

Word Formation Patterns of Academic Discourse in the Literary Genre of Science Fiction

Аннотация: Автор рассматривает проблему продуктивного словообразования на пересечении языка науки и художественной литературы, в частности, то, как авторы научно-фантастических произведений создают собственные окказионализмы, намеренно используя словообразовательные модели, характерные для языка академической прозы. В ходе изучения словообразовательных процессов были исследованы неологизмы и окказионализмы из художественных произведений Ф.К. Дика и О. Хаксли, определена их коммуникативная функция и связь с естественными науками, изучены механизмы взаимодействия продуктивного словообразования и научного типа дискурса.

Ключевые слова: научный английский язык, словообразование, научная фантастика, сложные слова, суффиксация, окказионализмы, словообразовательные модели, псевдотермины

Abstract: The article deals with the problem of dynamic word-formation in academic and literary discourse, in particular, unique neologisms and occasionalisms that were intentionally created by science fiction authors to resemble scientific and technical terms. Lexemes and word-combinations from the works of P.K. Dick and A. Huxley were analysed, as well as their communicative function and their connection with scientific disciplines and the relationship between dynamic word-formation and academic discourse.

Key words: academic English, word-formation, science fiction, compound nouns, suffixation, occasionalisms, word-formation patterns, pseudo-terms

The study of the interaction between academic language and the language of fiction is becoming increasingly more important in the light of the growing popularity of the *science fiction* genre. Dynamic word-formation is actively used in fiction as well as in academic prose. However, the functions it performs in each case are rather different: a wide-spread use of scientific neologisms serves as a mode for describing new ideas and concepts, whereas the new lexical formations used in the *belles-lettres* style generally contribute to the creation of 'believable' fiction.

The importance of studying word-formation as item-and-process can be explained by the historical development of morphological processes. The types of discourse with-

in which certain affixes and word-formation patterns regularly function have considerable influence on their correlation, productivity and frequency of occurrence.

The literary genre of science fiction deals with a description of situations that can be presented as non-existent, although hypothetically possible in objective reality. It should be remembered that one of the goals of science fiction authors is the creation of the so-called '*probability illusion*' [4], and that there are many different ways of creating and maintaining this effect, including linguistic means. Creating new lexical items on the basis of well-known word-formation patterns, which are often used to form new scientific terminology, contributes to the desirable stylistic effect. The '*pseudo terminology*' introduced by the author may often be used alongside actual scientific terms, however, terms proper, when used in a fictional text, undergo an *aesthetic transformation* [2: 288].

The effect known as 'probability illusion' plays a vital role in the genre of science fiction. Here is a particular mode of introducing fantastic elements into the text outline. According to E.N. Kovtun, «Rational fantastic fiction tries to 'hide' fictional elements, to present fantastic events as 'hypothetically possible', to convince the reader that all characters are 'ordinary people'» [4: 198]. The fictional element of fantastic texts is raised to the premise of rational character. The 'impossible' is explained through fictional 'natural' laws or technical inventions [4: 61].

Academic prose, conversely, establishes the verbal environment required for active production of neologisms. «New concepts, which emerge as a result of academic research, demand special terms to denote them. <...> Academic style can always be regarded as a source of new lexemes, word combinations and new meanings of existing words» [2: 352]. As for science fiction, it should be regarded as a secondary field of term functioning. In this genre, as well as in popular scientific literature, terms are only used alongside non-terminological vocabulary for «decoration or embellishment» [5: 82].

Although scientific terminology is, to a certain extent, a 'prototype' of neologisms and occasionalisms created in science fiction, it manifests a different communicative intent. '*Pseudo terms*' emerge and function within a genre that is primarily associated with the speech function of aesthetic impact and not the function of message. Their main objective is to imitate a certain message, to create an effect of verisimilitude, while 'terms proper' perform a different function – to adequately deliver the essence of a described phenomenon in all diversity of its characteristics. While '*pseudo terms*' follow the same word-formation patterns as academic terminology, their ultimate goal is to create an effect of emotional impact.

