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DIFFERENT DIMENSIONS IN ENGLISH PROSE

The article focuses on the peculiarities of the depiction of different dimensions in English prose. In our modern world the linguists have an increased interest towards the problem of unusual point of view. The peculiarities of presenting the unusual picture of the world have not yet been considered, though this question is of great interest.

The aim of the article is to reveal the existence of possible worlds in English literature that would differ from the world of reality.

The traditional dimension, depicted by the authors of English fiction, the same as by the authors of other languages, is our reality. Depiction of the world of lower level is met very seldom.

This article focuses on the analysis of different world pictures. It is revealed that besides depiction of the usual picture of the world the authors sometimes show the world from different point of view. Non-traditional points of view show things from unexpected angle. Depiction of different dimensions considered in the article is outside readers' previous experience.

The article considers the description of multidimensional space in the novels of A. Abbot «Flatland» and D. Burger «Sphereland» and Robert Heinlein's story «And He Built a Crooked House». Dimensionality of worlds and dimensions, the peculiarities of their depiction in fiction is the object of this article.

Describing different dimensions the author pursues the purpose to avoid stereotypical perception of the world by the reader, to show the described reality in an unusual foreshortening.

The results of the research can serve as a basis for further study of the peculiarities of the depiction of different dimensions in English prose.

The prospects of investigation are to find out the peculiarities of the depiction of different dimensions in literature of other countries.

Key words: *dimension, picture of the world, possible worlds, another world, multidimensional space, English fiction.*

Modern information space is experiencing great difficulties with the interpretation of the terms «other dimensions», «other environments», «other spaces», «other worlds», «other beings». The picture of the world depicted in English prose is represented by different dimensions. Moreover, multidimensional worlds are depicted more often than one-dimensional and two-dimensional ones.

The object of our linguistic research is the diversity of views on the universe in English prose. The works created by realist writers and science fiction writers are based on the fact that our space is three-dimensional.

The purpose of the article is to reveal the existence of a subset of possible worlds in English-language works of art that would differ from the world of reality.

Such scientists as A.P. Babushkin, G.V. Leibniz, J.S. Stepanov, Nancy Trail, Thomas Paul, A.D. Shmelev, Umberto Eco and others touched the problem of world depiction of literary texts and their classifications.

Our space is not as simple as people thought for many centuries. It is twisted in a direction beyond our direct perception and, what is even more strangely, is expanding.

The currently fashionable theoretical concept of the multiple universe – Multiverse is associated with M-theory, which contains many variants of «other dimensions».

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This theory is based on «twisted» dimensions, which are «foreign residues» of the birth of our Universe¹.

Measurement is a small part of electromagnetic radiation with unique physical properties. Each researcher sets the boundaries between the dimensions at his discretion. Some dimensions may border on other dimensions. Some dimensions are at a considerable distance and become the boundaries of human environments. The boundaries of such media as solid, liquid, gas can be determined by all people, the boundaries of other environments can be determined only by people with higher sensitivity. Each medium has many dimensions that border on each other. Objects, processes and phenomena of each environment are subjected to their own unique laws. Each environment occupies a part of the space that people rigidly associate with the three-dimensional coordinates of the real objects of the Universe. Space, all objects, processes and phenomena of which are subjected to their unique physical laws are usually called «another world».

From the point of view of human beings, another world is an environment, all objects, processes and phenomena of which are subjected to their unique and physical laws, different from the physical laws of the environment in which the body of a human being lives.

Science fiction writers are able to expand our understanding of the universe.

During the study of English prose we have identified the following types of worlds: *unreal*, but the earth one and *illogical* world², which is the most distant from reality and is a product of individual creative imagination of the author. «Our» world (real reality) is opposed to another world, and this other world rejects the real world.

The idea of curved space and an expanding Universe, designed by Dutch scientist Dionys Burger, can be got from his novel «*Sphereland*». Familiar to our perception of space – three-dimensional space is depicted in the novel of D. Burger «*Sphereland*», written in 1957, and is depicted through a Hexagon's point of view. The world of the Hexagon, the main character from the novel «*Sphereland*», is much more complicated than the Euclidean plane of his grandfather: this world is curved. Hexagon lives on the surface of a huge sphere, which also expands.

