

STRUCTURAL ORGANIZATION OF THE TRANSPORT LEXICAL-SEMANTIC FIELD IN ENGLISH: A LINGUISTIC ANALYSIS

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Abstract. *The present study examines the structural organization of the transport lexical-semantic field in English. Lexical-semantic field theory serves as an important framework for understanding the systematic nature of vocabulary and semantic relationships among lexical units. The research aims to identify the principal components of the transport lexical-semantic field, classify its constituent units, and analyze the semantic relations that connect them. The study employs descriptive, semantic, and componential analysis methods. The findings demonstrate that transport vocabulary forms a hierarchical and interconnected lexical system consisting of several thematic subfields, including road, rail, air, and water transport. The research contributes to the development of lexical semantics and transport terminology studies.*

Annotatsiya. *Ushbu tadqiqot ingliz tilidagi transport leksik-semantik maydonining strukturaviy tashkil etilishini o'rganadi. Leksik-semantik maydon nazariyasi lug'at tarkibining tizimli tabiatini hamda leksik birliklar o'rtasidagi semantik munosabatlarni tushunishda muhim nazariy asos bo'lib xizmat qiladi. Tadqiqotning maqsadi transport leksik-semantik maydonining asosiy komponentlarini aniqlash, uning tarkibiy birliklarini tasniflash hamda ularni bog'lovchi semantik munosabatlarni tahlil qilishdan iborat. Tadqiqotda tavsifiy, semantik va komponent tahlil metodlaridan foydalanildi. Natijalar shuni ko'rsatadiki, transport leksikasi ierarxik va o'zaro bog'langan tizimni tashkil etib, u yo'l, temir yo'l, havo va suv transporti kabi bir nechta tematik kichik maydonlardan iborat. Ushbu tadqiqot leksik semantika va transport terminologiyasi sohalarini rivojlantirishga hissa qo'shadi.*

Аннотация. *Данное исследование рассматривает структурную организацию транспортного лексико-семантического поля в английском языке. Теория лексико-семантического поля является важной теоретической основой для понимания системной природы словарного состава и семантических отношений между лексическими единицами. Цель исследования заключается в выявлении основных компонентов транспортного лексико-семантического поля, классификации его составных единиц и анализе семантических отношений, связывающих их. В исследовании используются описательный, семантический и компонентный методы анализа. Результаты показывают, что транспортная лексика образует иерархическую и взаимосвязанную систему, включающую несколько тематических подполей, таких как дорожный, железнодорожный, воздушный и водный*

транспорт. Данное исследование вносит вклад в развитие лексической семантики и транспортной терминологии.

Keywords: *lexical-semantic field, transport terminology, semantic structure, English lexicon, transport vocabulary, semantic relations.*

Kalit soʻzlar: *leksik-semantik maydon, transport terminologiyasi, semantik tuzilma, ingliz tili lugʻati, transport leksikasi, semantik munosabatlar.*

Ключевые слова: *лексико-семантическое поле, транспортная терминология, семантическая структура, английская лексика, транспортная лексика, семантические отношения.*

Introduction

Vocabulary represents one of the most dynamic and complex components of language. Modern linguistics increasingly views vocabulary as a system of interconnected lexical units rather than a collection of isolated words. Within this framework, lexical-semantic field theory provides an effective approach for investigating semantic organization and conceptual categorization.

The transport sector has become increasingly significant due to globalization, technological innovation, and international mobility. Consequently, transport-related vocabulary has expanded considerably, creating a rich lexical-semantic domain that deserves systematic linguistic investigation.

The relevance of the present study is determined by the growing importance of transport terminology in international communication, professional discourse, translation studies, and foreign language education. The object of the study is the English transport vocabulary. The subject of the study is the semantic structure and internal organization of the transport lexical-semantic field. The aim of the research is to analyze the structure of the transport lexical-semantic field in English and identify the semantic relationships among its constituent lexical units.

