

DOI: <https://doi.org/10.18454/RULB.2021.28.4.42>**ЛЕКСИЧЕСКИЕ СРЕДСТВА ВЕРБАЛИЗАЦИИ КОНЦЕПТА «SCIENCE» В РОМАНЕ СИНКЛЕРА ЛЬЮИСА «ЭРРОУСМИТ»**

Научная статья

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Аннотация

Творчество С. Льюиса представляет интерес в силу своей социальной значимости. Проанализированы лексические средства вербализации концепта «Наука» в романе Синклера Льюиса «Эрроусмит». Наука – основной концепт романа, для описания которого С. Льюис использует такие лексические средства, как science, chemistry, medicine, bacteriology, biology, physics, anatomy, scientist, doctor, professor, study, research, method, approach, test, analysis, experiment, formula, laboratory, cabinet, classroom, solution, microscope, reaction, substance, syringe, burner. Оригинальная картотека исследования состоит из 27 лексических единиц, 1008 употреблений. Отмечается, что наиболее ярко научную семантику в романе выражают слова science и scientist. Данные лексические единицы обретают в художественном тексте коннотативные семы, поэтому описаны в статье более детально. В результате исследования обозначилась тенденция использования С. Льюисом словарных значений слов, вербализующих концепт «Наука». При этом писатель иногда наделяет научную лексику новыми, окказиональными смыслами, внося в концепт «Наука» собственное видение. Практическая значимость исследования связана с преподаванием английского языка и с использованием его материалов при составлении словаря языка писателя.

Ключевые слова: лексика, концепт, наука, Синклер Льюис, «Эрроусмит».

LEXICAL MEANS OF VERBALIZATION OF THE "SCIENCE" CONCEPT IN SINCLAIR LEWIS'S "ARROWSMITH"

Research article

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Abstract

Sinclair Lewis's literary heritage is of interest due to its social significance. The lexical means of verbalization of the concept "Science" in Sinclair Lewis's novel "Arrowsmith" are being analyzed in this article. "Science" is the basic concept of the novel, in order to implement this concept into the text structure, the narrator uses such lexical units, as science, chemistry, medicine, bacteriology, biology, physics, anatomy, scientist, doctor, professor, study, research, method, approach, test, analysis, experiment, formula, laboratory, cabinet, classroom, solution, microscope, reaction, substance, syringe, burner. The original research card file consists of 27 lexical units, 1008 occurrences. It is noted that the most vividly scientific semantics in the novel is expressed by the words science and scientist. These lexical units acquire connotative semes in the literary text, therefore, they are described by the authors of the article in more detail. The results of the research enabled to reveal S. Lewis's tendency to employ mostly the dictionary meanings of lexemes that verbalize the concept "Science". At the same time, the novelist sometimes endows scientific vocabulary with new, occasional meanings, introducing his vision into the concept. The practical application of the article might be effected through its incorporation into academic courses of English language, the research materials might further be used in compiling a dictionary of the writer's language.

Keywords: lexis, concept, science, Sinclair Lewis, Arrowsmith.

Introduction

Modern researches on the concept "Science" affect the philosophical, social, cultural, linguistic aspects. Sociophilosophical edge of this concept is considered in the article by S. Chernozub "The concept of national science in the new discourse of civilizations" [1].

The research in the features of verbalization of the concept "Science" does not lose its relevance in the works of scientists. For example, N.V. Butorina examines the lexico-semantic field "Science" in Russian and English languages [2], Ya. V. Zubkova's studies are devoted to comparative analysis of the concept «Science» in German and Russian cultures [3].

The purpose of our research is to analyze the lexical means engaged in verbalization of the concept "Science" in the novel "Arrowsmith" by Sinclair Lewis.

Research objectives: to determine the social significance of the novel "Arrowsmith"; to compile a card index of lexical units verbalizing the concept "Science" in the novel; to reveal the semantic peculiarities of lexical means engaged in verbalization of the concept "Science" in S. Lewis's novel "Arrowsmith".

Research methods: descriptive method, field method, component analysis method. The material of the research is a card index compiled through the application of the method of continuous sampling to the studied text, the card index consists of 27 lexical units and 1008 occurrences.

