian linguists such as A. Wierzbicka, Yu. Stepanov, and N. Arutyunova, as well as Uzbek scholars like A. Madvaliev, M. Mirtojiyev, and G. Abdurakhmanova, interpret the concept as a "cultural code." Through language, concepts reflect national thought, worldview, and values. Therefore, in cognitive semantics, the concept is regarded as the central cognitive unit of meaning formation.

2 Conceptualization and Categorization

In cognitive semantics, the process of meaning construction is referred to as conceptualization. This is the mental activity by which a person organizes, classifies, and structures knowledge about the external world. For example, when a child sees an apple for the first time, they perceive its color, shape, taste, and weight through sensory experience. These perceptual impressions are integrated in the mind into a single concept. Later, the concept "apple" is generalized into a broader "fruit" category — this process is known as categorization. Cognitive semantics explains categorization through prototype theory. According to this theory, people do not form concepts as rigidly delimited categories, but rather as networks organized around central examples (prototypes). For instance, the category "bird" has central members such as dove or nightingale, but peripheral members like penguin or ostrich are considered less typical. Hence, in both thought and language, categories have graded structures, consisting of central and marginal elements. Thus, conceptualization and categorization illustrate how the human mind organizes linguistic and experiential meaning into flexible conceptual systems.

3 The Relationship Between Meaning and Experience

Cognitive semantics closely relates meaning to human experience (experiential meaning). Humans perceive, interact with, and interpret the world through their senses and lived experience — these processes form the foundation of conceptual systems. Every language embodies the historical, cultural, and social experience of its speakers. For instance, in Uzbek, the concept "non" (bread) denotes not merely "a product made of wheat," but also carries deep cultural and moral connotations such as blessing, life, labor, and kindness. Therefore, cognitive semantics interprets meaning as a system of experience-based conceptual structures rather than an abstract linguistic entity. Meaning emerges through the interaction between perception, culture, and cognition.

4 Conceptual Metaphor

One of the most well-known principles of cognitive semantics is the theory of conceptual metaphor (Lakoff & Johnson, 1980). According to this theory, metaphor is not simply a poetic device but a fundamental cognitive mechanism through which humans understand abstract concepts via more concrete domains of experience.

Examples include:

Time is money — reflecting the conceptualization of time as a limited economic resource.

Life is a journey — interpreting human existence through the spatial and experiential framework of movement.

Similar cognitive metaphors can also be found in Uzbek linguistic material:

Umr daryo ("Life is a river") — conceptualizing time as a continuous flow.

Hayot sinov ("Life is a trial") — viewing existence as a process of testing or challenge.

Through conceptual metaphor, human beings construct new meanings, interpret abstract phenomena, and connect mental domains. It is one of the key cognitive mechanisms of semantic creativity and conceptual expansion.

5 Frame and Script Models

Cognitive semantics also uses frame and script models to explain meaning. These theoretical frameworks were developed by Charles Fillmore. A frame represents a structured mental schema that organizes knowledge about a particular situation, event, or concept. For example, the "restaurant" frame includes such elements as location, waiter, menu, meal process, and payment. A script, on the other hand, is a sequence of actions occurring over time, such as entering a restaurant, ordering, eating, paying, and leaving. These models demonstrate that meaning is deeply contextual: it depends not only on linguistic forms but also on situational and cultural knowledge. Thus, cognitive semantics emphasizes the importance of context and background knowledge in the interpretation of meaning.

6 The Dynamic Nature of Meaning

While traditional semantics often treats meaning as static and unchanging, cognitive semantics views meaning as a dynamic process. As human cognition, context, experience, and cultural environment evolve, meanings also change and expand. For instance, words such as computer, network, and artificial intelligence once had narrow technical meanings, but today they also convey broader social, philosophical, and cultural associations. Hence, in cognitive semantics, meaning is not a fixed entity but a living cognitive system that develops together with human thought and experience.

7 Core Principles of Cognitive Semantics

The scientific direction of cognitive semantics is defined by the following key principles:

Meaning as part of knowledge: The meanings of linguistic units are inseparable from human experience and cognition. Language as the mirror of the mind: Language reflects the conceptual system of human thought. Context as the source of meaning: The true meaning of a word is determined by its contextual use. Prototype structure: Categories are flexible, consisting of central and peripheral elements. Metaphorical cognition: Metaphor is a natural cognitive mechanism of understanding. Cultural connotation: Each language embodies the cultural and social experience of its speakers.