To achieve this aim, the following tasks were formulated:

1. To define the concept of a lexical-semantic field.
2. To identify the core and peripheral elements of the transport lexical-semantic field.
3. To classify transport vocabulary into semantic subfields.
4. To analyze semantic relations within the field.
5. To determine the linguistic features of transport terminology.

Literature Review

The concept of lexical-semantic fields occupies a central position in modern linguistic theory and has been extensively investigated by scholars from structural, functional, and cognitive linguistic traditions. The theoretical foundation of lexical-semantic field analysis was established by the German linguist Jost Trier (1931), who argued that vocabulary should not be studied as a collection of isolated words but rather as an interconnected system of lexical units united by common conceptual meanings. According to Trier, lexical

items derive their meanings through their relationships with other words within the same semantic field. This perspective significantly influenced subsequent developments in semantic theory and lexical studies.

Further development of lexical-semantic field theory can be observed in the works of Weisgerber (1953), who emphasized the relationship between language, cognition, and conceptual categorization. He suggested that lexical fields reflect the way speakers perceive and organize reality. This approach contributed to the understanding of vocabulary as a structured system that mirrors human conceptual knowledge.

Lyons (1977) expanded the theory by examining semantic relations among lexical units. He argued that lexical fields are organized through systematic semantic relationships such as synonymy, antonymy, hyponymy, and meronymy. According to Lyons, these relations enable speakers to classify and interpret concepts efficiently. His work remains one of the most influential contributions to lexical semantics and continues to serve as a theoretical basis for contemporary field studies.

Palmer (1981) further developed semantic field theory by emphasizing the role of componential analysis in identifying semantic features shared by lexical units. He argued that words belonging to the same field possess common semantic components that distinguish them from words in other fields. This methodological approach has proven particularly useful in terminological research and vocabulary classification.

The contribution of Ullmann (1962) is also noteworthy. He examined lexical systems from a semantic perspective and highlighted the dynamic nature of vocabulary. According to Ullmann, semantic fields are not static structures but constantly evolve under the influence of social, technological, and cultural changes. This observation is particularly relevant to transport terminology, which undergoes continuous expansion as new technologies emerge.

In contemporary linguistics, Cruse (2011) defines lexical-semantic fields as networks of semantically related lexical units connected through various conceptual and linguistic relationships. He emphasizes that field structures often exhibit hierarchical organization, where general concepts occupy central positions while more specific concepts form peripheral layers. This hierarchical organization can clearly be observed in transport vocabulary, where the general term “transport” encompasses a wide range of subordinate concepts such as road transport, rail transport, air transport, and water transport.

The works of Jackson and Amvela (2007) provide additional insights into lexical organization and vocabulary structure. They argue that lexical fields facilitate language acquisition, vocabulary development, and semantic interpretation by creating meaningful connections among lexical items. Their findings suggest that lexical-semantic analysis can contribute significantly to language teaching and terminology management.

Recent developments in cognitive linguistics have also influenced lexical-semantic field research. Geeraerts (2010) emphasizes that semantic categorization is closely related to human cognitive processes and conceptual structures. From a cognitive perspective, lexical

fields represent mental frameworks through which speakers organize knowledge about the world. Consequently, transport vocabulary can be viewed not only as a linguistic system but also as a conceptual representation of transportation-related knowledge.

Research on specialized terminology has further expanded the study of lexical-semantic fields. Cabré (1999) argues that terminological systems possess field-like structures characterized by conceptual coherence and semantic interdependence. Transport terminology represents a particularly interesting domain because it combines technical, scientific, and everyday vocabulary. This dual nature creates a complex semantic network involving both general lexical units and highly specialized terms.

Studies specifically addressing transport terminology have mainly focused on technical communication, translation, and terminology standardization. Bowker and Pearson (2002) note that transport-related terms play a crucial role in international communication due to the global nature of transportation systems. However, most existing studies examine transport vocabulary from practical or terminological perspectives rather than from the standpoint of lexical-semantic field theory.

