

Cognitive linguistics from the perspective of Ronald Langecker

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Abstract:

Cognitive linguistics is a recently emerged trend that focuses on studying language as part of human cognition, and that it is inseparable from other human cognitive abilities such as perception and attention. Like any science, it has its leading figures and pioneers. The linguist Ronald Langecker emerged on the horizon, and he is considered one of the most prominent founders of the physical theory of language, which studies language from a physical perspective, attempting to understand how physical properties affect its processing and use. This includes studying the phonetic properties of language, in addition to how language is formed in the brain and how neural processes are processed.

Keywords: Cognitive linguistics - Ronald Langecker - Physical theory of language

1- Introduction

Cognitive linguistics or cognitivism is a modern linguistic trend, which focuses on studying language as part of human cognition. It emerged as a reaction against the generative-transformational theories led by "Noam Chomsky", which in their study of language were concerned with the linguistic competence possessed by the speaker/listener, enabling him to produce and understand sentences, focusing on the mental processes that precede speech production. Cognitive linguistics, on the other hand, focuses on the mind and the brain; it tries to understand and study language in its mental nature, that is, it attempts to explain language through the mental processes carried out by the brain, then to reproduce it in different forms. Like any science that has its figures and

pioneers, the linguistic scholar Ronald Langacker appeared on the horizon, who contributed to laying the foundations of this science through his famous and well-known theory, Cognitive Grammar, this psychological trend which focuses in studying linguistic phenomena as mental and neural processes taking place in the brain. Therefore, in this research paper we will try to introduce cognitive linguistics and its emergence, then to introduce this linguistic scholar, his major works, and the theoretical foundations he proposed.

First: Definition of cognitive sciences

Cognitive sciences, or cognitive sciences, are «a set of sciences that study the functioning of the mind and intelligence, whose study is based on the convergence of disciplines, in which philosophy, psychology, artificial intelligence, neuroscience (brain sciences), linguistics, and anthropology participate. Cognitive sciences study intelligence in general and human intelligence and its biological basis that carries it (...) and investigate its psychological, linguistic, and anthropological manifestations». (Al-Zinadi, n.d., p. 15)

George Lakoff, on the other hand, defines them as a new scientific field that focuses in its study on the functioning of the mind, and tries to answer a set of questions such as: What is the mind? How do we make sense of our experiences? What is the conceptual system and how is it organized? Do all humans use the same conceptual system? If so, what is this system? If not, what exactly is common in the way all humans think? (Saoudi, 2024, p. 5) From the two previous definitions of cognitive sciences, we conclude that it is a field among modern cognitive fields, which brings together various

academic disciplines such as psychology, computer science, linguistics, philosophy, and others, concerned with studying everything related to the mind and its functions, taking it as a tool to understand language and the way it is produced. It thus tries to determine how the human mind works, how it is organized, and whether all humans possess the same system. Thus, cognitive sciences attempt to link the mind, linguistic phenomena, and the neural processes that produce them.

Second: Definition of cognitive linguistics / cognitivism (Linguistics Cognitive)

Cognitive linguistics «is a general term applied to a current or movement that brings together a number of theories which share the same foundations and starting points, but differ, vary, and intertwine in their construction, concerns, orientations, and fields of interest». (Al-Zinadi, n.d., p. 241)

It is also «the systematic scientific study of human languages through the units and arrangements responsible for organizing cognitive processes, especially: categorization, construction, representation, and logic». (Givón, 2017, p. 303) Thus, cognitive linguistics is a new science concerned with studying language in relation to mental processes, and it is a science «that is based on studying the relationship between human language and the mind, including the social, material, and environmental aspects, that is, the relationship between language and the mind, and social, material, and environmental experience». (Al-Zinadi, 2011, p. 2) Thus, cognitive linguistics is an interdisciplinary science that studies language in its relation to the mind, without neglecting the external social and material conditions surrounding the communicative process.

Third: The theoretical foundations of Ronald Langacker

1- Introduction to the linguist Ronald Langacker

Ronald Langacker is considered one of the most prominent pioneers of cognitive linguistics, who contributed greatly to the development of this trend. He is an «American linguist born on December 27, 1942, in the state of Wisconsin,

USA. He obtained his PhD from the University of Illinois at Urbana-Champaign in 1966. Since then, he worked as a professor of linguistics at the University of California, San Diego, until 2003, after which he became an emeritus professor there. He chaired the International Cognitive Linguistics Association between 1997 and 1999. He received an honorary doctorate from the University of Bordeaux Montaigne in 2005. He has many publications and contributions in comparative studies of the opposed Tajik languages, and he has published numerous articles in historical Semitics, as well as editing collections of grammatical sketches for understudied languages. Among them: “Non-distinctive arguments in the Otomanguean languages,” published in 1976, and “An overview of the grammar of Otomanguean languages, studies in their grammar,” published in 1977». (Al-Mutairi, 2025, p. 493)

