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## **ZAMONAVIY TILSHUNOSLIKDA GIPERONIM-GIPONIM MUNOSABATLARNING STRUKTUR TAHLILI**

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### **Annotatsiya**

Ushbu maqolada tilshunoslikning muhim yo'nalishlaridan biri bo'lgan leksik-semantik munosabatlar, xususan, giponimiya fenomeni tahlil qilinadi. Tadqiqotda jahon va o'zbek tilshunosligining nazariy qarashlari umumlashtirilgan holda, giponimik iyerarxiya va semantik maydon masalalari ko'rib chiqiladi. Maqolada so'zlarning tur-jins munosabatlari tizimli hamda kognitiv nuqtayi nazardan yoritilgan.

**Kalit so'zlar:** Giponimiya, giperonim, leksik semantika, semantik maydon, iyerarxik tuzilish, tur-jins munosabatlari, kognitiv tilshunoslik, leksik tizim, valentlik, semantik inklyuziya

## **СТРУКТУРНЫЙ АНАЛИЗ ГИПОНИМИЧЕСКИХ ОТНОШЕНИЙ В СОВРЕМЕННОЙ ЛИНГВИСТИКЕ**

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### **Аннотация**

В данной статье исследуется феномен гипонимии как одна из ключевых лексико-семантических связей в системе языка. На основе анализа теоретических трудов проводится изучение иерархической организации лексики и родовидовых отношений. Особое внимание уделяется структуре семантических полей и функциональным особенностям гипонимических связей в контексте когнитивной лингвистики.

**Ключевые слова:** Гипонимия, гипероним, лексическая семантика, семантическое поле, иерархическая структура, родовидовые отношения, когнитивная лингвистика, лексическая система, валентность, семантическая инклюзия

## **A STRUCTURAL ANALYSIS OF HYPONYMIC RELATIONS IN MODERN LINGUISTICS**

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### **Abstract**

This article explores the phenomenon of hyponymy as a pivotal lexical-semantic relation within the linguistic system. Drawing upon established theoretical frameworks, the study examines the hierarchical organization of the lexicon and the "kind-of" relationship between terms. The research highlights the structural distribution in semantic fields and the cognitive implications of these relations across different language systems.

**Keywords:** Hyponymy, hypernym, lexical semantics, semantic field, hierarchical structure, genus-species relations, cognitive linguistics, lexical system, valency, semantic inclusion.

While the structural investigation of hyponymy—the hierarchical organization of meaning based on semantic inclusion—possesses a rich academic tradition, it continues to remain one of the most dynamic and developing areas of modern linguistics. The earliest theoretical foundations and categorical frameworks of hyponymic relations were substantially shaped by the scientific works of D.A. Cruse, J. Lyons, and A. Lehrer, who systematically explored lexical-semantic structures and semantic encapsulation within language systems. Their research established the conceptual basis for understanding how lexical units are organized hierarchically through relations of semantic inclusion. Simultaneously, western semantic theorists such as Katz and Murphy directed scholarly attention toward broader semantic mechanisms governing the way concepts are cognitively nested and interconnected within the human mental lexicon.

Historically, these theoretical models were applied primarily to Germanic and Romance languages. However, the adaptation of hyponymic theory to Turkic linguistics, especially to the Uzbek

language, marked a significant turning point in comparative semantic research. In Uzbek linguistics, R. Safarova pioneered the systematic investigation of hyponymic hierarchies through the classification of Uzbek zoonyms, particularly within the semantic field of animal names [15; 48-b.]. Her scientific contribution established one of the first structured approaches to semantic categorization in Uzbek lexical studies. Subsequently, J.Sh. Djumabaeva expanded this line of inquiry by integrating comparative stylistic analysis into the study of English and Uzbek semantic systems. Her research focused particularly on graduonymic relations, examining the gradual semantic transitions and layered hierarchical structures existing within lexical categories.

To examine the structural rigidity and semantic boundaries of hyponymic systems, the present research employed a dual-layered descriptive-analytical methodology focused on two highly organized semantic domains: “Verbs of Perception” and “Biological Classification Systems.” Lexical units such as see, glimpse, stare, peer, mammal, canine, wolf, and related semantic categories were selected for empirical investigation in order to analyze the mechanisms of semantic inclusion and hierarchical categorization.

The analysis of empirical data revealed three major structural phenomena that characterize the organization of human lexical systems.

The first phenomenon identified was asymmetrical dependency, also referred to as the principle of unidirectional semantic inclusion. The research confirmed that hyponymic relations function according to a strictly one-directional hierarchical principle. The subordinate lexical unit, or hyponym, inherently contains all semantic features associated with its superordinate category, or hypernym, whereas the reverse relation does not hold true. For example, every rose semantically belongs to the category flower, but not every flower can be categorized as a rose. Similarly, every eagle is a bird, but not every bird is an eagle. This demonstrates that semantic inclusion operates hierarchically and asymmetrically. The hypernym provides a generalized semantic framework, while the hyponym introduces additional semantic specificity and conceptual restriction.