Within the context of transport linguistics, researchers have identified several major conceptual categories that structure transport vocabulary. These categories include means of transportation, infrastructure, transportation processes, transportation personnel, and transportation technologies. Each category contains numerous lexical units linked through hierarchical and associative relationships. For example, the concept of “vehicle” functions as a superordinate category encompassing subordinate concepts such as “car,” “bus,” “truck,” “train,” and “aircraft.”

The rapid technological development of the twenty-first century has introduced numerous new lexical items into the transport lexical-semantic field. Terms such as “electric vehicle,” “autonomous vehicle,” “drone,” “ride-sharing,” and “high-speed rail” illustrate the dynamic nature of transport vocabulary. These innovations support Ullmann's (1962) argument that lexical fields evolve continuously in response to technological and societal changes.

Despite the substantial body of literature devoted to lexical semantics, relatively few studies have investigated the internal structure of the transport lexical-semantic field in a systematic manner. Existing research tends to focus either on general semantic theory or on practical aspects of transport terminology. Consequently, there remains a need for comprehensive linguistic studies that examine transport vocabulary as an integrated lexical-semantic system.

The present research seeks to address this gap by analyzing the structural organization of the transport lexical-semantic field in English, identifying its principal semantic subfields, and examining the semantic relations that connect its constituent lexical units. Such an investigation contributes to both theoretical linguistics and applied terminology studies while providing a foundation for future comparative research involving English and Uzbek transport vocabulary.

Research Methodology

The present study employs a qualitative linguistic research design aimed at investigating the structural organization of the transport lexical-semantic field in English. The research is based on the principles of lexical semantics, field theory, and terminological analysis. A combination of descriptive, semantic, componential, and classificatory methods was utilized to ensure a comprehensive examination of transport-related lexical units.

Data Collection

The research data consist of transport-related lexical items extracted from authoritative English-language lexicographic and terminological sources. The primary sources include the Oxford English Dictionary, Cambridge Dictionary, Merriam-Webster Dictionary, and specialized transportation glossaries and reference materials. In addition, transport terminology was collected from academic publications, transportation manuals, and professional documents related to road, rail, air, and maritime transportation.

A corpus of approximately 200 transport-related lexical units was compiled for analysis. The selected lexical items represent different categories of transport vocabulary, including vehicles, infrastructure, transportation processes, personnel, equipment, and technological innovations.

Research Methods

Descriptive Method

The descriptive method was employed to identify, classify, and characterize lexical units belonging to the transport semantic domain. This method facilitated the systematic description of transport vocabulary and its semantic properties within the English lexical system.

Lexical-Semantic Analysis

Lexical-semantic analysis served as the principal method of investigation. This approach enabled the identification of semantic similarities and differences among lexical units and allowed for the determination of their positions within the transport lexical-semantic field. Particular attention was paid to conceptual relations connecting lexical items.

Componential Analysis

Componential analysis was applied to identify the semantic features shared by transport-related lexical units. Through the decomposition of lexical meanings into smaller semantic components, the study examined the common and distinctive characteristics of terms belonging to different transport categories.

For example, the lexical items car, bus, and truck share the semantic components [+vehicle] and [+road transport], while differing in features such as [+passenger transport] and [+cargo transport].

Classification Method

The classification method was used to organize transport vocabulary into semantically coherent subfields. Based on shared semantic features, lexical units were grouped into four major categories:

1. Road transport vocabulary;
2. Rail transport vocabulary;
3. Air transport vocabulary;
4. Water transport vocabulary.

Further subcategorization was conducted to identify more specific semantic groups within each category.

Field Analysis

Field analysis was employed to determine the internal structure of the transport lexical-semantic field. This method enabled the identification of the field nucleus, central elements, and peripheral components. The lexical item transport was considered the core element around which related lexical units were organized.

