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Hyponymical Analysis of Forestry Terms in German and Uzbek Languages

Gavkhar Abdakhatovna Tilovova

Senior Teacher, Department of Languages, Tashkent State Agrarian University
100140, Universitet Street, 2, Tashkent, Uzbekistan

Abstract: ***The article discusses the hyponymic analysis of forestry terms in German and Uzbek, which is one of the main points of the scientific work. In linguistics, it is very important to combine the lexical layers of a language into a system and divide them into lexical-semantic groups. The series, divided into separate lexical-semantic groups, include synonyms, antonyms, as well as hypo-hyperonym series. They not only connect with each other on the basis of a clear semantic connection, but also form a whole microsystem. The article also explored the meaning of words by combining them into thematic and lexical-semantic groups. Given that hyponymic relations are prevalent in forestry terminology, a series of analyzes were conducted on terms related to the disciplines taught in forestry faculties. The following disciplines: Forest Selection, Forest Phytopathology, Dendrology, Forest Medicinal Plants, Forest Entomology, Forest Formation and Forest Plant Anatomy. According to the species relationship of the collected terms, differential semantics referring to the general meaning of the term were highlighted. At the same time, it was revealed that the study of hypo-hyperonymic series in German and Uzbek on the basis of forestry terms serves to systematize lexicography.***

Keywords: hyponym, hyperonym, lexical-semantic relationship, paradigm, forestry terms, differential sememe, semantic field

1. Introduction

In linguistics, it is known in advance that the lexical layers of a language have a systematic character, and that synonyms and antonyms are separated lexical-semantic groups. In Uzbek linguistics, R. Safarova expresses this opinion in her research on “Types of lexical-semantic relations”: The separation of synonyms and antonyms into lexical semantic groups, in turn, indicates the systematic nature of the language and the lexical system of that language. In a word, synonymous words are a definite system of lexical units connected on the basis of a definite semantic connection (relation). Lexical paradigms connected on the basis of this exact semantic connection, in turn, form a whole microsystem” [1]. In support of this idea, it can be observed that each element interacts with its own meanings within this microsystem. For example, der Wald, der Forst. At this point, the question naturally arises: “What is hyponymy?” Hyponymy refers to a series of words that express a genus-type relation on the one hand, and a hierarchical sequence of words that express a sequence of lexical units on the other. Although monographic research on the phenomenon of hyponymy has been conducted in Uzbek linguistics, there are many aspects of this phenomenon that are still unknown to us.

2. Literature Review

It is very important to study the meaning the words by combining thematic and lexical-semantic groups. According to R. Safarova, lexical-semantic groups known in systemic lexicology in Western European and later Russian linguistics, along with synonymous and antonymous paradigms, are distinguished by a new type of lexical-semantic relations between lexical units – hyponymy. The terms hyponymy, hyponym, and hyperonym were coined in 1968 by the English linguist D.J. Lyons [2]. First of all, the hyper-hyponymic relation helps us closely in understanding the universe and its ontological structure. All the basic that exist in nature and society all the features that are characteristic of their species emerge through a peculiar perfect paradigm genus-type relation [3].

It is well known that genus relations are of global importance in the lexical system. If synonymous and antonymous combinations combine only a part of a word, genus-type relations occupy all words. In this case, the genus-type relations stems from the generalizing nature of the word. Therefore, as N.P. Denisov points out, genus-type relation or hyponymic relations are “the basis for the creation of thematic, conceptual dictionaries, as well as scientific and technical theses” [4]. Before analyzing forestry terms in hypo-hyperonomic series, we can clarify the concepts of hyperonym and hyponym.