The second structural phenomenon revealed through the study concerns lexical gaps, which represent systemic asymmetries within lexical-semantic systems. The analysis demonstrated that language does not operate as a perfectly symmetrical semantic grid. In many cases, a conceptual or psychological category exists within human cognition, yet the language lacks a specific lexical unit to denote it. One illustrative example occurs in English, where the lexical unit limbs functions as a hypernym encompassing both arms and legs. However, English lacks a common everyday hypernym capable of simultaneously categorizing fingers and toes without resorting to specialized medical terminology. Such lexical absences indicate that vocabulary organization is influenced not by mathematical completeness but rather by communicative utility and cultural relevance. If speakers do not perceive a practical communicative need for a generalized lexical category, the semantic system leaves such conceptual positions lexically unfilled.

The third phenomenon identified during the analysis is co-hyponymic tension, which refers to semantic exclusivity among lexical units occupying the same hierarchical level. Lexemes such as apple and orange function as co-hyponyms under the broader category fruit. Although these lexical units share common high-level semantic features inherited from the same hypernym, they must remain semantically distinct and mutually exclusive in order to preserve communicative precision and lexical clarity. If semantic boundaries between co-hyponyms became unstable or overlapping, language would lose its ability to ensure accurate and unambiguous reference. Therefore, semantic exclusivity among co-hyponyms functions as an essential mechanism maintaining lexical differentiation within semantic hierarchies.

The findings of the research challenge the traditional perception of dictionaries as static inventories of lexical definitions. Instead, language emerges as a dynamic cognitive system shaped by social interaction, communicative practice, and cultural experience. Structural irregularities such as lexical gaps demonstrate that lexical systems are governed not solely by logical or mathematical principles but also by social relevance and communicative necessity.

Another important finding of the research concerns the effect of prototypicality within semantic categories. The analysis revealed that some category members are cognitively perceived as more representative or more “typical” examples of a category than others. For instance, within the semantic category bird, lexical units such as sparrow or pigeon are generally processed as more prototypical representatives than penguin or ostrich. This phenomenon demonstrates that semantic hierarchies are influenced not only by formal taxonomic classification but also by human perception, environmental familiarity, and cognitive experience. Consequently, semantic categorization reflects psychological and cultural processes alongside linguistic structure.

The practical significance of this research is particularly evident in the fields of computational linguistics and artificial intelligence. A detailed understanding of semantic hierarchies, lexical gaps, and prototypical structures contributes significantly to the development of Natural Language Processing (NLP) systems and word-sense disambiguation technologies. By analyzing the structural boundaries of semes and identifying the ways humans navigate semantic asymmetries, the study provides an important theoretical basis for improving computational models of language understanding.

First, the findings contribute to the enhancement of Natural Language Processing systems by enabling computational models to better interpret contextual meaning, semantic nuance, and implied communicative intent in human speech.

Second, the research contributes to the development of word-sense disambiguation algorithms, improving the ability of artificial intelligence systems and search engines to determine the intended meaning of polysemantic lexical units. For example, the lexical unit crane may denote a bird, construction machinery, or a physical movement depending on contextual semantic relations. Accurate interpretation of such lexical ambiguity requires sophisticated understanding of semantic hierarchy and lexical categorization.

The issue of hyponymic and hyper-hyponymic relations has also been extensively examined in Russian linguistics. Scholars such as E.E. Kottsova and I.N. Gridina investigated lexical-semantic hierarchies and semantic inclusion within Russian lexical systems. Hyponymic relations were further explored in the scientific works of J. Lyons and V.G. Gak [1; 870–878-b.]. In linguistics, the term hyponymy originates from the Greek words hupo (“under”) and onuma (“name”) and refers to a semantic relation in which the semantic field of a subordinate lexical unit is included within the semantic field of a broader lexical category [2;112-b.]. In simpler terms, a hyponym exists in a type-of relationship with its corresponding hypernym. For example, pigeon, crow, eagle, and seagull function as hyponyms of bird, while bird itself functions as a hyponym of animal [3;250-b.].

Thus, hyponymy represents one of the fundamental semantic mechanisms organizing lexical meaning through hierarchical inclusion and conceptual categorization. The evidence drawn from both English and Uzbek linguistic traditions demonstrates that hyponymic structures provide semantic specificity, conceptual organization, and lexical precision within semantic systems. These hierarchical relations function according to the principle of semantic inclusion, where generalized concepts gradually transition into increasingly concrete and specialized lexical realizations. Consequently, hyponymy continues to hold substantial theoretical and practical significance for modern semantics, cognitive linguistics, lexicography, translation studies, computational linguistics, and artificial intelligence research.