Analytical Framework

The analysis focused on identifying the principal semantic relations operating within the transport lexical-semantic field. These relations include:

- Hyponymy (general-specific relations);
- Synonymy (similarity of meaning);
- Antonymy (opposition of meaning);
- Meronymy (part-whole relations);
- Associative semantic relations.

The examination of these relations provided insights into the systematic organization of transport vocabulary and its conceptual structure.

Reliability and Validity

To ensure the reliability of the findings, lexical units were selected from multiple authoritative linguistic and terminological sources. Cross-referencing among dictionaries and transportation glossaries helped verify the semantic classification of lexical items. Furthermore, the use of multiple analytical methods enhanced the validity of the research by allowing transport vocabulary to be examined from different linguistic perspectives.

The research is limited to the analysis of transport vocabulary in contemporary English. The study focuses primarily on lexical-semantic relationships and does not examine phonological, morphological, or syntactic aspects of transport terminology. Additionally, the analysis is restricted to general transport terminology and does not provide an exhaustive investigation of highly specialized technical vocabulary.

Since the study is based exclusively on publicly available linguistic and lexicographic sources, no human participants were involved, and no ethical concerns arose during the research process.

Results and Discussion

The analysis of the collected corpus revealed that the transport lexical-semantic field in English constitutes a highly structured and hierarchically organized system of lexical units. The field encompasses a wide range of vocabulary related to the movement of people and goods, transportation infrastructure, transportation personnel, and technological innovations. The findings indicate that transport vocabulary is organized according to semantic proximity and conceptual relationships, forming a coherent lexical network.

General Structure of the Transport Lexical-Semantic Field

The lexical item transport functions as the nucleus of the field and serves as the most general conceptual category. Around this central concept, numerous lexical units are organized into several interconnected semantic subfields. The analysis demonstrated that the transport lexical-semantic field consists of four major thematic groups:

1. Road transport vocabulary;
2. Rail transport vocabulary;
3. Air transport vocabulary;
4. Water transport vocabulary.

These subfields are not isolated from one another but are connected through shared semantic features and conceptual associations.

The hierarchical organization of the field can be represented as follows:

Transport

→ Road Transport

→ Rail Transport

→ Air Transport

→ Water Transport

Each subfield contains its own system of lexical units arranged according to general-specific relationships.

Road Transport Vocabulary

The analysis revealed that road transport vocabulary represents the largest subgroup within the transport lexical-semantic field. This dominance can be explained by the extensive role of road transportation in everyday life and international logistics.

Examples of lexical units identified within this category include:

- car
- automobile
- bus
- truck
- van
- taxi
- motorcycle
- bicycle
- highway

- traffic
- intersection
- driver

The lexical item vehicle occupies a superordinate position within this subgroup and functions as a hyperonym for numerous subordinate categories.

For example:

vehicle

→ car

→ bus

→ truck

→ motorcycle

The existence of such hierarchical relations confirms the systematic organization of transport vocabulary and supports the assumptions of lexical-semantic field theory.

Rail Transport Vocabulary

The railway subfield consists of lexical units associated with railway infrastructure, railway vehicles, and railway operations.

Representative examples include:

- train
- locomotive
- carriage
- railway
- station
- platform
- track
- conductor

The analysis showed that many railway terms demonstrate a high degree of semantic specialization. Unlike general transport vocabulary, railway terminology often refers to specific technical concepts and operational procedures.

The strong semantic cohesion of this subgroup contributes to its distinct identity within the broader transport field.

Air Transport Vocabulary

The air transport subfield contains lexical units related to aviation and air travel.

Examples include:

- aircraft
- airplane
- helicopter
- airport
- runway
- pilot
- flight

- navigation
- passenger
- cockpit

The findings indicate that aviation terminology has experienced significant lexical expansion during the last century. Technological developments have introduced numerous new terms into the transport lexical-semantic field.

Examples include:

- drone
- autopilot
- unmanned aircraft
- air traffic control

This phenomenon supports previous linguistic observations regarding the dynamic and evolving nature of specialized vocabulary.

