

## INNOVATIVE DEVELOPMENTS AND RESEARCH IN EDUCATION

**International scientific-online conference** 



## HYPONYMIC TAXONOMY IN SEMANTICS

## N. K. Jumaeva

Master's Degree
Student in CSPU
nasibajumayeva1@gmail.com
(+99)350-79-39

Annotation: This article describes the hyponymic taxonomy as an object of the study the semantics and its semantic features in English linguistics. In addition to this, some examples are given with explanations and their taxonomic analysis which is taken as an object of semantic layer. One of the most vital progresses in cognitive understanding of information and the extremely significant devices to classifying vocabulary and performing of the human perception.

**Introduction.** Taxonomy (classification) is a specific method of semantic analysis, a set of principles and rules for the classification of linguistic objects [1]. Using many methods, the concept of taxonomy, which is expressed as a function of the taxonomic relations of objects and their attributes, was introduced into the linguistic system [2]. The concept of mutualism is important as a tool of evolutionary theory. Taxonomic relationships have been expressed automatically for many years. R.A. Amsler automatically created a taxonomy for English noun and verb word groups based on dictionary definitions [3]. M.A. Hirst introduced the use of lexical and syntactic patterns representing hyponymic relations [4].

Taxonomy simultaneously includes three types of relationships, namely hypernymy (genus-species), hyponymy (species-genus) and cohyponymy (species-species). In the study of lexical-semantic groups and functional-semantic fields of natural language word groups, it shows the lack of strict consistency and systematicity in the manifestation of hyper-hyponymic relations. In the scientific typologies of various fields, hyper-hyponymy is a common phenomenon that expands and systematizes the concepts of profession.

**Research Methodology.** It is well known that a taxonomy (or taxonomical classification) the structure of classifying especially it is a hierarchical classification which means that things are organized according to its groups or types. In addition to this, taxonomy also applies to relationship schemes other than parent-child hierarchies such as network structures. Taxonomies hierarchies may then include a single child with multi-parents, for instance, car might appear with both parents *vehicles* and *steel mechanisms*; to some however, this merely means that *car* is a part of several different taxonomies [5].



## INNOVATIVE DEVELOPMENTS AND RESEARCH IN EDUCATION **International scientific-online conference**



**Analysis and results.** the hyper-hyponymic taxonomic relations of words, phraseological units and terminology in the linguistics attracted the attention of M.V. Lysyakova, A.M. Plotnikova, E.L. Ginzburg, A.SH. Ayrapetyan and other linguists [7].

According to D. Cruse, many words have different hyponymic relationships depending on the context, based on the facet on their meaning. In the example he cites, the word a book has facets like TOME and TEXT, and it has hyponyms like paperback, novel. D. Cruse's facet approach is designed to express the different types of relationships of words such as book without increasing the number of meanings and hierarchical nodes. Also, although D. Cruse introduced the term microsense into linguistics, the phenomenon of the complete taxonomy requires some prevention of word meanings. For example, there are many superordinates of the word knife, i.e. cutlery, weapon, surgical instrument, tool and they do not represent the importance of the facets of the word *knife*, but rather the types of knife and the different meanings of the word knife [7]. In the figure that given below, the hyponymic relationship is represented by a scheme. The lexical units in this scheme are parts of the hyponymic or taxonomic paradigm. Given the probability that the tree structure is in an asymmetric state, it can be observed that each lexical unit can have many hyponyms, but they have a single hypernymy. For example, if the word tool has hyponyms such as Educational tools, Agricultural tools, IT tools, Painting tools, is their hypernymy. The word *Agricultural tools* is the hypernymy of *Garden tools*.

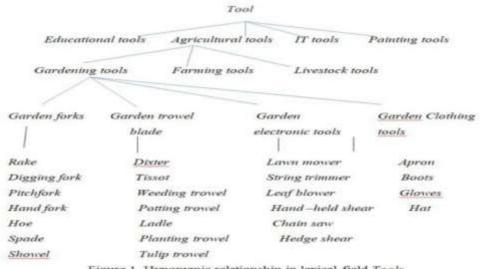


Figure 1. Hyponymic relationship in lexical field Tools.

According to English linguist J. Lyons, "These cross-categorical relations are quasi hyponymy. But even in nominal taxonomies, we see some differences in syntactic categories at the highest levels" [9]. Adjectives can also have nominal hypernyms, for example *emotion*>*happy*, *sad*, *angry*. Hyponymy is a paradigmatic relationship in which the relationship between members of the same syntactic category is represented. The inter-category relationship is called quasi-hyponymy. In some cases, a high degree of syntactic category differences is observed in nominal taxonomy. For example, even though the word *tool* in the picture above is a noun phrase, it is used in the adjective form agricultural tools. The agriculture tools varieties gardening and farming tools and



## INNOVATIVE DEVELOPMENTS AND RESEARCH IN EDUCATION

**International scientific-online conference** 



*livestock tool* are represented at the bottom. Despite the fact that the words *IT and educational tools* and *painting tools* in the primary stage are in the unit of counted, the word *tool* is a noun in the category that is also counted.