The Relationship Between Cognitive Semantics and Lexical-Semantic Systems

The lexical-semantic system of a language represents the most direct expression of human thought, while cognitive semantics provides a framework for analyzing this system at a deeper conceptual level. Cognitive semantics studies meanings not only as structural linguistic entities but also as reflections of human knowledge, perception, and conceptual understanding. Hence, these two domains complement each other and together enhance the depth and precision of semantic analysis.

1 Lexical Meaning and Cognitive Models

In traditional semantics, the meaning of a word is usually analyzed through its denotative (literal) and connotative (figurative or emotional) layers. Cognitive semantics expands this approach by linking the meaning of each word to the cognitive model that exists in the human mind. For instance, the Uzbek word "uy" (house) denotes "a building where people live," but in cognitive semantics it also includes a range of associated notions such as comfort, safety, family warmth, and belonging. Thus, the true semantic value of a word is determined not only by its dictionary meaning but also by its cognitive frame and cultural connotations. Consequently, lexical meaning extends beyond linguistic form — it is anchored in the knowledge structures of human cognition.

2 Lexical Networks and Semantic Fields

Cognitive semantics views the lexicon as a semantic network in which words and concepts are interconnected through relationships of synonymy, opposition, hierarchy, and association. For example, the concept "fruit" is linked to "apple," "pear," "fig," and other subordinate terms (a hyponymic relationship). Such networks resemble the organization

of knowledge in the human mind: meanings are not arranged in strict logical hierarchies but rather in associative structures. Analyzing semantic networks from a cognitive perspective enables linguists to: identify the degrees of semantic similarity between words, explain processes of metaphorical extension, and understand the causes of lexical polysemy. For example, the Uzbek word "ildiz" (root) originally referred to the biological root of a plant but, through metaphorical expansion, has come to mean "root of a language," "root of culture," "root of a problem." This process vividly illustrates the principle of metaphorical transfer in cognitive semantics.

3 Cognitive Interpretation of Polysemy

Cognitive semantics explains polysemy (the coexistence of multiple meanings within a single word) as the result of conceptual expansion. A word's central meaning (the core concept) develops new semantic shades in different contexts. For instance, the Uzbek word "yurak" (heart) denotes a physiological organ, but in other contexts it acquires metaphorical meanings such as "courage" (yurakli odam – brave person), "sincerity" (yurakdan gapirmoq – to speak from the heart), and "emotion" (yuragi ezildi – heart ached). All these are metaphorical extensions of the same conceptual core, demonstrating that polysemy is not a static lexical phenomenon but a dynamic conceptual system — each new meaning reflects a new cognitive association in the human mind.

4 Synonymy and Antonymy in Cognitive Analysis

Cognitive semantics also reinterprets synonymy and antonymy based on mental models rather than mere linguistic substitution. For example, the Uzbek adjectives "quvonchli" (joyful) and "baxtli" (happy) are synonymous in formal terms, but they differ in cognitive structure: joy refers to a temporary emotional state, while happiness represents a more stable, long-term mental condition. Similarly, antonymy is viewed beyond simple opposites. Words such as "issiq" (hot) and "sovuq" (cold) not only denote physical temperature but also convey social and emotional connotations — as in "iliq munosabat" (warm relationship) and "sovuq qarash" (cold attitude). These examples demonstrate that lexical oppositions are grounded in multilayered cognitive representations rather than purely linguistic contrasts.

5 Cultural Concepts and the Lexical-Semantic System

The lexical system of every language is deeply rooted in its speakers' cultural experience. Cognitive semantics analyzes this phenomenon through the notion of cultural concepts. For example, in Uzbek, words such as "mehmon" (guest), "duo" (blessing), "or-nomus" (honor), and "taqdir" (destiny) are not just lexical items — they represent complex cultural and ethical constructs. They reflect the moral values, religious views, and social norms of the Uzbek people. Such concepts often lack full equivalents in other languages because their semantic cores are intertwined with national culture. Therefore, cognitive semantics interprets the meanings of lexical units through their cultural-cognitive contexts, revealing how language encodes worldview and value systems.