A hyperonym is a lexical unit that appears as the central word, the dominant, of a microsystem that semantically generalizes many meanings that represent the name of an object denoting a genus sign. A hyponym is a semantically rich lexical unit that is semantically a hyperonym, representing the names of certain species and attaching the word in its semantic structure implicitly to the meaning of the genus. Semems of hyponyms have more differential properties than hypertext semems. For example, the word birch encompasses the entire semantics of the word tree, and also birch differs from other tree species in its differential characteristics. The contradictory relation, expressed in terms of genus and types, allows us to clearly see what signs exist in the sense of hyponym and hyperonym. Here semantically very high-level words are associated with the concept of meaning. A hyperonym always includes a hyponym because of its higher semantic possibilities, as well as because it is noted as a synonym [5].

3. Results and Analysis

In particular, hyponymic relations are common in forestry terminology. The sequence of analyzes was conducted on terms related to the disciplines taught in the forestry faculties. They are: Forest Selection, Forest Phytopathology, Dendrology, Forest Medicinal Plants, Forest Entomology, Forest Formation, Forest Plant Anatomy.

In the field of forest selection, the German term "seed dispersion" has the general meaning of the following terms: anemochorie - die Anemochorie, zoochoria - die Zoochorie, hydrohoria - die Hydrochorie, autochoria - die Autochorie. The lexical unit representing the concept of hyponym species includes the general meaning of the term die Chorie dispersal and is distinguished by differential semaphores referring to seed dispersion: die Anemochorie wind dispersal, die Zoochorie animal dispersal, die Hydrochorie seed dispersal by water, die Autochorie spontaneous spread along the way. These words contain a common "die Chorie" element.

In the discipline of forest phytopathology, terms are associated with lexical-semantic groups or other hyponymic relations. Die fäulige Krankheiten - decay is a term of genus, i.e. hyperonym, according to the term relation of decay or die Fäule - decay. Decay is one of the diseases of the tree caused by fungi. In hyponyms, the common die Fäule is characterized by a differential semem of decay, which indicates which parts of the tree the disease affects. We can cite many terms as examples of this. Die Astfäule – decay of branch, die Bacterienfäule - bacterial decay, die Braunfäule - brown, dark decay, die Fruchtfäule - decay of fruit, die Grünfäule - green decay, die Herzfäule, die Markfäule - core decay, die Holzfäule - wood decay, die Rotfäule - red decay, die Stammfäule, die Stockfäule - stem, body decay, die Trockenfäule - dry decay, die Weißfäule - white decay, die Wurzelfäule - root decay, die Wipfelfäule - topsoil decay. Die Fäule adjectives and nouns are combined in a compound word order before the term decay. Thus, represents the meanings of the differential semaphore. This analysis forms a hypo-hyperonymic series, through a system of connected words based on the expression of the genus-type relation of hyperonyms and hyponyms in the terminology of Forest Phytopathology. One of the causative agents of decay is the fungus der Zunderpilz *(Fomes fomentarius* Gill.*)*. Die Eichenfäule - brown, dark decay of the oak tree *(Daedalea quercina* Pers.*)*, Die Eichenweißfäule - white decay of the oak tree, die Fichtenfäule - pine decay *(Trametes abietis* Karst.*)*, die weiße Marmorfäule - white marble decay die Rotfäulepilz occurs in coniferous and deciduous trees of brown, dark foamy decay *(Femes annosus* Fr.*)*. Thus, differential semems determine in which part of the tree individual species of fungi can develop. The fact that fungi cause decay in the lower thick, upper, stem, body, root part of the plant means that there are types of decay. The above pine fungus, oak fungus, maple fungus, etc. reflect the hyponyms.

The advent of quality before the word determines which tree species the fungi belong to. der Epiphitot - epiphytes, der local Epiphitot - local epiphytes, der progressive Epiphitot - progressive epiphytes, der allgegenwärtige Epiphitot - general epiphytes, der Schimmel - mold, grüner Schimmel - green mold, rosa Schimmel - pink mold, schwarzer Schimmer - black mold, these examples also clearly demonstrate the composite nature of hyponymy, and they are common in all disciplines of forestry. There is a concept of semantic field in linguistics. Hyper-hyponymic relations form the basis of this field. The hyponymic (genus-type) approach plays a key role in combining moving elements (members) within a field into a specific semantic row, these rows into a larger group, and groups into sets. Not everyone understands such a delicate relationship between lexemes [6].