According to English linguist M.L. Murphy, "The necessity of representing hyponymy in the lexicon is called into question". That is, the semantic relation of hyponymy is a linguistic expression of the meaning group and its broad relation. In this case, the expression of information such as lexical and linguistic information is redundant because information already exists as part of our secular knowledge [10].

Taxonomies are often represented as kind of hierarchies where each level is more specific than the level above it (in mathematical language is *a subset of* the level above). For example, a basic biology taxonomy would have concepts such as *mammal*, which is a subset of *animal*, and *dogs* and *cats*, which are subsets of *mammal*.

In linguistics, there is a kind of relations which are called hyponymy. When one word describes a category, but another describes some subset of that category, the larger term is called a hypernym with respect to the smaller, and the smaller is called a hyponym with respect to the larger. Such a hyponym, in turn, may have further subcategories for which it is a hypernym. In the simple biology example, dog is a hypernym with respect to its subcategory collie, which in turn is a hypernym with respect to Fido which is one of its hyponyms. Typically, however, hypernym is used to refer to subcategories rather than single individuals.

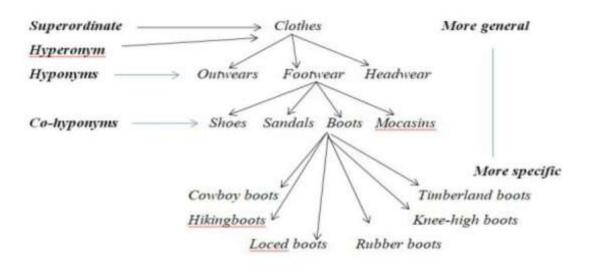


Figure 2. Hyponomic Taxonomy of the Clothes.

In this place, the word *cloth* describes a category, but the words such as *outwear*, *footwear*, *headwear* express some subsets of that category, additionally, the word *clothes* is larger term which is called *hypernym* with respect to the smaller ones: *outwear*, *footwear*, *headwear* and this smaller one is named a *hyponym* with the respect to the larger. Such a hyponym, in turn, may have futher subcategories like *cowboy boots*, *rubber boots*, *timberland boots* for which it is a hypernym.

## **Conclusion**



# INNOVATIVE DEVELOPMENTS AND RESEARCH IN EDUCATION International scientific-online conference



The hyponym and hypernym relationship are very important in giving a logical connection in speech, expressing the meaning of words. There is no clear basis for the fact that a hyper-hyponymic relationship is a linguistic-lexical relationship rather than a cognitive-semantic relationship. The taxonomies of hyponymy do not cover all types of relationships that fall into the general term. The fact that functional hyponyms do not have to be part of hypernyms, the range of what is considered a hyponym in these taxonomies, suggests that hyponymy is a broad concept. English linguist A. Wierzbicka distinguishes hyponymic relations based on the morpho-semantic properties of hypernyms. These ideas raise the question of the relationship between hyponymy and words or concepts or meanings [11].

Easy and quick teaching of various terms to young people in teaching English can increase the level of communication in this foreign language and allow them to freely express their opinions in a foreign language.

#### **REFERENCES:**

- 1. Krongauz M.A.Semantics. –M., 2001: -C. 98.
- 2. Farris J.S. The meaning of relationship and taxonomic procedure. Systematic Zoology. <u>Vol. 16. No.1. 1967</u>. pp. 44-51. <u>https://doi.org/10.2307/2411515</u>.
- 3. Amsler R.A. A taxonomy for English nouns and verbs, in Proceedings of the 19th annual meeting on Association for Computational Linguistics. Standford, CA. 1981. pp. 133–138.
- 4. Hearst M.A. Automatic acquisition of hyponyms from large text corpora, in Proceedings of the 14th International Conference on Computational Linguistics. 1992. pp. 539–545.
- 5. Jackson, Joab, "Taxonomy's not just design, it's an art". Government Computer news. Washingtong, D.C. September 2, 2004. Pp 98-99.
- 6. J. Djumabaeva, N. Sabirova. The study of hyponymic taxonomy in English linguistics and the lexical and semantic relations of hyponymy. Ilkogretim Online-Elementary Education Online 2020; 19(4):p. 874. Doi:10.17051/ilkonline.2020.04.195
- 7. D.A. Cruse. Meaning in language: An introduction to semantics and pragmatics. New York: Oxford University Press. 2000. P 356
  - 8. Lyons J. Semantics (2 vols) Cambridge University Press. 1977. P 293.
- 9. Murphy M.L. Hyponymy and hypernymy. Cambridge University Press. 2003.
- 10. Brachman, Ronald (October 1983). "What IS-A is and isn't. An Analysis of Taxonomic Links in Semantic Networks". IEEE Computer. 16 (10): 30–36. doi:10.1109/MC.1983.1654194. S2CID 16650410.
- 11. A Wierzbicka. Semantics: Primes and universals: Primes and universals. Oxford University Press, UK. 1996.