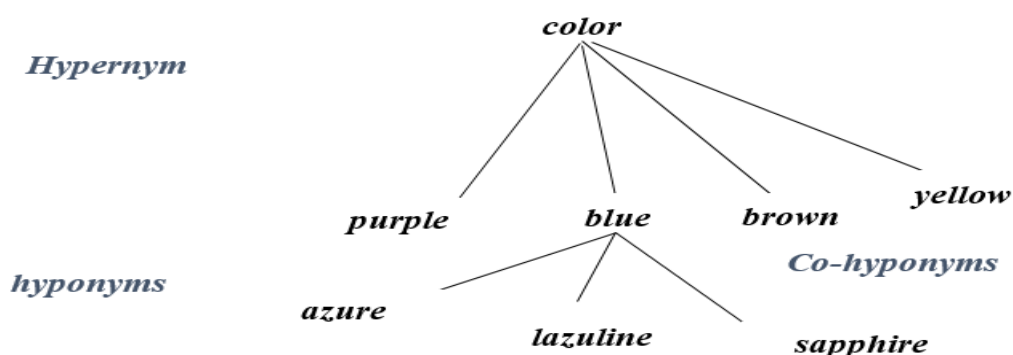


Figure 1 illustrates the semantic relationship between hyponyms and hypernyms within lexical hierarchy.

Hypernym or hyperonymy also originates from the Greek words huper (“over”) and onuma (“name”) and represents the converse relation of hyponymy. A hyponym refers to a subtype or specific category, whereas a hypernym denotes a broader and more generalized category. In contrast, a meronym refers not to a type but to a part of something. For example, pine tree and oak tree function as hyponyms of tree because they represent specific types of trees, while bark and leaf are meronyms because they denote constituent parts of a tree rather than categories within the same semantic hierarchy.

Hyponymy demonstrates the semantic relationship between a generic lexical category (hypernym) and its more specialized lexical realizations (hyponyms). A hyponym is therefore a lexical unit whose semantic field is more specific and narrower than that of its corresponding hypernym. Conversely,

the semantic field of a hypernym, also referred to as a superordinate category, is broader and more generalized. One common approach to understanding the relationship between hypernyms and hyponyms is to view a hypernym as a semantic structure composed of its hyponyms. However, such an approach becomes increasingly complicated when applied to abstract lexical concepts such as imagine, understand, and knowledge, where semantic boundaries are less concrete and more cognitively flexible.

Although hyponymy is traditionally associated with nominal lexical categories, this semantic relation also extends to other parts of speech, particularly verbs. Within the verbal lexicon, hypernyms function as generalized descriptors of broad action categories, while hyponyms express more specialized or nuanced realizations of those actions. For example, the verb look serves as a hypernym for a cluster of semantically related hyponyms such as stare, gaze, view, peer, and glance, each of which represents a more specific form of visual perception. Similar semantic hierarchies can be observed in lexical groups such as read – skim, scan, and read aloud, where subordinate verbs introduce additional semantic specifications related to manner, purpose, or intensity of action.

Theoretical conclusions regarding semantic kind-type relations are also reflected in Uzbek linguistic scholarship, particularly in the scientific works of Rohatoy Safarova. Her research significantly contributed to the understanding of lexical-semantic categorization within Uzbek linguistics. In addition to Safarova's studies, H. Ne'matov and R. Rasulov discussed hypo-hyperonymic relations in their textbook "System Linguistics Basics." According to these scholars, one type of semantic relation between lexemes is hypo-hyperonymy, which reflects generic and specific category relations. Within such relationships, hypernyms represent generalized categories, while hyponyms denote their specific subtypes. They provide examples such as tree (kind) – poplar, cherry, maple, apple tree, spruce (types); fruit (kind) – apple, cherry, peach, apricot, pear (types); teaching aids (kind) – notebook, book, pen, ruler (types) [4; 68-bet]. Similar examples can also be observed in contemporary lexical fields, for instance gadget (kind) – smartphone, smartwatch, smart board, tablet (types).

According to the English linguist Amaro, the relationship between hypernymy and hyponymy should be understood as a lexicon-conceptual relation simultaneously encompassing both world knowledge and linguistic knowledge because of its ontological and cognitive nature [5; 1–12-b.]. This relation can be illustrated through the following examples:

- a) He bought a German shepherd (hyponym), but the dog (hypernym) does not bite.
- b) He crawled (hyponym) through the forest, moving (hypernym) like this to avoid being seen.
- c) Marine (hyponym) animals are threatened by the proximity of towns, as aquatic (hypernym) animals are easily affected by sewage pollution.