6 Cognitive Links in Semantic Networks

In cognitive semantics, the relationships between linguistic units are represented as semantic networks. Within such a network, words are connected through several types of relationships:

Hyponymy – subordination (animal → cat, horse, cow)

Hyperonymy – generalization (tree → oak, pine, willow)

Meronymy – part-whole relations (body → head, hand, legs)

Associativity – experiential connection (heart ↔ love, fear, anger)

These interconnections form the cognitive structure of the semantic system, showing how human knowledge and linguistic meaning interact. In this sense, cognitive semantics models the mental lexicon — the network of semantic relationships that exists in human consciousness.

7 Cognitive-Semantic Approaches in Uzbek Linguistics

In recent years, cognitive approaches have been increasingly applied in Uzbek linguistics. Scholars such as A. Madvaliev, G. Abdurakhmanova, D. Rahmatullaeva, M. Mirtojiyev, and N. Jo'rayev have explored the concepts of concept, metaphor, frame, and cultural code using Uzbek linguistic data. For instance, the concept "or-nomus" (honor) is analyzed as one of the key values of the Uzbek national mentality. It encompasses not only shame or moral restraint, but also family reputation, national pride, and social responsibility. Similarly, the concept "mehmondo'stlik" (hospitality) represents a complex

cultural model that reflects social relations and moral principles in Uzbek society. Through such analyses, cognitive semantics allows linguists to interpret the lexical system of the Uzbek language as a reflection of national cognition and worldview.

8 Cognitive Semantics and Discourse Analysis

In recent linguistic research, cognitive semantics has also become closely linked with discourse analysis. In discourse, meaning is constructed not only through lexical content but also through conceptual structures, intentions, and communicative goals. For example, in political discourse, concepts such as “future,” “progress,” and “new stage” evoke positive connotations that build an optimistic worldview, while “threat,” “danger,” and “conflict” generate negative emotional associations. Cognitive semantics, therefore, helps reveal underlying conceptual and metaphorical structures within discourse, exposing the implicit meanings and mental models that shape communication.

9 The Cognitive Dynamics of the Lexical System

The lexical system of a language is never static; it evolves alongside cultural, scientific, and technological change. As new concepts emerge, new lexical items appear or existing ones acquire expanded meanings. In the past decade, terms such as “digital culture,” “artificial intelligence,” “online life,” and “metaverse” have entered the Uzbek lexicon. Cognitive semantics interprets these developments as processes of conceptual innovation and semantic expansion. This demonstrates that language is a living, adaptive cognitive system that evolves together with human consciousness and society.

Cognitive Semantics and Its Interdisciplinary Connections

Cognitive semantics is one of the most dynamic and interdisciplinary branches of modern linguistics. It stands at the crossroads of linguistics, psychology, philosophy, neuroscience, and artificial intelligence. Through this interaction, the field expands its methodological and analytical possibilities and contributes to the development of new models of meaning, cognition, and communication.

1 Cognitive Semantics and Linguoculturology

Linguoculturology is a science that studies the relationship between language and culture, and is closely related to cognitive semantics. At the heart of both directions is the concept of a cultural concept and a conceptual system. The lexical system of a language expresses the cultural values, traditions, national psychology and historical experience of the people. Cognitive semantics explains this process through conceptual models in human thinking. For example, such words as “or-nomus”, “duo”, “mehr-moqal”, “ajdod”, “mehmon” in the Uzbek language are concepts inherent in national thinking. In addition to the lexical meaning, these units also represent a cultural-ethical system. Cognitive semantic analysis shows that these words are conceptual structures based on the moral and emotional experience of a person. In the linguoculturological approach, concepts:

interpreting as the core of national thought (for example, "honor"),

an indicator of social values (for example, "hospitality"),

a sign of mental stereotypes (for example, "respect for a woman", "great respect").

Thus, cognitive semantics serves as a theoretical basis for linguoculturology, since it connects cultural concepts with the system of meaning in the language. This interrelationship means that the semantic structure of the language is a conceptual map of culture, and language units are codes of cultural knowledge.