One of the most frequent word-formation patterns in academic writing is the 'Noun + Noun Compound' model: most lexemes found in modern terminological dictionaries have been created on the basis of this pattern. Compounds like '*brain death*' (medicine), *language laboratory* (linguistics), *aversion therapy* (psychology) play an important role in academic disciplines. A variant of this model, the 'Proper Noun + Common Noun' pattern, is extremely productive in modern English. It is especially common in academic discourse, where many of these formations function as terms. We can adduce numerous examples, such as *Duchenne dystrophy* (a medical term for a type of muscular dystrophy), *Eaton agent* (a biological term meaning a microorganism that is the causative agent of primary atypical pneumonia), *Lie algebra* (a term from the domain of mathematics: Lie algebras are algebraic structures which were introduced to study the concept of infinitesimal transformations), *Markov chain* (another mathematical term, a mathematical system that undergoes transitions from one state to another on a state space), etc. The

‘common noun’ part of the lexical item often goes back to the name of the researcher who described or invented the phenomenon denoted by the term. It is not surprising, therefore, that this pattern is also frequent in literary texts if the author’s objective is to create the effect of scientism. In the world of science fiction ‘pseudo terms’ can go back to names of real scientists as well as names of fictional characters. For example, «**Penfield mood organ**», the first ‘pseudo term’ found in Philip K. Dick’s novel «Do Androids Dream of Electric Sheep?» (1966), is a complex compound where ‘Penfield’ functions as a modifier and ‘mood organ’ as a compound head of the whole structure: «*A merry little surge of electricity piped by automatic alarm from the **mood organ** beside his bed awakened Rick Deckard*» [8: 1].

The ‘Proper Noun + Common Noun’ pattern can be found throughout the text of P.K. Dick’s novel. Examples include such terms as ‘**Voight Empathy Test**’ and ‘**Voight-Kampff Empathy Test**’: «*But then the **Voigt Empathy Test** had been devised by the **Pavlov Institute** working in the Soviet Union*» [8: 23]. The fictional tests described as psychological methods of distinguishing people from ‘androids’ contributed to the leitmotif of empathy, which is one of the central ideas of the novel. In order to develop a believable fictional reality, the author chooses to describe scientific methodology as well as scientific progress. Thus, Lurie Kampff, the co-designer of the ‘Empathy Test’, is said to be the author of several other works: «*The consensus of police opinion is known to you in **Lurie Kampff’s article**, written eight years ago. “Role-taking blockage in the Undeteriorated Schizophrenic*» [8: 36].

Suffixation is another word-formation pattern that is known as one of the most productive techniques in modern English. It is widely used to create **eponyms**, which makes it essential for term development. Terminological studies have revealed the popularity of this model in various disciplines. Thus, the verb ‘**to pasteurize**’ was formed in 1881 from the name of Louis Pasteur, a French chemist and microbiologist, with the help of the suffix *-ize*. The noun ‘**Darwinism**’ originates from the name of Charles Darwin. It came into the language in 1864 and was formed with the help of the suffix *-ism*.

Suffixation is also extremely productive in literary texts, for example, it is extensively used to create ‘*pseudo eponyms*’ in science fiction. In Aldous Huxley’s novel «*Brave New World*» fictional names serve as a supposed source of several pseudo terms. The name of **Bokanovsky** and the biotechnological breakthrough that was stimulated by the character’s discovery are seen as an important part of the novel’s world. The nominative complex ‘**Bokanovsky’s process**’ becomes the basis for new lexemes, created with the help of suffixation: «“**Bokanovsky’s Process**”, repeated the Director, and the students underlined the words in their little notebooks. <... > One egg, one embryo, one adult – normality. But a **bokanovskified** egg will bud, will proliferate, will divide. <...> “Essentially,” the D.H.C. concluded, **bokanovskification** consists of a series of arrests of development» [9: 7].

The suffix *-fy* and its variant, *-ify*, can also be regarded as quite productive: recent formations include such verbs as **detoxify**, **gentrify** and **webify**. The suffixal element *-fication* is widely used to create new terminology, for example, such nouns as **reification** (1846) and **desertification** (1973). Huxley prefers the word-formation patterns which appear familiar and ‘scientific’ to the reader – however, the author makes the structure of his occasionalisms extremely complex, introducing deliberate grotesque elements into the lexeme.

As can be observed, dynamic word-formation is marked by the function of impact in different styles and genres. However, the communicative intent that it realises is re-

markably different in each type of text. In literary texts, metaphoric word play is often used for creating an aesthetic impact or an effect of unexpectedness and originality. In academic literature, neologisms function as elements responsible for the function of message. The genre of science fiction combines the two intents and brings in a new perspective – a science-like believable description with an enhanced ‘intellectual factor’. The multi-functionality of word-formation patterns creates an opportunity for expanding their productive potential.

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