2- The theoretical foundations of Ronald Langacker

Research in cognitive grammar began in 1976, and Ronald Langacker is considered the real founder of this trend through his book *Cognitive Grammar: A Basic Introduction*, in which he laid out his most important theories and principles. Cognitive grammar is based on a fundamental principle: restoring meaning and making it central in the study of language from the viewpoint of the mental processes that produce it. This is what made it a more comprehensive semantic theory than a syntactic one, since it rejects «the conception according to which a number of linguists separated the different levels that contribute to building and shaping meaning». (Ben Ghriba, 2010, p. 28)

Cognitive linguists' view of grammar has differed according to their view of language. For Langacker, grammar is «a linguistic, psychological, and neural phenomenon that takes place in different centers of the brain, which are linked by relations of interaction and integration, so that the process of understanding and interpreting speech can occur. He sees grammar as a conceptual process carried out by the brain». (Ahmed, 2022, p. 464) It is also «a continuum of symbolic structures, and all

linguistic units, whether lexical, morphological, or syntactic, are symbolic units that link a semantic pole with a phonological pole, and the different levels cannot be separated». (Ben Ghriba, 2010, p. 18) From this we conclude that cognitive grammar rejects the idea of separating the levels of linguistic structure, and sees morphology, lexicon, and syntax as essential elements for the formation of meaning in the speaker's/ addressee's mind, in contrast to generative grammar, which focuses on the centrality of syntax (grammar) and neglects the other aspects.

3- Cognitive grammar in Langacker's conception

Langacker criticized previous studies that totally exclude meaning, which are based on separating language from mental processes, «so that the information prominent in mental representations cannot refer to a projected world resulting from this structure and born of mental organization; this means that humans speak about things only by possessing mental representations of them». (Ghilos, 2020, p. 44) Thus, cognitive grammar in Langacker's view is based on linking the principle of imagery, i.e., the mental representation of images of things inside the mind when we use a word or linguistic expression, with meaning. That is, meaning is not only in the word, but in the way the word is mentally pictured within a larger cognitive structure.

«When a speaker uses a particular unit or syntactic structure, he is selecting a particular image through which he arranges the situation occurring in his mind for communicative purposes. And according to the different languages and their syntactic systems, the patterns of imagery used by speakers in following linguistic conventions differ». (Al-Zinadi, n.d., p. 100) From this, syntactic structures are produced as a cognitive, mental product whose meaning admits an expanded interpretation, which is what is meant by the open domain. Cognitive systems are mental spaces within which meaning is interpreted, and they are broad because interpretation is multiple and infinite. But the domain is determined

precisely by reference to it, and reference to it requires a special ordering of units that accurately points to the domain in order to reflect all its content. Here, specification occurs in the construction of the image, which is what makes grammar rely on the principle of imagery.

From the above, it can be concluded that cognitive grammar in Langacker's view is based on two principles:

1. Cognitive grammar sees language as an integrated system among linguistic levels, without relying only on syntax.

2. Giving importance to the element of mental image produced by the descriptive style.

4- The basic categories in Langacker's theory **a- Meaning (signification)**

Meaning in Langacker is based on a holistic conception of all events and things in general, unlike Jackendoff, whose conception is partial and based on what he calls "formatives," since he sees that the mind is capable of representing more comprehensive images. Therefore, Langacker proposes the category, because it is more comprehensive and abstract, since «the appropriate categories for all elements of a class must clarify a greater abstraction than the considered formatives». (Langacker, 2008, p. 94)

Thus, the general rule on which meaning formation is based is the attempt to expand the domains of the image, or what he calls the schema, which is «an abstract example, a conception that includes a very limited number of properties and details. This number of properties is much smaller than those available in the elements that instantiate that example and belong to it. It is therefore a general, overall image of the various elements belonging to the category». (Ben Ghriba, 2010, p. 75) Thus, meaning for Langacker is the same as the process of conceptualization. In this definition, he does not depart from the cognitive framework that shaped a conception of language that does not separate its different levels. Langacker brought together all elements contributing to meaning construction without separating them.

Therefore, these meanings must be studied starting from the conceptual mental processes that produce them, not by isolating them from the context of utterance or confining them to a single level of syntactic structure.

For this reason, he differs from theories that separate the levels of language, especially Chomsky's theory, which focused on syntax and neglected meaning. He sees that «linguistic meaning lies in the construal I have described, up to this point, as dynamic, interactive, and imagistic (as opposed to propositional), and imaginative (including metaphor, blending, imagination, and the construction of mental spaces)». (Langacker, 2018, p. 80) Thus, the concept of meaning in Langacker differs from its concept in other scholars. If meaning is usually taken as the semantic features distinguishing that thing, for Langacker it is related to cognitive domains, i.e., the various aspects that contribute to forming the essence of the thing, which is what he means by "construal" in its broad sense. Based on this, he divided linguistic expressions into two types: the first related to basic domains, and the second to higher domains in the conceptual system. For example, the conceptual meaning of the word "vessel" "glass" containing water can be expressed by different expressions that approach the subject from different angles, such as:

- (3) a. The glass that has water in it.
- b. The water that is in the glass.
- d. The glass is half empty.