Water Transport Vocabulary

The maritime subgroup contains lexical units associated with transportation by water.

Examples include:

- ship
- vessel
- ferry
- boat
- harbor
- port
- captain
- cargo
- tanker
- dock

Compared with road transport vocabulary, maritime terminology contains a larger proportion of technical and professional terms. Many of these lexical units are primarily used within specialized maritime discourse.

Semantic Relations within the Transport Lexical-Semantic Field

One of the most important findings of the study concerns the extensive network of semantic relations connecting lexical units within the field.

Hyponymic Relations

Hyponymy was identified as the dominant semantic relation.

Examples include:

transport → vehicle → car

transport → vehicle → bus

transport → vehicle → truck

transport → aircraft → airplane

transport → vessel → ferry

These hierarchical relationships facilitate conceptual categorization and contribute to lexical organization.

Synonymic Relations

The analysis identified several synonymic pairs within the field.

Examples:

- automobile – car
- vessel – ship
- roadway – highway

However, complete synonymy was relatively rare. Most synonymic relationships involved partial semantic overlap rather than complete equivalence.

Antonymic Relations

Antonymic relationships were observed primarily in transport processes.

Examples:

- arrival – departure
- boarding – disembarkation
- loading – unloading
- import – export

These oppositions play an important role in organizing transportation-related concepts.

Meronymic Relations

Part-whole relationships were particularly common in technical terminology.

Examples:

car → engine
aircraft → wing
train → carriage
ship → deck

The prevalence of meronymic relations reflects the complex physical structure of transportation systems and vehicles.

Core and Peripheral Elements

Field analysis demonstrated the existence of a nucleus-periphery structure. The central zone consists of highly frequent and semantically general lexical units such as:

- transport
- transportation
- vehicle
- transit
- mobility

The peripheral zone contains more specialized and less frequently used terms, including:

- hovercraft
- monorail
- tanker
- autopilot

- drone

This distinction confirms one of the fundamental principles of lexical-semantic field theory, namely that lexical fields are organized around central concepts with varying degrees of semantic relevance.

Terminological Innovation and Lexical Expansion

Another important finding concerns the influence of technological innovation on transport vocabulary. The emergence of new transportation technologies has resulted in the creation of numerous lexical items.

Examples include:

- electric vehicle
- autonomous vehicle
- ride-sharing
- e-mobility
- high-speed rail
- smart transportation

These innovations demonstrate that the transport lexical-semantic field remains open and dynamic. New lexical units continuously enter the field, while obsolete terms gradually lose relevance.

Discussion

The findings of the study support the theoretical assumptions proposed by Trier (1931), Lyons (1977), and Cruse (2011), who argued that vocabulary is organized into structured semantic systems rather than isolated lexical units. The transport lexical-semantic field exhibits clear hierarchical organization, semantic interconnectedness, and conceptual coherence.

The predominance of hyponymic relations suggests that transport vocabulary is largely organized through taxonomic categorization. Furthermore, the existence of core and peripheral zones confirms that lexical fields possess internal structural differentiation.

The study also demonstrates that technological development functions as a major factor influencing lexical expansion within the transport domain. Consequently, transport vocabulary represents one of the most dynamic areas of the contemporary English lexicon.

Overall, the results indicate that the transport lexical-semantic field constitutes a complex semantic system whose organization reflects both linguistic principles and real-world conceptual structures.

Conclusion

The transport lexical-semantic field in English constitutes a structured and hierarchically organized system of lexical units connected through multiple semantic relationships. The field includes several major subfields: road, rail, air, and water transport. Semantic relations such as hyponymy, synonymy, antonymy, and meronymy ensure systematic organization and conceptual coherence.

The study confirms that transport vocabulary represents a significant component of the English lexical system and reflects developments in technology, mobility, and global communication. Future research may investigate comparative aspects of transport terminology in English and Uzbek, as well as the influence of emerging transport technologies on lexical innovation.

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