We all know the dimensions, width and length. But modern physics does not exclude the possibility of other spatial or temporal dimensions, as well as multidimensional beings. Let's say that there are two-dimensional beings «planes». In their world there is not even an idea about the height, they do not even suspect that there is a «top» and «bottom». The world around them is flat. A three-dimensional creature can observe over a two-dimensional one and even interact with it, while remaining almost invisible. You can press the plane with your finger, and he will not understand, just freeze in place. Or you can even remove him from the plane and the figure will disappear from the two-dimensional world. May be many unexplained phenomena can be explained by this fact.

Many convincing mathematical details of the two-dimensional existence described in a fancy, grotesque literary form made the works of E. Abbott and D. Burger extremely popular. These works teach mathematics as children comprehend the world – playing. The authors of the works in a fascinating form with constant humor introduce the reader into the mainstream of important geometric ideas, such as connectivity, curvature, demonstrating abstract objects in various «everyday» situations.

In E. Abbott's novel «*Flatland*», written in 1880, the role of the fictional narrator is entrusted to a Square, the world of which is a two-dimensional space (all the events occur on a plane where there is length and width, but there is no height). In this novel four different types of space are depicted: *Lineland* – the space of one dimension (this is a straight line – *Lineland*. Linear country); *Flatland* – two-dimensional space (plane, where there is length and width); *three-Dimensional* – sphere (length, width and height); and the country of *Four dimensions*. In

¹ Грин Б. (2012). *Скрытая реальность: Параллельные миры и глубинные законы космоса*. М.: Либроком. С. 45.

² Бабушкин А. П. (2001). *Возможные миры в семантическом пространстве языка*. Воронеж: Воронежский государственный университет. С. 46.

addition to these worlds in the novel the country with the number of measurements equal to zero is mentioned (*Pointland*. Point country. A world without dimensions, the resident of which fancies himself the only existing, all-powerful God).

The science fiction literature often describes the instantaneous crossing of huge distances with the help of so-called zero-transportation. The basis of this idea is based on physical-mathematical considerations.

If a «one-dimensional being» is a point that lives on a straight line and it has one dimension – length and only two possible directions of movement – forward and backward, then the imaginary two-dimensional beings «planes» have more possibilities. They can move in two directions. If the two-dimensional surface is folded or folded in three-dimensional space so that the points of the beginning and end of the route were from each other at a short distance, it can be overcome very quickly. This is the «zero transportation» or «hypertransition»³.

In our three-dimensional world, there are three mutually perpendicular directions – length, width, and height – three mutually perpendicular coordinate axes.

In the novels of E. Abbott and D. Burger, the concept of the fourth dimension is presented in a peculiar form. The Square, the inhabitant of Flatland, tells about the difficulties faced by the imaginary author when trying to imagine the third dimension. By analogy, the reader comes to understand what the fourth dimension is – a dimension in the direction perpendicular to our three-dimensional space.

Three-dimensional space can be seen as a line going to infinity in the direction perpendicular to the time line. Time by its properties is *identical with space*, as two lines lying on the plane are identical. That is, it means that just as things cannot suddenly grow in space, but must exist in advance that we suddenly see, so in time «the events» exist before our consciousness has touched them, and they remain after we have moved away from them. Therefore, the *length in time* is the length in an unknown *space*, and not only the distance separating one event from another.

The works of E. Abbott «*Flatland*» and D. Burger «*Sphereland*», considered by us, are a unique phenomenon in literature, since the authors of the considered works offer readers *alternative realities* (the world of the 2nd density – is below ours and the 4th density – is the reality higher in the development and structure), create an infinite number of new worlds, the laws of which can be comprehended, although the human foot will never leave a trace on them. Written at different time by different authors and different languages, the novels are united not only by the continuity of the theme, but also by the «family ties» of the characters from whose point of view the narrative is conducted.