In turn, there are tall trees in the forests, which have a complex structure. Der Hochwald tall trees also have a number of other organs such as stems, leaves, roots. In linguistics, genus-type relations require a deeper insight into the field in revealing the concept of another complex systemic hyponymic relation. So, given the complex structure of each plant in nature, we will focus on the section on open-seeded and closed-seeded. For example, closed-seeded the class *Magnoliatae*, the part *Magnolianae*, the family *Magnolia*, the type *Magnolia* der Riesenlohrbeer represent large-leaved magnolia. In the open-seeded section, conifers are divided into a class, a genus of conifers, a family of pines, and a type of pine. It is therefore recommended to given with a description of the section pertaining to a particular plant species when describing a hyponym relation. In textbooks are not primarily concerned with the description of sections, but such a description allows us to see how the semantic meaning of hyperonyms correspond to the meaning of hyponyms. Hyponyms "collect" semems in their meaning and as a result their content becomes increasingly complex. The names of trees class, genus, family and types are studied in dendrology. We can also observe many hypo-hyperonymic relations in the science of dendrology. Dendrology (greek dendron - tree, logos - science) is a branch of botany that studies the systematics, biological and ecological properties, evolution, morphological and anatomical structure, physiology, geographical distribution and importance of trees and shrubs in the national economy. The following table provides an analysis.

The hyperonyms enumerated in this branching themselves also become hyponyms relative to the lexeme "tree" and form a single set, a system of forestry terms. Their aggregation into a single area ensures that the lexical layer associated with forestry has a systemic character. There is a complex view of the relation between the lexical units included in the forest terminology system, which is arterial but unified by a single arrow root. According to the laws of the system, everything is determined by the relations that take place between the parts within the whole. The word tree is associated with the words pine, birch, poplar, willow as a word expressing the concept of genus. The word tree in this line, as the central, key word, encompasses all the words that have been used to express the names of species concepts in relation to the same type. According to R.Safarova, the word tree as a lexical unit representing the name of the whole concept is connected with the words root, body, branch, leaf, which represent the names of the components of this whole,

forming a lexical-semantic line [7]. Therefore, the lexical-semantic system of language exists only on the basis of linguistic differentiation of logical-semantic relations between the elements of the relative lexical paradigm, which are formed on the basis of the expression of whole-piece concepts of interrelationships between the elements of hyperonymic lexical paradigms. It is possible to define a clear boundary of the existing phenomenon of hyponymy and to reveal the linguistic nature of the paradigms formed on the basis of hypo-hyperonymic semantic relations.