2. Cognitive semantics and psycholinguistics

Cognitive semantics is also directly related to psycholinguistics, since both areas study the process of processing language units in the human mind. Psycholinguistics analyzes the processes of language reception, understanding and production (rechevoy protsess) from a psychological perspective. Cognitive semantics answers the questions of how meaning is formed, stored and updated in these processes. For example, when a person hears the word "mountain", images, emotions and experiences associated with this word - elements such as snowy peaks, cold air, grandeur, natural beauty - are instantly activated in his mind. This situation is called semantic activation.

Cognitive semantics, together with psycholinguistics, explains the following processes: encoding and decoding of meaning, mental representation of language units, associations between words and

concepts, and connections between language and memory.

In addition, recent neurolinguistic studies (Lakoff, Bergen, Feldman, etc.) show that the human brain uses not only linguistic, but also sensorimotor systems when processing language units. For example, when hearing the word “run”, neurons in the brain that respond to movement are activated. This phenomenon is explained by the theory of embodied cognition, and it is one of the important principles of cognitive semantics. Thus, cognitive semantics provides psycholinguistic research with a cognitive model of meaning formation. A person does not just hear or read words - he “tastes”, “sees” and “feels” them in his mind.

3. Cognitive Semantics and Artificial Intelligence (AI)

In recent decades, cognitive semantics has also gained importance as a theoretical basis for artificial intelligence (AI) and computational linguistics. Semantic models are necessary for AI systems to understand human language, analyze texts, and determine meaning. While classical AI systems are based on syntactic structures, modern systems (e.g. ChatGPT, BERT, GPT-5, Claude, etc.) use cognitive-semantic models. They place language units in semantic space and analyze meaning through context. The following cognitive-semantic principles play an important role in this process:

Frame semantics — each situation or text is explained through a frame (Fillmore model).

Conceptual metaphor model — artificial intelligence can connect complex concepts on a metaphorical basis.

Semantic vector space — the meaning of words is expressed through mathematical vectors (word embeddings).

For example, AI systems connect the word “mother” with concepts such as “love”, “protection”, “childhood”, “home”, creating a semantic network close to human perception. This is a computer model of cognitive semantics. Also, in AI research, models called “cognitive graphs” have appeared. They represent networks of meaning in human thinking in an algorithmic way. This clearly demonstrates the technological application of cognitive semantics: it allows modeling human thinking and bringing artificial intelligence closer to “meaningful thinking”.

4. Cognitive semantics and neurolinguistics

In the modern development of cognitive semantics, integration with neurolinguistics is also important. Neurolinguistics studies which centers in the brain control language, and in which neural systems meaning is formed. Cognitive semantics explains this process: when words are activated through the semantic network, different areas of the brain (Broca's, Wernicke's, temporal and parietal areas) communicate with each other. In this way, meaning is considered the cognitive result of this neural activity. Currently, fMRI (functional MRI) studies show that when a person hears words related to different semantic areas, different parts of the brain are activated. For example, the words "food" activate the orbitofrontal region, and the words "action" activate the motor cortex. This case scientifically confirms the idea of body-based thinking in cognitive semantics.

5. The interdisciplinary nature of cognitive semantics

Cognitive semantics is not just a branch of linguistics - it is an interdisciplinary integrative model. It is directly related to the following fields: Field Related field Psychology Explains the formation of meaning through the processes of perception, memory, association, and thought. Philosophy Grounds the relationship between meaning and being, the theory of knowledge. Cultural studies Analyzes concepts as cultural codes. Computational linguistics Creates methods for modeling and algorithmic representation of meaning. Sociology Connects meaning and discourse with social factors. Thus, cognitive semantics has become a multidisciplinary scientific concept today. It not only explains meaning in language, but also analyzes the cognitive, cultural, and technological mechanisms of human thinking.

6. Modern applications of cognitive semantics

Cognitive semantics is practically applied in the following areas:

Language education: concept-based learning.

Text analysis: identifying hidden metaphors in political, media or advertising discourses.

Automatic translation systems: creating translations based on contextual meaning analysis.

Artificial intelligence: applying human thinking models to machine learning algorithms.

Psychotherapy and communication: identifying cognitive patterns in human speech through metaphorical thinking.

Thus, cognitive semantics is now recognized as a universal theory located at the intersection of language, consciousness, culture and technology.