In 1930 Sinclair Lewis became the first US writer who won the Nobel Prize in Literature "for his powerful and expressive narrative art and rare skill to create new types and characters with satire and humor." His Nobel speech "The American Fear of

Literature" caused a wide public resonance, because in this speech Lewis spoke against those who are "afraid of any literature except the one that exalts everything American, equally advantages and disadvantages" [4].

Among his most popular works are "Our Mr. Wrenn", "The Job", "Main Street", "Babbitt" "The Man who knew Coolidge", "Elmer Gantry", "Arrowsmith".

The study of S. Lewis's literary heritage is relevant for modern researchers, for example, the works of such scientists as Edward Sorel [5], Ashley Walters [6], Ian Afflerbach [7], Andrew Ball [8], Isabel Marin Gomez [9] are devoted to it.

Main results

The novel "Arrowsmith" is named for the main character — a young American physician, microbiologist Martin Arrowsmith. One of the strands of the narrative is depiction of the "genius of science" — an old German professor working in the USA, Max Gottlieb. Another narrative thread is the collision of general scientific interests with personal or business interests. According to many scholars, the novel very accurately depicts the atmosphere of scientific research.

While working on the manuscript, Sinclair Lewis investigated into the matter and read a lot of scientific literature, personally met many scientists. Most of the novel's characters have real prototypes.

S. Lewis's "Arrowsmith" reflects the broad and significant theme of contradiction between capitalism and science. In terms of science the choice fell on medicine and biology because, as the novelist mentioned before, in these fields the acute influence of capitalism can be traced.

The addresser reveals all the ins and outs of the interaction between science and capitalism, highlighting various aspects of the life of private doctors, the processes of functioning of private clinics, as well as institutes of hygiene and research institutions. The protagonist, Arrowsmith, along with his colleague Terry Wickett, hides in the wilderness, developing serums, earning money for scientific research. Sinclair Lewis is quite pessimistic in his novel when touching on the theme of contradiction of science and capitalism, for as he notes science turns into an object of purchase and sale. Cultivation of a scientist-careerist image is the main aim and characteristic of capitalism. As I.O. Mazirka notices, in the novel there are no prospects beyond the framework of capitalism, therefore the author takes the side of those who are going against the current, the side of those who seek to achieve true progress in science despite capitalist interests and needs [10].

Thus, contradiction of science and capitalism becomes the key strand of the narrative; the main conflict of the novel — between the protagonist-scientist and society — is formed around it. "Arrowsmith" undoubtedly reveals social problems that remain more than relevant nowadays, in this aspect, the text of the novel and in particular the concept "Science" is of great interest for social and linguistic research. A number of additional nuances in realization of scientific theme of the novel should be marked out, they are mostly connected with the personality of the main character. It is not by chance that the author places the name of the main character of the novel into its title — the strong position of the text. Science turns out to be the basis that brings the scientist's intrapersonal conflict into society, giving rise to the science-morality contradiction.

According to our observations, in order to reveal the state of science and scientific community in America, S. Lewis employs in his novel 27 lexical units (1008 uses) associated with science: *science* (94), *chemistry* (47), *medicine* (39), *bacteriology* (15), *biology* (14), *physics* (8), *anatomy* (5), *scientist* (75), *doctor* (58), *professor* (49), *study* (144), *research* (46), *method* (25), *approach* (24), *test* (21), *analysis* (20), *experiment* (18), *formula* (3), *laboratory* (164), *cabinet* (78), *classroom* (14), *solution* (14), *microscope* (13), *reaction* (8), *substance* (4), *syringe* (4), *burner* (4).

The authors included these lexical units into the concept "Science" and presented it in the form of a field, with the lexical unit *science* in the core of the concept and the near periphery including various fields of science (*medicine, anatomy, biology, bacteriology, chemistry, physics*) and science workers (*scientist, professor, doctor*). To the far periphery the authors referred units, which name scientific activities and cover the processes of scientific research, observations and experiments (*study, research, method, approach, test, analysis, experiment, formula, laboratory, cabinet, classroom, solution, microscope, reaction, substance, syringe, burner*) (Table 1).