Table 1: Hyperonym and hyponyms

	№	Hyperonym	Hyponym
Der Baum – tree	1	die Fichte – pine	die Fahre, die Fohre, die Forche, die Forle, die Kuschel, die Kussel, die Sandkiefer, die Weißföhre, die Weißkiefer – the white pine *Pinus silvestris.*
			die Alteifichte Siberia fir-tree *(Picea obovata* Ledeb.*)*, Omorikafichte Serbian fir-tree *(Picea omorica* Pancic.*), die Rotfichte Europe fir-tree (Picea excelsa* Link.*), die Sapindusfichte east fir-tree (Picea orientalis* L.*).*
	2	die Kastanie – chestnut	die Edelkastanie Europe chestnut *(Castania saliva* Mill.*)*, die Roßkastanie spurious chestnut *(Aesculus* L.*)*-
	3	die Akazie - acacia	die Scheinakazie white acacia *(Robinia pseudaocacia L.), d*ie Zier-Akazie decorative acacia.
	4	die Zeder – cedar	die Flußzeder river cedar *(Libocedrus* Endl.*), die* Himalajazeder Himalaya cedar *(Cedrus deodara* Laws.*)*, die Libanonzeder Lebanon cedar *(Cedrus libanotica* Link.*)*
	5	der Ahorn – maple	der amerikanische Ahorn american maple, der eschenblättrige Ahorn virginia maple, der großblättrige Ahorn megaphyllous maple, der kleinblättrige Ahorn microphyllous maple, der rote Ahorn red maple, der weiße Ahorn white maple.
	6	der Pappelbaum - poplar	die Aspe aspen *(Populus tremula* L.*)*, die Weißpappel white poplar *(Populus alba* L.*).*
	7	die Weide – willow	die Bandweide willow *(Salix viminalis* L.*)*, die Bachweide marsh willow *(Salix helix* L.*)*, die Bruchweide willow brittle (*Salix fragilis* L.*)*, die *Goldweide yellow willow (Salix vitellina* Stockes.*)*, die Hohlweide white willow *(Salix caprea* C.*), die* Krautweide willow herb *(Salix herbacea* L.*), die* Lorbeerweide black willow *(Salix pentandra* L.*)*,die Mandelweide almond willow *(Salix amygdalina* L.*), die* Moorweide blueberry willow *(Salix myrtilloides* L.*), die* Polarweide polar willow *(Salix polaris* Whlb.*), die* Purpurweide willow purple *(Salix purpurea* L.*), die* Schimmelweide wolf willow *(Salix daphnoides* Vill.*)*, die Tränenweide willow weeping *(Salix babylonica* L.*).*
	8	die Birke – birch	die Alpenbirke dwarf birch *(Betula nana* L.*)*, die Buche beech *(Fagus* L.*)*, die Gelbbirke yellow beech *(Betula lutea* Michx.*).*

We analyze the hyponyms in the forest terminology on the example of forest medicinal plants. Die Waldheilpflanzen - Forest medicinal plants are divided into two groups:

1) Waldbaum-Strauch-Heilpflanzen – Forest medicinal tree-shrub plants.
2) Waldkraut-Heilpflanzen - Forest medicinal herb plants.

I.1. der Nußbaum walnut *(Juglans regia* L.*), die* Linde linden *(Tilia* L.*), der* Ölbaum olive tree *(Olea* L.*), östliche* Oleaster east oleaster *(Elaeagnus* L.*), die* Scharlachquitte japanese quince *(Cydonia japonica* Pers.*), der echte* Mandelbaum common almond *(Amygdalus communis* L.*), der* Amorpha amorfa *(Amorpha* L.*)*, die Berberitze barberry *(Berberis* L.*), der* Wacholderbaum common spruce *(Juniperus communis* L.*)*, die Weißkiefer common pine *(Pinus silvestris* L.*), die* echte Pistazie true pistachio *(Pistacia vera* L.*), die* Roßkastanie horse chestnut *(Aesculus* L.*), der* Traubenbeere common grape *(Vitis vinifera* L.*), der* Maulbeerbaum mulberry tree *(Morus* L.*), der rote Maulbeerbaum* red mulberry *(Morus rubra* L.*), der schwarze Maulbeerbaum* black mulberry *(Morus nigra* L.*), der weiße Maulbeerbaum white mulberry (Morus alba* L.*), der* Jujubenbaum yuyuba *(Zizyphus jujuba* Mill.*), der* Eukalyptus eucalyptus *(Eucalyptus* L.*)*, die Eiche oak *(Quercus* L.*)*, der Rosenkranzbaum japanese sophora *(Sophora japonica* L.*), die Marille apricot (Armeniaca vulgaris* Lam.*)*, die *Moorbirke white birch (Betula alba* L.*).*