From this, the point of focus on the thing differs from one expression to another: in expression (3-a) it is the vessel, in (3-b) it is the water, while in (3-c) it is the capacity of the vessel taken from the side of fullness, and if we interpret it cognitively, it is an upward movement accompanying the rising level of the liquid inside the vessel, and the opposite, downward, in (3-d). (Al-Zinadi, n.d., pp. 102–105) Thus, these are the different angles of approach adopted by meaning in cognitive grammar.

b- Nouns

A noun occupies a place or space within a defined domain. This place may be characterized

by the presence of boundaries or by their absence. Starting from this feature, Langacker distinguishes between two types of nouns: count nouns (*les noms comptables*) and mass nouns (*les noms de masse*). (Ben Ghriba, 2010, p. 77)

To clarify the idea of boundedness or unboundedness in space, he gives us the following example: (Ben Ghriba, 2010, pp. 77–78)

Imagine a person standing at a distance of five meters from a wall painted black, with a red circle in its center. This person can say "I see a red spot," because in this case he sees the red spot and the black background that outlines its boundaries. The boundaries in such a case exist within the signified field, i.e., within the visual field, and the observer perceives by sight the red color which occupies a defined space.

If we place the person so that he looks at the same wall, but from a distance where he sees only the part colored red and no longer sees the surrounding black color, then in this case he can say that he sees only redness. The word "redness" in this case is a mass noun (*un nom de masse*).

Through the previous example, Langacker defines two types of nouns:

1. «We conceive of a noun as a basic location in space, where it is bounded and possesses its own location.
2. At the same time, from another perspective, a noun can continue without being bounded, and it is not thought to possess any specific location in this domain». (Langacker, 2008, p. 104)

c- Relations

By the category "trajector and landmark" is meant those relations connected with time, i.e., those that concern the construction of verbs. Langacker sees that the trajector (TR) is the main participant (the focal point) in clarifying the temporal relations of linguistic sentences, and it is known to both speaker and listener. In order for the oblique relation to be built through its participants at different levels of focusing, there is one participant who represents the most prominent focus and is called in this case the trajector (Trajector), in addition to the secondary

participant in the focus, which is the landmark. (Langacker, 2008, p. 113)

d- Autonomy and dependence (autonomy & dependence)

This is a category adopted by Langacker to clarify the importance of dependent linguistic expressions in building the overall meaning of the whole expression. Dependence is the requirement of units and expressions that are invoked by a head in a construction or demanded by a branch of this construction so that the full meaning is achieved. «This means that we consider an expression as conceptually dependent if its semantic structure includes an empty slot that the expression does not achieve or complete except after filling it». (Ben Ghriba, 2010, p. 122) For example, many expressions that are formed from basic constructions and other dependent ones, such as: “mujtahidun,” “kuttāb,” “ṭabībāt,” etc. The nominal construction “mujtahidun” consists of the expression “mujtahid” and “-ūn” indicating plurality, likewise with the expression “kuttāb” (independent) and its dependent pattern “fa‘āl,” and also with the expression “ṭabībāt,” composed of the main expression “ṭabība” and the dependent “-āt” indicating feminine plural.

As for autonomy, it is related to linguistic units whose meaning is clear without needing other units dependent on them, and it concerns expressions that do not have empty slots for meaning to be completed, such as:

1. The boy wrote the lesson.
2. The pupil put the notebook on the desk.
3. The child slept before eating lunch.
4. The worker finished his work on the bus.

The previous expressions show two types of dependents: in examples (1) and (2), the expressions “the lesson” and “on the desk” are essential dependents that cannot be imagined without them, whereas the expressions “before eating lunch” and “on the bus” are secondary and can be dispensed with without causing a defect in meaning.

Cognitive grammar also sees that «the relational meaning is related to nominal

constructions as a dependent, and that the concept of dependence must be a general concept applicable to the phonological pole and the semantic pole, as it holds for most recurring cases in language». (Ben Ghriba, 2010, p. 124)

Conclusion:

In the end, it can be said that Ronald Langacker has made decisive contributions to establishing cognitive linguistics as a trend that links language, thought, and human cognition. Langacker shifted the study of grammar from an abstract formal level to a cognitive, conceptual level, showing that linguistic structure is not a system independent of the mind, but rather a reflection of the way humans conceptualize the world and organize experience.

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