Here is an example of the description of the main hero's dimension:

«I call our world Flatland, not because we call it so, but to make its nature clearer to you, my happy reader, who are privileged to live in Space.

Imagine a vast sheet of paper on which straight Lines, Triangles, Squares, Pentagons, Hexagons, and other figures are, instead of remaining fixed in their places move freely about, on in the surface, but without a power of rising above or sinking below it.... my universe, but now my mind has been opened to higher views of things»⁴.

The following example gives the description of the unknown to the hero dimension:

« ... I saw a Line that was no Line; Space that not Space; I saw myself, and not myself. When I could findIt is neither, calmly replied the voice of the sphere, it is Knowledge; it is Three Dimensions: open your eye once again...»⁵.

According to the General theory of relativity, the three-dimensional world is curved. And the curvature depends on the gravitational forces and, if there was a four-dimensional space, this curvature could be controlled (reduced or increased). It would be possible to «bend» three-

³ Комаров В. Н. (2000). *Тайны пространства и времени*. М.: Вече. С. 27.

⁴ Abbot E. (2006). *Flatland. A Romance of many Dimensions*. Oxford: University Press. P. 58.

⁵ Burger D. (1983). *Sphereland: A Fantasy About Curved Spaces and an Expanding Universe*. New York: Harper and Row publishers. P. 172.

dimensional space so that the points of the beginning and the end of the «space route» were separated by a very small distance. In order to get from one point to another it would be enough to «jump» through the «four-dimensional gap» separating them. That is what science fiction writers mean.

The theme of the fourth dimension, touched upon in the books of E. Abbott, D. Burger and Ch. Hinton, was picked up by other writers of that time in different literary genres, especially in the genre of science fiction (J. Verne, G. Wells). The fourth dimension was reflected in the literature of two periods: from the late 19-th century to the early 1920-s, as well as decades after the discovery of the theory of relativity. The youth and part of the adult life of G. Wells, the «pioneer» of science fiction, coincided with the Golden age of the fourth dimension. His works were influenced by the ideas about multidimensional spaces (about travels to the fourth dimension, about the journey of hyper-beings to our world, about parallel universes and the time machine).

His first story about time travel was «*The Argonauts of the Air*» (1888). On the basis of this story a widely acclaimed novel «*The Time Machine*» (1895) is written. G. Wells considers time the fourth dimension, moreover in the sense of static space – time. In those years, the theory of relativity was not discovered, it was developed in 1920. The philosophers of the fourth dimension at that time considered time as another dimension, which, together with the other three dimensions forms a space-time continuum. Therefore, they believed that you could travel in time back and forth at different speeds and stop when you wanted. But the time flows in one direction with constant speed. The protagonist of G. Wells moves on a time machine and he watches how life has changed in the future of mankind.

Other works of G. Wells are also associated with multidimensional geometry (novels «*The Wonderful Visit*» (1895), «*Men Like Gods*» 1923, stories «*The Remarkable Case of Davidson's Eyes*» (1895), «*The Crystal Egg*» (1897)). All these works are united by the idea that every real body should have the fourth dimension in addition to the three generally accepted dimensions – the duration of existence. We do not notice this factor due to the limitations of the human mind. Moreover, the space in the fourth dimension can be curved and then there is a window between parallel universes.

The theme of the journey to other dimensions is used by G. Wells in the stories «*The Plattner Story*» (1896-1897) and «*The Stolen Body*» (1898).

The idea that time is another dimension in which you can travel appeared also in such books as «*A Christmas Carol*» in the prose of Charles Dickens (1843) and «*Yankees at the court of King Arthur*» in the book of M. Twain (1889). Spanish playwright Enrique Gaspar described the creation of a time machine in his novel «*El anacronópete*» («*Who Flies Against Time*», 1887), in which the characters travel to different periods of the past before G. Wells. Lewis Carroll (English mathematician Charles Lutwidge Dodgson) also plays with measurements in his books «*Alice in Wonderland*» (1865) and «*Sylvie and Bruno*» (1889). Mathematician Ch. Dodgson knew well the works of German mathematician Bernard Riemann and Russian mathematician and geometer Nikolai Lobachevsky (known primarily for his work on hyperbolic geometry, otherwise known as Lobachevskian geometry), was interested in spiritualism, so his works used the idea of B. Riemann's tunnels that connect the two worlds, ours and the looking-glass («*Alice Through the Looking-glass*», 1871).