I.2. *die* Beeresche common chestnut *(Sorbus aucuparia* L.*), der* Feigenbaum fig *(Ficus* L.*)*, das *Meersträubchen ephedra, beetroot (Ephedra* L.*)*, das Salzkraut brine *(Salsola* L.*)*, der Weidenseedorn sea buckthorn *(Hippophae rhamnoides* L.*), der* Gerbersumach sumac *(Rhus coriaria* L.*)*, die Brombeere raspberry *(Rubus* L.*)*, die Felsenbrombeere red raspberry *(Rubus saxatilis* L.*), die* Rahmbeere blue raspberry (*Rubus caesius* L.*), der* Fliederbaum black elder *(Sambucus nigra* L.*), die* Zaunrose common dog-rose *(Rosa canina* L.*)* [8]. The above-named fruit medicinal tree-shrub plants are named after their own fruit. Walnut - walnut tree, olive - olive tree, oleaster - oleaster tree, pistachio - pistachio tree and so on. If, on the one hand, these words are connected to the fruit hyperonym with the hyponyms of walnut, olive, oleaster, pistachio, on the other hand, they are connected with the hyperonym of the tree, forming a hypo-hyperonymic paradigm. Thus, the existence of hyponymy in the lexical-semantic system of language and the differential possibilities of nominative units representing the name of a species belonging to the same genus are revealed.

II. Waldkraut-Heilpflanzen - Forest medicinal herb plants.
der Walddosten common marjoram *(Origanum vulgare* L.*), das Anis fennel (Anisum vulgare* Gaertn.*), das Mutterkraut liontale (Leonurus* L.*), der* Astragel astragal *(Astragalus* L.*)*, die Nessel nettle *(Urtica* L.*), das* Katzenkraut valerian *(Valeriana officinalis* L.*), das Dill fennel (Foeniculum vulgare* Mill.*), der Spinat spinach (Spinacia L.), der* Kapernstrauch capers (*Capparis* L.*), das* Wegerichkraut goose-grass *(Plantago* L.*), das Sesam, der Kuntschut sesame (Sesamum indicum* L.*), die Melissa melissa (Melissa*

officibalis L.*), die* Rötegewächse bedstraw *(Rubiaceae), der* Kassienbaum cassia *(Cassia medicinalis* Bisch.*), die Ringelblume calendula (Calendula officinalis* L.*), die* Feldkamille camomile *(Matricaria* L.*), die Pfefferminze pepper spearmint (Mentha piperita.), das* Süßholz *licorice (Glycyrrhiza* L.*), die* Butterblume dandelion *(Taraxacum officinalis* Web.*)* [8]. In this analysis, each hypo-hyperonymic paradigm has the ability to fill an unlimited number of words with different signs of the same genus, i.e., lexical lacunae, that are not expressed through special lexical units. While there are more than 2000 medicinal plants in the world, some medicinal trees and shrubs growing in the environment of Uzbekistan, hypo-hyperonymic, lexical paradigms in the language system, the interaction of lexical-semantic groups were discussed.

In the discipline of forest entomology, the names of many pest insects that enter into a semantic relation between hyperonym and hyponym have been studied and analyzed.

Pests of deciduous and coniferous forest decorative trees: der Markorkäfer pine chafer *(Polyphylla fullo* L.*),* die Saateule turnip moth (*Agrotis segetum* Schiff.*),* die Lärchenrindenlaus larch aphid *(Cinara laricis* Walk.*),* die San-Jose-Schildlaus San Jose scale *(Diaspidiotus perniciosus* Comst.*),* die Schildlaus apple mussel scale *(Lepidosaphes ulmi* L.*).*