Table 1 Semantic and quantitative correlation of the lexis included in the field of the concept "Science" in S. Lewis's novel "Arrowsmith"

Table 1 — Semantic and quantitative correlation of the lexis included in the field of the concept "Science" in S. Lewis's novel "Arrowsmith"

The place of the lexical unit in the concept field	Lexical unit	Lexical meanings and number of uses
Core	Science	The total number of uses is 94, in terms of: Science — 74 Scientific — 5 Scientific work — 4 Scientist — 3 Knowledge — 2 Science (Medicine) — 1 Science (as a human, woman) — 1 Education — 1 Scientific fact — 1 Scientific information — 1 Scientific world — 1
Near periphery	Chemistry Medicine Bacteriology Biology Physics Anatomy Scientist Doctor Professor	47 39 15 14 8 5 75 58 49
Far periphery	Study Research Method Approach Test Analysis Experiment Formula Laboratory Cabinet Classroom Solution Microscope Reaction Substance Syringe Burner	144 46 25 24 21 20 18 3 164 78 14 14 13 8 4 4 4

The core of the concept "Science" — the lexical unit *science* occurs in the novel "Arrowsmith" quite often (94 uses) and in various meanings, the authors will consider the details below.

In order to get a thorough understanding of the meaning of the lexical unit *science* the authors turned to the etymological dictionary of the English language, where the word *science* has the following meaning: "what is known, knowledge (of something) acquired by study; information", "assurance of knowledge, certitude, certainty" [11]. In modern English the lexeme *science* denotes a scientific discipline, a branch of science [12].

In English, the word *science* means what in Russian is denoted by the phrase natural sciences. Since the term *science* denotes only natural sciences, it is worth considering the entire classification of sciences in English: exact sciences, social sciences/studies, applied sciences, humanities/arts. In English, the following expressions are recorded with the term *science* and its derivatives: be a scientist — "to engage in science", give oneself up / devote oneself wholly to science/scholarship — "to surrender to science"; men of science/scholars — "people of science"; let this be a lesson — "this is science for you." The authors can conclude from the above, that the notion *science* can be expressed by the word *lesson*.

Let us consider the meaning of the word *science* in the Oxford Dictionary:

"1. The intellectual and practical activity encompassing the systematic study of the structure and behavior of the physical and natural world through observation and experiment.

2. A particular area of science.

3. A systematically organized body of knowledge on a particular subject.

4. (archaic) Knowledge of any kind" [13].

The lexical unit *science*, according to our data, is used by Sinclair Lewis in the novel "Arrowsmith" in the following meanings:

· science (74 uses);

- scientific (5 uses);
- scientific work (4 uses);
- scientist (3 uses);
- knowledge (2 uses);
- science (as Medicine) (1 use);
- science (as a living organism, as a woman) (1 use);
- scholarship (1 use);
- scientific evidence (1 use);
- scientific baggage (1 use);
- scientific world (1 use).

All these meanings correspond to the meanings of the word *science* in the Oxford Dictionary.

The use of the lexical unit in the context of the novel is seen through this example:

"You do not! They say, 'Oh, sure, *science* is all right in its way; helps a doc to treat his patients,' and then they begin to argue about whether they can make more money if they locate in a big city or a town, and is it better for a young doc to play the good-fellow and lodge game, or join the church and look earnest" [14].

The lexical unit *science* is used in its first direct dictionary meaning, which is "a particular area of science". But, at the same time, there are some sentences in which the lexical unit *science* bears the meaning "knowledge".

For example: "I don't care whether he has all *science* at his fingertips, whether he can instantly diagnose with a considerable degree of accuracy the most obscure ailment, whether he has the surgical technique of a Mayo, a Crile, a Blake, an Ochsner, a Cushing " [14].

In the meanings of this lexical unit, in addition to the dictionary and contextual meanings, there is a connotative one, which might be formulated as "the main purpose of a scientist's life" since for the protagonist science is equated with the meaning and purpose of life, without which the true scientists cannot imagine themselves.

The near periphery of the field of the concept "Science" in the novel includes the fields of branches of science and workers of science.

The most common word in this group is *chemistry* (47 uses). For example: "His idol was Professor Edward Edwards, head of the department of *chemistry*, who was universally known as "Encore" [14].