In the novel «*The Canterville Ghost*» English writer and playwright Oscar Wilde used the idea that ghosts are creatures from the fourth dimension and can visit our world.

In the novel «*Lilith*» of Scottish writer and poet George McDonald the main character created with the help of mirrors the passage between our and parallel universe, which is home to the souls of the dead.

American writer Ambrose Bierce in the collection «Mysterious Disappearances» tells about the cases of disappearances of people who came from our space to another. In the «strange pocket» in which they fall, no one hears or sees them, they also cannot see and hear, live or die.

The novel «The Inheritors» about the race of beings from the fourth dimension, who wishes to conquer our world, is written by British writers Ford Madox and Joseph Conrad. The protagonist of the story «Bedroom Door» written by American writer Mary Wilkins Freeman was in the fourth dimension, looking at the strange picture.

Robert Heinlein in his story «And He Built a Crooked House» uses the idea of hypercube, having described the house in the form of tesseract (a cube in the fourth dimension). The story was first published in 1941. In this story the main hero – Teal, an architect, built the house of future, but after the earthquake it became rolled up. Here is the description of the house:

«Teal went into the lounge. There he found that the big view window at the end of the room was open. He peered cautiously through it. He stared, not out at the California countryside, but into the ground floor room – or a reasonable facsimile thereof. He said nothing, but went back to the stair well which he had left open and looked down it. The ground floor room was still in place. Somehow, it managed to be in two different places at once, on different levels».⁶

These are just a few examples of the use of the theme of multidimensional worlds in literature. The «Golden age» of the fourth dimension lasted until 1920s. Such great science fiction writers as Isaac Asimov, Gregory Bear, Arthur Clark, Howard Lovecraft, Frederick Paul, Rudy Rucker, Clifford Simak and many others addressed to these theme.

Imitations of sequels have been written by other authors: «*Tangents*» by Greg Bear, «*Voluntary Committal*» by Joe Hill and many others.

Modern writers, understanding how complex the world is, seek to portray it so as to overcome the stereotype of reader's perception. The depiction of different dimensions allows the authors going beyond the usual perception of the world.

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Вдовенко Т. Різні вимірювання в англomовній художній прозі.

Статтю присвячено описові специфіки багатовимірних просторів у художніх англomовних творах. Особливості їх відображення у літературних творах є предметом цієї статті. Погляд вигаданого оповідача, незнайомий читачеві, показує світ з іншого погляду. Оповідач, виключений із суспільного оточення читача дозволяє показати речі з незвичного погляду.

Специфіка світосприйняття багатовимірних просторів у англomовній прозі полягає в тому, що руйнуються шаблони сприйняття. Статтю присвячено особливостям зображення різних вимірювань в художніх творах англomовної прози.

Іноді автори залучають неантропологічного наратора, прагнучі показати іншу картину світу, іншу логіку, іншу систему стосунків. Прикладом зображення багатовимірних світів і просторів у художніх творах слугують твори Є. Ебота «Флатландія», Д. Бюргера «Сферландія» та Р. Хайнлайна «Дім, який побудував Тіл» (про будинок чотирьох вимірювань). Незвичність зображення різних вимірювань в досліджених художніх творах англomовної прози передбачає спотворення художнього простору через суб'єктивність сприйняття світу незвичним наратором.

Зображуючи різні вимірювання автори мають за мету уникнути стереотипності у світосприйнятті читача, висвітлити зображувану дійсність у непередбачуваному ракурсі.

Ключові слова: вимір, картина світу, імовірні світи, інший світ, багатовимірний простір, англomовна художня проза.