Leaf beetles of forest and decorative trees: der Pappelblattkäfer roter red poplar leaf beetle *(Melasoma populi* L.*), der* Weidenblattkäfer leaf beetle willow *(Melasoma collaris* L.*),* der Ulmenblattkäfer leaf beetle birch *(Galerucella luteola* Müll.*),* die Kieferneule pine moth *(Panolis flammea* Schiff.*), der* Kiefernspinner pine silkworm *(Dendrolimus pini* L.*),* der Ringelspinner annulate silkworm *(Malacosoma neustria* L.*), die* Ulmengallmilbe birch tick *(Eriophyes ulmicola* Nal.*), der* Fichtenbock pine barbel *(Tetropium fuscum* F.*), der* Aspenprachtkäfer bronze poplar borer *(Poecilonota variolosa* Payk.*),* der Fichtenbastkäfer pine bark beetle *(Hylastes paliiatus* Er.*), der* Borkenkäfer engraver beetle *(Ipidae),* der Ulmensplintkäfer großer birch bark beetle *(Scolytus scolytus* F.*), die* Kirschfliege cherry fly *(Rhagoletis cerasi* L.*)* [9]. In German die Baumschädlinge tree pests are hypo-hyperonymic, hyperonym, all other words are hyponym. Because this is in the semantic structure of the hyponym the general meaning is expressed not only in the genus semantics but also in the differential semem type semantics. Die Baumschädlinge hyperonym cannot be used in place of the above hyperonym, even if it is using integral determinants that generalize in context. Because in this hyperonym, along with the integral part, there is also a part with a differential semantics. Words are defined from a hyponymic point of view only by means of a hyperonym. Also, in relation to the system of hierarchical relations, the belonging of each pest insect to a certain class, category, family, species, genus is taken into account. Latin equivalents for Uzbek scientifec names of insects very consistently reflect the hyponymic relation of terms. For example, the elements -ptera, -optera correspond to the family names (coin-winged - *hepidoptera*), -ae (step worm - *geometridae*) means families.

Our analysis continues with an analysis of some terms of the science of forestry. Forestry terminology is related to terms such as künstliche Aufforstung - restoration of artificial forests, vorläufige künstliche Aufforstung - restoration of the first artificial forests, anschließende künstliche Aufforstung - restoration of the last artificial forests, vorläufige Waldbau - primary forestry. Restoration of artificial forests means the creation of forest crops in areas previously covered with forest. As a hyperonym the word künstliche Aufforstung is expressed in terms of restoration of artificial forests, and in the hyponym row the terms of restoration of the first artificial forest, restoration of the last artificial forest. Hyponym semems contain additional semantics indicating the time, place, and purpose of creating forest crops. Thus, the restoration of the original artificial forests means the removal of seedlings under the forest trees before they are cut down in order to create new forests. Prior to the restoration of the last artificial forest, in the “Forestry” felling of trees, depending on their age and condition, felling areas are created. Common vorläufige künstliche Aufforstung - the first artificial forest restoration compound word vorläufige Waldbau - the first forest compound word to be linked on the basis of genus expression. All the terms thus quoted are combined with the word vorläufige – the first. Another example, der Bestand planting, planting trees; ~ angehender planting on time; ~ gemischter mixed planting; ~ geschloßener dense planting; ~ gleichartiger planting the same age; ~ ungleichartiger planting of different ages; ~ vollkommener full planting. In the example, the planting species are hypo-hyperonymically combined.

The meaning of the term *artificial vegetative restoration of forests* reflects its meaning in terms of new shoots, juicy horns, root bark, grafting, rhizome. The values of the terms of the tour differ from the signs indicating the origin of the parable. New shoots can be formed in the body between the buds that sleep in the body or between the bark and wood; water trunks grow in the trunks of uncut live trees; The root can be used in the form of bark on the shoots.

Due to the anatomy of the herbaceous plants, all plants are divided into low and tall plants. Low plants, for example, a die Bakterie - bacteria, die Wasserpflanzen - aquatic plants, die Schwämme - fungus, die Flechten - lichen, moss, das Moos – moss. Low plants attach semantic terms to the hyperonym of bacteria, algae, and fungi. By comparing the hyponyms of bacteria and algae, we identify semen that represents the main difference between bacteria, such as low plants. Bacteria are single-celled organisms. At the same time, depending on the shape of the bacterial cells, the bacteria are divided into two types: Kokken - coccus and Webrion - webrion. Coccus spherical cells, weakly twisted cells in the form of vibration perpendiculars. The term coccus is hyperonymous in terms of diplococcus, tetra coccus, streptococcus, staphylococcus, and others. There are common coccus element of these named hyponyms, in which the semen is separated by the semen, which indicates how the cells are connected.