These examples demonstrate how speakers naturally alternate between generalized and specialized lexical categories during communication. The hypernym allows speakers to refer back to a broader conceptual category, while the hyponym introduces semantic precision and specificity.

In addition to this, the English linguist D.A. Cruse also presented important theoretical perspectives on hyponymy, arguing that hyponymy should be treated as a prototype category and that taxonyms constitute the central members of the hyponymic system. In his attempt to define the prototypical characteristics of hyponymic relations, Cruse identified several features for determining the "goodness-of-exemplar" rating of the relation "X is a hyponym of Y." Among these features, the first two are considered particularly significant:

- a) There is no categorial incongruity between X and Y.
- b) The truth of "A is X" leads to an expectation of the truth of "A is Y" more strongly than the reverse expectation.
- c) Expressions of the form "an X is a kind/sort/type/variety of Y" are semantically normal and acceptable.
- d) No lexical item Z exists that simultaneously functions as a hyponym of Y and a superordinate category of X.
- e) The additional specificity distinguishing X from Y constitutes a central semantic component of X.
- f) X and Y correspond in their non-propositional characteristics such as stylistic register, expressiveness, and contextual usage [6; 350-b.].

These criteria demonstrate that hyponymy is not merely a formal semantic relation but also a cognitively and pragmatically motivated lexical structure influenced by human categorization processes.

In conclusion, hyponymy serves as one of the fundamental semantic relations organizing lexical

hierarchy between generalized categories (hypernyms) and their specific realizations (hyponyms). Analysis of both English and Uzbek linguistic traditions demonstrates that hyponymic structures contribute semantic specificity, lexical precision, and conceptual organization within semantic fields. This hierarchical system operates according to the principle of semantic inclusion, where meaning gradually transitions from abstract and generalized categories toward increasingly concrete and specialized lexical realizations. As illustrated by semantic progressions such as *tool* → *pen* → *red pen*, each subsequent hierarchical level introduces additional semantic detail and conceptual refinement.

Consequently, hyponymic relations play a crucial role not only in theoretical linguistics and lexical semantics but also in cognitive linguistics, language teaching, lexicography, translation studies, computational linguistics, and artificial intelligence systems concerned with semantic categorization and natural language understanding.

### REFERENCES

1. Djumabaeva J., Sabirova N. The Study of Hyponymic Taxonomy in English Linguistics and the Lexical and Semantic Relations of Hyponymy // *Ilkogretim Online — Elementary Education Online*. — 2020. — Vol. 19. — № 4. — P. 870–878.
2. Brinton L.J. *The Structure of Modern English: A Linguistic Introduction*. — Illustrated ed. — Amsterdam: John Benjamins Publishing Company, 2000. — P. 112.
3. Fromkin V., Rodman R. *Introduction to Language*. — 6th ed. — Fort Worth: Harcourt Brace College Publishers, 1998. — P. 250.
4. Rasulov R. O‘zbek tilidagi holat fe’llari va ularning obligator valentliklari. — Toshkent: Fan, 1989. — 68 b.
5. Amaro R., Mendes S., Marrafa P. Increasing Density through New Relations and PoS Encoding in WordNet.PT // *International Journal of Computational Linguistics and Applications*. — India: Bahri Publications, 2013. — P. 1–12.
6. Cruse D.A. *Meaning in Language: An Introduction to Semantics and Pragmatics*. — New York: Oxford University Press, 2000. — P. 356.
7. Chafe W. *Meaning and the Structure of Language*. — Chicago: University of Chicago Press, 1970. — P. 84; Fillmore C.J. *The Case for Case* // In: Bach E., Harms R. (eds.). *Universals in Linguistic Theory*. — New York: Holt, Rinehart and Winston, 1968.
8. Ungerer F., Schmid H.J. *An Introduction to Cognitive Linguistics*. — London; New York: Longman, 1996. — P. 182–270.
9. Lyons J. *Semantics: In 2 vols.* — Cambridge: Cambridge University Press, 1977. — P. 293.
10. Wilkins D.A. *Linguistics in Language Teaching*. — London: Edward Arnold Press, 1972. — P. 98–158.
11. Wierzbicka A. *Semantics: Primes and Universals*. — Oxford: Oxford University Press, 1996.
12. Abuzalova M., Nazarova S. *Sistem tilshunoslik asoslari*. — Buxoro: “Buxoro” nashriyoti, 2010. — 96 b.
13. Baskakov N.A., Sodiqov A., Abduazizov A. *Umumiy tilshunoslik*. — Toshkent: O‘qituvchi, 1979. — 192 b.
14. Rasulov R. O‘zbek tilidagi holat fe’llari va ularning obligator valentliklari. — Toshkent: Fan, 1989. — B. 56–125.
15. Safarova R. *Leksik-semantik munosabatlarning turlari*. — Toshkent: O‘qituvchi, 1996. — 48 b.