The following example "Who the dickens has been talking scandal about my organic *chemistry*?" shows the presence of an emotional attitude to chemistry and a positive connotation in the meaning of this word [14].

This lexical unit *chemistry* is found in the novel in the direct meaning of "science that studies chemical processes."

The field of science, which is the most important to the protagonist of the novel, is medicine. This word is used 39 times in the novel.

In Oxford Dictionary, this lexical unit has the following meanings:

"1. The science or practice of the diagnosis, treatment, and prevention of disease (in technical use often taken to exclude surgery)

2. A drug or other preparation for the treatment or prevention of disease. (especially among some North American Indian peoples) a spell, charm, or fetish believed to have healing, protective, or other power [13].

For example:

"In college he had felt that prosody and Latin Composition were futile, and he had looked forward to the study of *medicine* as illumination" [14].

"I tell you, you fellows are the kind that keep *medicine* nothing but guess-work diagnosis, and here you have a man" [14].

S. Lewis uses dictionary meanings of lexical unit *medicine*, nevertheless, medicine is an important part of the protagonist's life, as well as science in general.

The following aspect to consider is the role of the lexical unit *scientist*, which refers to the near periphery of the concept "Science" in the novel and designates workers of science. This word occurs in the novel 75 times, mainly in the following meanings:

- scientist (72 uses);
- scholarship (1 use);
- professor (1 use);
- wise men of science (1 use).

According to Oxford dictionary, the meaning of the word *scientist* (noun) is determined as following: "a person who is studying or has expert knowledge of one or more of the natural or physical sciences" [13].

In the novel the word *scientist* might be found in the following context: «And in the whole Institute there was not one man who would, in all states of liquor, assert that the work of any other *scientist* anywhere was completely sound, or that there was a single one of his rivals who had not stolen ideas from him» [14].

Here the word *scientist* is used in its direct dictionary meaning, however, there are examples in which one sees that the word is used in the meaning of "learning".

For example: "The wire-gang were as healthy and as simple as the west wind; they had no pretentiousness; though they handled electrical equipment they did not, like medics, learn a confusion of scientific terms and pretend to the farmers that they were *scientists*" [14].

In most of examples, this lexical unit is used in its direct meaning, however, there are also additional connotations in the description of scientists and teachers, who have different opinions about science and its purpose. All those who put money above scientific research receive the title of "pseudo scientists", people who do not deserve to call themselves true scientists.

To the far periphery of the semantic field the authors attributed scientific activities and processes of scientific research, observations and experiments. The most common units were *study* (144 uses) and *laboratory* (164 uses). Let us refer to the examples, showing these lexemes in the context of the novel:

"If the business of the Institute was not more complicated thereby, certainly its placidity was the more disturbed by the appearance of Gustaf Sondelius, who had just returned from a study of sleeping sickness in Africa and who noisily took one of the guest *laboratories*" [13].

"He thought of working in a *laboratory* at night, alone, absorbed, contemptuous of academic success and popular classes" [14].

It shall be noted that these lexemes bear a direct dictionary meaning. The fact that they are used more frequently than others indicates that the studying process plays the most important role in the life of a scientist, and the laboratory is the place where all the stages of scientific research take place. Laboratory is the place where scientists spend most of their day, devoting their time and energy to science, which comes before everything.

Conclusion

Having studied the concept "Science" in Sinclair Lewis's novel "Arrowsmith", the authors came to the conclusion that this concept certainly differs from a general language concept. It can be proved by the fact that the writer includes only certain branches of science, without touching on the humanitarian sections. The lexical units that verbalize the concept "Science" in the novel in most cases have a dictionary meaning. However, S. Lewis's creativity in using scientific vocabulary results in introduction of additional connotative senses into the novel that enrich the text and make it an unforgettable piece of literary work. It shall be noted that negative and positive connotations mainly indicate the mood, attitude and emotions of the author while he describes various scientific phenomena. Sinclair Lewis extols science over money, showing the reader that there are still "pure scientists" who devote their lives to scientific research and are not interested in the material side of the issue.

Конфликт интересов

Не указан.

Conflict of Interest

None declared.

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