In forestry terminology the common der Boden – soil hyperonymic term deletes a number of soil species based on differential approaches. In German: der Boden - der

Alkaliboden – der Alluvialboden – der Mineralboden – der Lehmboden – die Schwarzerde – der Humusboden. In Uzbek: soil – salt soil – sedimentary soil – mineral soil – gel soil – brown soil – humus soil. The above soil types are considered to be hyponyms for soil. In this case, the soil hyperonym is different from the types of hyperonyms in terms of semantics. This is because in the mountainous, steppe, and desert areas, the word "soil" includes seeds that express additional properties. They are different from each other in terms of function, but according to some of the composition, they are different from each other. The word soil reveals the existence of types of soils and the properties of soils. Thus, soil hyperonymy is differentiated by differentiation in terms of appearance and chemical composition. The hyponym - the terms are generally derived from der Boden - soil lexemes. The hypo-hyperonymic paradigm helps to express the hyponyms that denote the different types of a species.

The study of paradigmatic relations between lexical units is still relevant. The types of lexical-semantic relations of the lexical system, which had been limited to classical semantic relations, were further enriched. For example, partonymy, graduonymy and functionalism. Given the scope of terms to be analyzed, in order to clearly define the scope of hyponymic relations in the lexical-semantic system of language, we aimed to study forestry terms separately with hypo-hyperonymic paradigms. Partonymy means the expression of whole-piece relations in meaning groups of lexemes. It is also referred to as meronymy in some literatures [10]. The partonymic relation is a central part of the meaning of some lexemes. For example, a tree is a part of a forest, in other words, a forest lexeme has a semantic meaning of integrity, while a tree is the main component of a forest. In particular, in partonymic relations, some lexemes are an important component of meaning. According to B. Tversky, in certain areas of the dictionary the partonymic structure is more important than the hyponymic relation [11]. For example, die Blume - flower, die Wurzel - root, das Blatt - leaf, die Knospe - bud. In this example, the paradigmatic "hierarchical" semantic relationship between lexemes means that it belongs to the "whole" part of another lexeme.

A lexical-semantic series consisting of lexical units denoting different levels of denotation or concepts is called graduonymy [12]. The phenomenon of graduonymyis a topical problem of linguistic research that manifests itself at different levels. J. Lyon divides a set of incompatible words into cycles with a sequence [13]. According to the state of J. Lyon's regulated words lexemes distinguish between scale and degree in terms of class. For example, heiß – warm – kühl – kalt. The peculiarity of graduonymy is caused by the semantic features of lexical units. In other words, lexical graduonymy relies on denotative and connotative semantics. Denotative and connotative signs, on the other hand, are imbodied in various changes in the semantic types of lexical units. In fact, O. Bozorov emphasizes that these changes are related to the fact that lexical hierarchy occurs in different quantitative and qualitative scales within the lexical-phraseological system [14]. According to G. Rakhmonov, in the study of lexical graduonymy it is expedient to work on the types of denotative and connotative meanings, types of semantics that components of lexical meaning [15]. A distinctive feature of lexical graduonymy is that it represents a character that is inextricable linked ti a particular semantic quantity in the semantic structure. This sign, on the other hand, changes to the minority or the plural and becomes part of two or more semantics, and in this way semantic connections are formed. For example, a device for cutting trees in forestry in German die Faustsäge - handsaw, die Bandsäge - bandsaw, die Bestossäge – sizing saw, die Kettensäge – electric saw. In this line we can see the difference that exists in the perfection of an object, not its size. A. Sobirov categorized the semantic field related to plants in terms of social usefulness in the type of hierarchy between lexical-semantic groups and meaning groups as follows:

1) Low plant micro field.
2) Micro field of aquatic plants.
3) Micro field of wild plants.
4) Micro field of harmful plants.
5) Micro field of medicinal plants.
6) Micro field of indoor flowers [16].