CONCLUSION

Cognitive semantics, as one of the most profound and promising areas of modern linguistics, reveals the internal mechanisms of human thinking through the system of meaning in language. This theory interprets meaning in language not only as a formal or grammatical unit, but also as a dynamic conceptual structure that is inextricably linked to human cognitive (perception, memory, knowledge) processes. The following main scientific conclusions were reached during the research: Cognitive semantics interprets meaning as a process of cognition. While traditional semantics analyzes the relationship between words and things in language, cognitive semantics explains this relationship through a conceptual model reflected in the human mind. Meaning is a cognitive construct formed on the basis of human experience, emotions, and cultural knowledge. At the heart of cognitive semantics is the concept of "concept".

A concept is a generalized model of meaning in the human mind, which covers a wider semantic field than lexical units. Concepts are the main means of transmitting meaning in the language system. For example, units such as “freedom”, “mother”, “light” exist not only as words, but also as conceptual, emotional and cultural codes. Cognitive semantics explains the main mechanisms of human thinking through metaphor and metonymy. Based on the theory of conceptual metaphors by Lakoff and Johnson, human thinking models abstract concepts through concrete experiences. For example, metaphors such as “life is a path”, “time is money”, “love is fire” demonstrate the universality of human thinking. Cognitive semantics is closely related to psycholinguistics. The process of meaning formation is associated with psychological, neural and emotional mechanisms. A person not only hears words, but also “tastes” them in his mind through emotional, imaginative and moving images. This shows that the process of understanding language is based on the principle of embodied cognition - that is, bodily perception. Cognitive semantics and linguoculturology are mutually integrated. Semantic units in each language reflect the culture, values, and mental stereotypes of the people. In the case of the Uzbek language, concepts such as “or-nomus”, “mehmonnavozlik”, “duo”, “sabr” constitute the semantic core of national thinking. Cognitive semantics is used in semantic models of artificial intelligence. Modern artificial intelligence systems (GPT, BERT, etc.) perform contextual analysis of meaning based on cognitive semantic principles. In AI technologies, models such as “frame semantics”, “conceptual metaphor”, “semantic vector space” serve to technologically model human thinking. Cognitive semantics has created the basis for a new paradigm in knowing, learning, and analyzing language.

This direction sees language not only as a communicative tool, but also as a system of thought. Thus, the cognitive approach has brought semantic analysis in linguistics to a new level: now meaning is associated not with the world outside language, but with cognitive processes in the human mind. Thus, cognitive semantics combines the linguistic, psychological, cultural and technological dimensions of human thinking into a single theoretical model. This direction is recognized in modern science as a “universal paradigm for the study of thinking through language.

REFERENCES

1. Lakoff, G. & Johnson, M. (1980). Metaphors We Live By. Chicago: University of Chicago Press.
2. Langacker, R. W. (1987). Foundations of Cognitive Grammar, Vol. 1: Theoretical Prerequisites. Stanford University Press.
3. Evans, V. & Green, M. (2006). Cognitive Linguistics: An Introduction. Lawrence Erlbaum Associates.
4. Fillmore, C. (1982). Frame Semantics. In Linguistics in the Morning Calm. Seoul: Hanshin Publishing.
5. Fauconnier, G. & Turner, M. (2002). The Way We Think: Conceptual Blending and the Mind's Hidden Complexities. New York: Basic Books.
6. L. (2000). Toward a Cognitive Semantics. MIT Press.
7. Croft, W., & Cruse, D. A. (2004). Cognitive Linguistics. Cambridge University Press.
8. Kövecses, Z. (2010). Metaphor: A Practical Introduction. Oxford University Press.
9. Kubryakova, E. S. (2004). Jazyk i znanie: Na puti polucheniya znaniy o yazyke. Moskva: Jazyki slavyanskoy kultury.
10. G‘ulomov, A. & Rustamov, A. (2018). Kognitiv tilshunoslik asoslari. Toshkent: O‘zMU nashriyoti.

11. Qurbonov, A. (2021). Zamonaviy semantika va kognitiv yondashuvlar. Samarqand: SamDU nashriyoti.

12. Rakhmatullayev, R. (2022). Til va tafakkur: Kognitiv tahlil. Toshkent: Fan va texnologiya.

13. Bergen, B. (2012). Louder Than Words: The New Science of How the Mind Makes Meaning. Basic Books.