Thus, the most important feature of the graduonymic series is that there is a clear difference in relation to the homogeneity, and new lexemes (graduonyms) are formed as a result of the primacy of this difference factor.

H. Nematov and R. Rasulov gave detailed information about the phenomenon of functional in the book "System lexicology of the Uzbek language." It has also been pointed out that the rare occurrence of function in our language is mainly related to the noun phrase [17]. Of course, from the point of view of our research work, it is natural that functionalism is rare in forestry terminology. These are lexical units that are grouped together based on their natural function. The above examples are paradigms adapted to *fruit formation*. For example, der Baumstamm – tree, die Rinde – bark of tree, der Ast – branches, das Blatt - leaf, die Blüte - flower, die Frucht - fruit, der Kern - bone. Such paradigms can also be noted within the semantic fields. A natural plant that produces oxygen, beauty, shade, fruit, wood, according to its function in the earth, concentrated in a single semantic field. Hence, such peculiarities require a separate approach to each of the lexical paradigms. As for hierarchy, its interrelation between hyponymy is determined by its relation between scientific terms and common words.

Hierarchyonymy (series, step-by-step placement) is a hyponymic series of words given in the scientific literature. In particular, in rare cases, a chain of terms related to forestry terminology represents a complex hyponymic relation. Such complex hyponymic relationships are observed in forest botany, dendrology, forest entomology, forest phytopathology, and other sciences.

By translating forestry term into Latin, it is possible to determine whether there are hyponymic connections between them. International Latin names that define the phylogenetic system of plants may also reflect genus-species relations. N.N. Zabinkova emphasizes that each plant belongs to a certain class, family, genus, species. For example, - *-aceae*

family names, pines (Pinaceae), cypresses (Cupressaceae), taxus (Taxaceae) and taxodiacs (Taxodiaceae); *-ales* class names, ginkgoals family (Ginkgoales), class of conifers (coniferales); For the name of Taxus genus, the fruiting or European genus Taxus baccata L., forms a hierarchical system with the species of sharp-leaved or Far Eastern genus (*Taxus cuspidate* S.et Z) [18].

Of course, in order to facilitate the semantic methods of forestry terminology, plant names are used in conjunction with standard Latin equivalents. Sometimes the standard elements of Latin nomenclatures may not always accurately reflect hyponymic relations. For example, the *-ae* element can occur in class, category, and family names. We compare: die Bedecktsamige - close-seeds class Angiospermae, die Alge – aquatic plants family Algae, die Grünanlagen green aquatic plants class Cyanophyceae. It is formed by quoting units that formally reflect the distinctive features of one plant in another in the Latin nomenclature.

In fact, semantic relations can be based on a combination of terms. For example, Beziehung zwischen Arten - relation between species is a very complex term that refers to a very contradictory relation between two organisms. Relation between species usually manifest themselves in the form of symbiosis, parasitism, predation, competition. Thus, the term mutualism and commensalism, which signify the close relation of different organisms that are beneficial to one or both species of symbiosis, is a hyperonym relative to the terms cohesive. Species terms are different, mutualism is a symbiosis that is beneficial to both organisms, and commensalism is a symbiosis that is beneficial to one of the organisms.

4. Conclusions

Thus, from the above analysis, it can be concluded from the ideas that hypo-hyperonymic, genus species relations are inherent in all sciences in forestry. The hyponymic relation of the terms is particularly prevalent in forestry terminology. Having a hyponymic relation in terminology simplifies the ways of systematizing the content of a dictionary, revealing the meaning of terms. The hypo-hyperonymic series of words is a category that systematically forms the lexicon that exists in the German and Uzbek lexical layer. The study of lexical lines connected on the basis of hypo-hyperonymic relation shows that the German and Uzbek lexical structures are organized as a system, have a systemic character.

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